Determinants of Growth of Employees' Savings and Credit Associations in Ethiopia: The Case of Addis Ababa University, Ethio Telecom and Ethiopian Airlines Employees' Savings and Credit Associations

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This is to certify that the thesis prepared by Tariku Kolcha, entitled: Determinants of Growth of Employees' Savings and Credit Associations in Ethiopia and submitted in partial fulfillment of the requirements for the Degree of Masters of Science in Accounting and Finance complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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Abstract

Employees' savings and credit associations (ESCAs) in Ethiopia have been investing over the years with the objective of maximizing their wealth. As is the case with all investments, wealth maximization is a key objective whenever ESCAs have chosen an investment avenue from a universe of possible investment vehicles. The failure to build enough ESCAs' wealth, through accumulation of institutional capital, is attributable to weak financial stewardship, inappropriate capital structure and imprudent funds allocation strategy. This study assessed financial practice as a determinant of the growth of employees' savings and credit association with a view of improving the situation for socio-economic development. This study used descriptive design and data was collected from the respondents and financial records of the three ESCAs using a questionnaire and document review tool, and analyzed using both descriptive and inferential statistics. The study findings indicated that growth of ESCAs depended on financial stewardship, capital structure and funds allocation strategy. The study recommends that ESCAs credit policies should be the one that would enhance the evaluation of loan applications; ESCAs should make loan provisions to promote safety of funds, and apply optimum financing mix in their capital structure.

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Abbreviation and acronyms

AAU ESCA	Addis Ababa University Employees' Savings and Credit Association
ACCOSCA	African Confederation of Cooperatives Saving and Credit Association
ATC	Accounting Technician Certificate
EAL ESCA	Ethiopian Air Lines Employees' Savings and Credit Association
ESCA	Employees' Savings and Credit Association
ETC ESCA	Ethio Telecom Employees' Savings and Credit Association
FDRE	Federal Democratic Republic of Ethiopia
GESCA	Growth of Employees' Savings and Credit Associations
PEARLS	Protection, Effective Financial Structure, Asset Quality, Rates of Return and Costs, Liquidity and Signs of Growth
SACCODO	Savings and Credit Co-operatives Development Office
SACCOs	Savings and Credit Co-operatives
SPSS	Software Package for Social Science
USA	United States of America
WACC	Weighted Average Cost of Capital
WOCCU	World Council of Credit Unions

Chapter One

Introduction

This chapter presents introductory section of the research work that consists of background of the study, statement of the problem, objectives of the study, research hypotheses, significance of the study, and scope and limitations of the study.

1.1. Background of the study

Employees' savings and credit associations (henceforth ESCAs) for purpose of savings and credit in Ethiopia started at the work place where by employees save certain percentages of their income which gives them the entitlement to borrow money for reasons they consider important to raise the living standards of their household (in most cases these include the buying of fixed assets like house, car, machinery to start a business, higher education, marriage, medication of family members, and others).

ESCAs have been in operation in Ethiopia for more than half a century. They were categorized under Savings and credit co-operatives (SACCOs) and designated as semi-formal financial institutions. They are outside the control of the central authorities with respect to ownership of assets and management. They are established within governmental organizations and private businesses, and play a significant role in mobilizing deposit and in allowing employees access to loans at a cheap rate. Their deposit collection and loan recoveries are integrated to each organizations payroll system, hence reducing administrative costs. The fact that they are protected by operational rules of organizations reduces their credit risk because an employee cannot default as long as he earns salary every month. In the event of default, loans are recovered from earnings of

guarantors who work in the same organization. ESCAs also participate in the investment market by buying shares of different financial and non-financial firms in the country.

The ESCAs, as potential sources of savings in the country, need serious study. The existing literature highly limited to only few studies on farmers unions and other agricultural related cooperatives. Similarly the government also highly attempted to expand union and farmers cooperatives on the rural areas of the country while very little attention is given to ESCAs. Based on this reality it is necessary to assess over all operation, especially factors affecting growth, of ESCAs existing in Ethiopia, particularly in Addis Ababa.

1.2. Statement of the problem

ESCAs encourages employees to save a minor percentage of their monthly income as a compulsory membership contribution through its saving account services and also grants loans at a minor cost to all its members. The ESCAs in Ethiopia have recent origins. The oldest ones were established in the late 1960s, and they grew very slowly until 1978. One reason behind such slow growth was the political and social instability which followed the 1974 uprising. ESCAs have been growing fast since 1978 (ACCOSCA), 1990, p.3). Nowadays several numbers of ESCAs are operating from smaller scale to larger investments areas in each organization. Thus, it is no doubt that ESCAs goes beyond loan provision to the members, but creating a large scaled investment to the economy.

The fact that cooperatives showed a significant growth in size and number of members, the rate of growth is not the same for all cooperatives. Some of them are growing at very fast rates. Over time, ESCAs have been trying to address members' demands by

mobilizing funds and granting credit to members. However, they have not been able to grow their wealth sufficiently through accumulation of enough institutional capital to finance non-withdrawable capital funded assets, provide cushion to absorb losses and impairment of members' savings.

From the foregoing background literature, it emerges that the objective of ESCAs is member empowerment through savings mobilization, disbursement of credit and ensuring ESCA's long-term sustainability through prudent financial practice. However, they contend that there are a number of challenges in promoting quality financial management such as limited capital funding sources, loan delinquency, and assessment and management of risks in addition to negative cash (liquidity), poor governance and poor investment decisions. That wealth generation is hampered by poor financial stewardship, under-capitalization of cooperative enterprises, high cost of funds, and delayed member payments.

There are few studies conducted to assess the role of these sectors in saving, investments and their role on entire economy. Specifically, Studies on ESCAs in Ethiopia are scant and this led to little knowledge about various aspects of their operation including administrative costs, investment income, loan portfolio, loan price and investments. This study aimed to fill this gap by assessing all possible aspects related to growth of employees' saving and credit association.

1.3. Objective of the study

1.3.1. General Objective

The main objective of the study was to assess the financial practice as determinants of the growth of employees' savings and credit association.

1.3.2. Specific objective

More specifically, the study was guided by the following objectives

1. To assess whether there is association between financial stewardship and the growth of employees' savings and credit associations.
2. To determine whether the growth of employees' savings and credit associations is determined by capital structure.
3. To determine whether the funds allocation strategy affect the growth of employees' savings and credit associations.

1.4. Hypothesis

Hypotheses are used to state the relationship between dependent and independent variables. Thus the study was based on the following hypotheses:

i. H0: There is no association between growth of ESCAs and financial stewardship.

   Ha: There is association between growth of ESCAs and financial stewardship.

ii. H0: There is no association between growth of ESCAs and capital structure.

   Ha: There is association between growth of ESCAs and capital structure.

iii. H0: There is no association between growth of ESCAs and funds allocation strategy.

   Ha: There is association between growth of ESCAs and funds allocation strategy.

1.5. Significance of the study

It is clear that ESCA plays an important role in credit provision to employees/ member of thrifts and further investment in other forms of business. Hence assessing the thrifts costs of operation benefits and investments would contribute over all informal financial sectors and economy of the country. ESCAs will be benefited to apply the recommendations related with investments portfolios and risk diversification strategies. Any organization employees of mutual interest to form ESCA with less experience will found this study as base line to incept and operate in the sector.

1.6. Scope and limitation

Saving and credit cooperatives in Ethiopia are vast in number in which most of the cooperatives are established voluntarily in private under different sectors. Ethiopian government paid special attention to farmers' cooperatives under agriculture sectors and other saving and credit unions in urban areas. Employees saving and loan association is one among the cooperatives lacking required attention from federal cooperatives agency. Hence this paper assessed operation, the growth, and investments of employees saving and loan associations.

The fact that at organizational level there are number of employees' savings and credit associations. Among employees' saving and credit associations operating in Addis Ababa, the paper is limited to Ethiopian air lines ESCA, Addis Ababa University ESCA and Ethio Telecom ESCA. The sector is underdeveloped in terms of administration and control over responsible body which will made challenging task to collect appropriate data useful to complete this study.

Chapter Two

Literature Review

Introduction

This chapter presents a review of literature related to ESCAs. Essentially, it deals with past studies on ESCA, previously known as Savings and credit cooperatives (SACCOs), financial practice and growth of ESCA. It will highlight the global, regional and national trends in financial practice aspects of SACCOs as they relate to the growth of SACCOs. Accordingly, past researches will be explored to shed light on this pertinent area and identify the gaps in knowledge that this study proposed to fill.

2.1. Theoretical literature

This section of the literature review contains information on the theoretical background of the study. This includes the theoretical explanations of the dependent and independent variables, and their related theories,

2.1.1. The basis of growth in SACCOs

The Savings and Credit Co-operative Society (SACCOs) system encompasses a mutual membership organization involving pooling voluntary savings together from cooperators in form of shares. SACCOs are user-owned institutions with savings accumulated to act as SACCOs' wealth. The shareholders share a common bond based on a common area of interest or purpose, namely; their geographical area, employment, community or any other affiliation. The principal services of SACCOs include savings and credit but other services such as money transfers, payment services, insurance and member development are also offered (Maina, 2007). The prime concern of a SACCO Society is to build the

financial strength that would ensure continued service to members. Apparently, the SACCOs' wealth needs to be well-managed for the achievement of the SACCOs' objectives. In fact, the concern of this study was that the growth of SACCOs is grounded on financial stewardship (decision-making aspect), capital structure and funds allocation strategy.

2.1.2. Financial stewardship and growth of SACCOs

Financial stewardship is meant to increase and sustain SACCOs' value and satisfy the needs and interests of all the members. Accordingly, the financial manager is expected to provide information which will assist in decision-making concerning the investment of the SACCOs' capital. The major financial decisions involved in corporate governance include laying down basic objectives to be met, evaluation of the objectives, establishment of the budget, budget approval, deciding on capital structure, cost of finance, fund raising, investment and distribution of returns (Horne, 2003 and Mudibo, 2005).

In this context, the financial practice team needs to set up the objectives of the co-operative. They should come up with alternative options to invest available funding and evaluate the core objectives by costing them. The alternatives are ranked based on cost and benefit analysis and the best fit is selected. Once the team is satisfied with the selection, a budget is established for the selected objectives. This incorporates a plan to show how much would be incurred in carrying out the chosen alternative. The common budgets include working capital, revenue, cost of mobilizing funds, cash, and disbursement budgets. These budgets are forwarded to the management committee for

approval. The possible capital structure to invest in the selected objectives is identified once the budget is approved. In this case, the management should identify the required start-up capital and long-term finance in order to achieve its objectives. A decision is taken on the mix with respect to optimum capital structure and considerations are made on the returns and risks of such sources (Singh, 2003). The cost of capital for each different funding is evaluated because different types of capital carry different rates of return. For instance, loans without full security or with a high risk usually carry higher rates of interest. The Return on Capital Employed (ROCE) is determined as well and expressed as a percentage of the capital employed in the co-operative business. The funds to be used in the investment are raised from the sources identified during the mobilization of financial resources (Ross, 1998).

After the required funds have been raised, they are then applied to generate income. This is the utilization of the finance raised by the society in the selected objectives. This marks the implementation stage of the investment identified by the SACCO Society. However, after income has been obtained, the agent measures the results from the investment by preparing a statement of comprehensive income which shows the surplus, statement of financial position indicating the financial state of affairs as at that time and cash flow statements. The management committee determines whether the appropriate returns. The dividends and rebates are paid according to the SACCOs' policy where the focus may be to distribute profits or set up reserves to pay debt in future or set sinking funds for retirement of debts (Pandey, 2010).

2.1.3. Impact of capital structure on growth of SACCOs

SACCOs need to establish stable and consistent capital structure because they require finances to invest in capital and operational expenses for the achievement of their objectives. In performing this function of sourcing for funds, the management team determines the most optimal capital structure to be employed. The capital structure of the SACCOs comprises members' shares and debt capital, savings/deposits and retained surpluses, (Maina, 2007). SACCOs are generally concerned with invested funds, institutional and debt funding. Their equity capital can be obtained by combining direct investment, retained patronage and surpluses, per unit capital, retained sales of common or preferred stock and net profits (Evans, 2001).With regard to share capital, the total finance required is divided into a number of monetary units called shares and sold to the prospective investors competitively. The number of shares held by each investor reflects the degree of his/her claim on the net assets of the SACCOs. In this case, shares represent the member's relative ownership position of the total investment of the co-operative society. Contrarily, debt capital is funds borrowed from other institutions or individuals such as banks, non-bank financial institutions and well-wishers. It normally carries a fixed rate of interest payable at specified times of the year. Debt capital requires some prudent management and the purpose of the loan must be clear. Importantly, debt capital is a cheaper source of finance though it involves a considerable risk in case the society is unable to meet the set obligations of repayment and financial payments.

Further, SACCO societies can draw finances from internal sources such as institutional capital where, for instance, the society utilizes the surplus retained in its earlier years of operation. Institutional capital is a cheaper source of co-operative financing since they do

not involve floatation costs. They are also more flexible sources of financing as there are no conditions imposed upon the society on their utilization. Similarly, SACCOs can also draw their finances from reserves and provisions. The latter is the surplus set aside to carter for the SACCOs' specific purposes and such funds may be reinvested into the society. Examples of such sources include sinking funds. In some cases, accrued expenses can be used by SACCOs as spontaneous sources of financing in the course of running the SACCOs' business. Pragmatically, resources are conserved for sometime before the expenses are eventually cleared, usually when the SACCOs cash flow has improved. In such instances, the SACCO Society may utilize such funds as a source of financing. In fact, this is a cheaper source of financing for SACCOs though care should be taken in case of failure to pay the expenses on time is misinterpreted as the society having financial liquidity problems (Pandey 2010). At another level, trade credit can also be used as a source of financing SACCOs. This kind of scenario happens where the society finances the acquisition of short-term assets through credit facility availed by the supplier. In such transactions, the society is able to conserve cash which is invested before the creditors are paid. In addition, the co-operative society can use leasing as a source of financing the SACCOs' activities. This involves the use of services from assets without having any ownership rights. This is a long-term financial obligation where the SACCO Society obtains the possession and use of assets without full payment of the value of the assets (Horne, 2003). Thus, the funds which would have been spent to acquire the assets are conserved and invested by the co-operative society.

Sometimes the co-operative society may need to dispose surplus assets. In such situations, the surplus assets such as bonded vehicles are normally sold after examining

their levels of depreciation and the funds accruing invested. Similarly, deposits and savings can also act as sources of financing for SACCO societies. In this regard, SACCO society members and third parties may put funds into the co-operative in form of savings or short-term investments. These funds can be invested by the SACCO Society to generate returns which can be used in repaying the deposits and interest with any surplus re-invested in the SACCOs (Evans, 2001). Finally, SACCOs can also use hire purchase as a financial strategy to implement their projects. Ideally, this involves the acquisition of assets payable in installments over a stipulated period of time. The extra funds which could have been spent in acquiring the asset on cash basis are invested in an area of high growth by the SACCO Society to ensure surpluses for the benefit of the members. In this strategy, the asset will generate returns which can be able to finance the repayment of the hire purchase installments (Ofei, 2001).

The capital structure which optimizes the requirements of the shareholders and the financial requirement of the society needs to be maintained and should be compatible with the interest of other stakeholders such as creditors, employees, government, customers and the general public. Capital structure should be in a position to maximize returns without additional costs. The best optimal capital structure is the one that yields the minimum weighted average cost of capital (WACC) (Pandey, 2010). The computation of WACC requires the sum of the cost of each individual source capital and its relative weight where the weight is the relative strength of each source with respect to the total amount contributed. Capitalization can be determined using the Net Operating Income (NOI) approach which states that the value of the firm and the weighted average cost of capital (WACC) are independent of capital structure.

The cost of debt and the cost of equity are independent of capital structure (i.e. they remain constant). Therefore, the cost of capital declines and the share value increases with debt. The shareholders would receive the same cash flows regardless of the capital structure (Pandey, 2010). The traditional approach to valuation and leverage argues out that a moderate degree of debt can lower the overall cost of capital. This will, therefore, increase the share value. This is to say that the SACCO Society can lower its cost of capital and raise its total value through leverage. There is an initial increase in the cost of equity which is offset by lower cost of debt. As the debt increases, there is an increase in risk and a rise in the cost of equity. This continues until the lower cost of debt benefit is more than offset by more expensive equity. Thus, in the traditional approach, the cost of capital is not independent of the capital structure of the SACCO Society and there is no optimal capital structure (Horne, 2003).

2.1.4. Association of funds allocation strategy on growth of SACCOs

Efficient allocation of capital is the most important financial practice function in any SACCO Society and it involves decisions of committing the co-operative funds to SACCOs' assets. Such decisions determine their value and size by influencing their growth, surpluses and risk. The investment decisions are the capital budgets or capital expenditure decisions. SACCOs should make decisions to invest their current funds more efficiently in long-term assets in anticipation of expected flow of benefits over a series of years. Such investment decisions generally include expansion, acquisition, modernization and replacement of long-term assets (Horne, 2003). The SACCOs' value will increase if investments are profitable and add value to the SACCOs' wealth. These investments should yield benefits in excess of the minimum benefit as per the opportunity cost of

capital. Thus, before an investment is made, the co-operative should be able to determine its economic viability. The methods used to determine the economic viability of a project include Net Present Value (NPV); Internal Rate of Return (IRR); Payback period (Payback) and Surpluses index (Pandey, 2010).

NPV is the excess of present value of the future cash flows over the initial outlay of the project. Thus, NPV = Present Value less Initial Outlay. The project is accepted when the NPV is equal to or greater than zero. It recognizes the time value for money. It also correctly shows that cash flow arising at different time periods differs in value and is comparable only when their equivalent "present value" is found. The IRR refers to a point at which the present value of future cash flow is equivalent to the initial outlay. It is the rate that equates the present value of cash flow to the initial outlay. Surpluses index on the other hand, is the ratio of the projects present value of its cash flow to its initial outlay. The decision criterion is that a project will be accepted if it has a surpluses index of one or more. It gives the same result as NPV. The Payback Period refers to the period of time that a project takes to recover its initial outlay. The shorter the payback period, the better it is for the co-operative society. However, the method does not consider all the cash flow as it is interested in the cash flow in the initial years before the recovery of the initial outlay. It ignores all other cash flows arising after recovery of the initial outlay (Horne, 2003). Finally, distribution shows how profits made during the year are utilized. Some of the surplus may be transferred to specific accounts to be utilized in the future for specified activities such as replacement of assets.

2.2. Critical review of theories explaining the growth of SACCOs

The existing theories explaining growth of SACCOs can be categorized into governance (financial stewardship), dividend, capital structure (capital structure), funds allocation strategy, and growth theories.

2.2.1. Financial stewardship theories

The financial stewardship theories set the SACCOs' objectives as value maximization which is complemented by the SACCOs' vision. Key among these theories is the stakeholder theory which says that corporate decisions should consider the interest of shareholders. However, the theory is not a legitimate contender of value maximization (Jensen, 2001). Another theory, virtue ethical theory of corporate governance states that SACCOs' agents and shareholders should conduct themselves appropriately. The theory suggests an ethical approach towards economic situations such as when there is less wealth or when there is competition (Zetsche. 2007). The theory involves effectiveness and intellectual aspects of the steward and virtues can be instilled with education (Abdullah & Valentine 2009). This theory is very useful to this study in that it will help to relate the staff ability to ability to growth of SACCOs. Agency theory reduces the SACCO Society to two participants; steward, and the shareholders (Daly et al., 2003; Clarke, 2004). According to the theory, shareholders expect the stewards to act and make financial decisions in the interest of the shareholders (Padilla, 2002) with the aim of maximizing shareholders value. This theory provides a separation of ownership and control (Bhimani, 2008).

In the Stewardship Theory, stewards protect and make profits for the shareholders and they are satisfied and motivated when SACCOs' objective is attained (Abdullah & Valentine 2009). It stresses that the executive management are stewards who ensure they operate the SACCO society to maximize financial performance as well as shareholders' profits (Daly et al., 2003). Donaldson (1995) contend that this theory appreciates the importance of structure which empowers the agents and it allows for the stewards' autonomy built on trust. This theory will assist in identifying the role of the finance staff in growing the SACCOs. Transaction cost theory recognizes that the organization and structure of a SACCO Society can determine its profitability. This theory helps to establish the need for qualified staff in the SACCO Society for maximization of the SACCOs' wealth (Abdullah & Valentine 2009). As with agency theory, the finance theory is concerned with ensuring that managers act to maximize shareholders' wealth. The theory is an efficient market model (Blair, 1995; Keasey et al., 2004) which actually recognizes the agency costs (Jensen & Meckling, 1976). The myopic market model shares a common view with the agency theory where the firm should serve shareholders' interests only. According to the model, short-term performance are encouraged thereby sacrificing long-term value and competitive capacity of the SACCO society (Moreland, 1995). According to the model, earnings can provide a clue as to the firms value (Stein, 1988). This model argues out that maximization of shareholder welfare does mean share price maximization. This is owing to the fact that the market system tends to undervalue long-term expenditures which may lead to the increase of the shareholder welfare. Owing to myopic nature in the governance structure, the agents are forced to take short-term decisions in increasing share prices (Keasey et al., 2004).

2.2.2. Theories on capital structure

Studies on capital structure have erupted since Modigliani and Miller theorized in 1958 (Flannery & Hankins, 2007) in M-M theory. The most popular theories are trade-off theory, pecking order and market theory (Small Stocks, 2008).

The first theory, trade off theory encourages borrowing for the firm to enjoy the tax advantage. The trade-off theory takes a common sense approach by encouraging firms to gain from the tax advantage in debt financing (Small Stocks, 2008; Ahmed & Hisham, 2009). The second theory, Pecking order theory, encourages debt financing for the capital structure (Ahmed & Hisham, 2009). In fact, the internal financing is preferred to external financing and debt financing is preferred to other external options. The theory supports the suggestion that debt is cheapest and most attractive of the external sources of financing (Flannery &Hankins, 2007 and Small Stocks, 2008). The third theory, market theory emphasizes that a firm would prefer equity financing when the perceived cost of equity is low and prefer debt financing when cost of debt financing is low. The financial managers should make security issuance decisions based on the cost of equity capital and cost of debt capital (Huang & Ritter, 2008).

Lastly, Modiglani–Millier (M-M) theorem, often called the capital structure irrelevance principle indicates that the value of a firm is not influenced by how the financing is done (i.e. it is independent of the capital structure) (Chorafas, 2004). According to the theory, the source of funds does not affect the value of the firm in the absence of taxes, bankruptcy costs and asymmetric information and in an efficient market. This theory is suitably applied where there is: perfect and efficient market, no transaction costs, no

default risks, no taxation. M-M theory does not propose a more effective capital structure between the equity and debt capital but simply states that the source of fund is inconsequential in the stated conditions (Pandey, 2010). Another theory, the pricing theory shows that a profit can be obtained by buying the asset on the market at lower price and simultaneously selling the same asset on the market with the higher price without necessarily using any actual investment. In this case, the investors make exploitation on them, and as time goes by, the price of the assets changes up to equilibrium again when there are no more positive returns between the same assets and the possibility of profiting from arbitrage is gone (Rorden & Kristofer, 2010).

2.2.3. Funds allocation strategy theories

The investment flow over a given period can be measured as a difference between capital at the end of the period and the share capital at the beginning of the period. The Keynesian Theory of investment emphasizes on the need of interest rates in investment decision such that changes in interest rates affect the level of planned investment. It states that when interest rates fall, the cost of investment decreases. One of the investment theories, the E-ratio theory states that net investment directly depends on the ratio of the stock market valuation to the replacement cost of that firm. The E-theory is the optimal investment rate of a function of future surpluses (Philippon, 2006). According to the informational theory of investment, information is the primary cause of investment performance. As such, the market patterns are, therefore, subject to information the investors have.

The yield theory (simply known as the Y-theory) suggests that when the stocks are small, the risk free yields, risky corporate yields and book leverage have a linear combination leading to aggregate investment (Phillpon, 2006). Lastly, the Kaleckiam model of growth and distribution (1933) defines the investment as a function of anticipated growth of surpluses and interest rates. In the Q-theory, the SACCO Society would choose investments to equate the marginal value of capital with the marginal cost of capital (including adjustment costs) without regarding the investment costs (DeMarzoy, Fishmanz, Hex & Wang, 2010). The marginal value of capital, Q equals the average value of capital, Q1.

2.2.4. Growth theories

Growth can be based on endogenous growth theory or neo-classical growth model. The neo-classical growth theory argues that the rate of growth is exogenously determined using the Harrod Damar model or Solow model. Solow-Swan class growth theory which focuses on capital and labor indicates that capital is added when SACCOs invest but is lost due to depreciation. The indication is that there is capital growth in wealth only when the investment exceeds depreciation (Gardner, 2006). The investment should insist on keeping the capital growing to achieve capital growth. That increase in capital yields leads to an increase in growth of SACCOs' Wealth. The theory explains growth as a factor of accumulation of capital. This model is strongly supported by Harrod Damar Model of development economics (1946) which explains the growth rate in terms of saving and productivity of capital. It explains that increase in investment leads to accumulation of capital.

2.3. Empirical literature

Studies have been carried out on growth of SACCOs explaining different determinants of such growth. These studies are global, regional or local. This study has considered the following studies identifying the gaps and critically analyzing the findings. The research sought the relevant information on previous studies from university libraries, private libraries, and public library and through the internet search. Such material was in journals, research papers and working papers.

In 1998, Mrema carried out a study on Tanzanian Women and Progress in Tuke Consumers' Marketing Co-operative. The study found that the SACCO Society had increased profits. It had also continued to pay dividends to members. However, it faced challenges of illiteracy, lack of training, and business. It was recommended that through economic power, members can meet their economic ends that act as motivation for other members to join the societies. In another study, Beck et al., (2000) examined the causal impact of financial development on growth and its sources where they found that there was a significantly positive causal impact of financial development on real per capita growth and productivity per capita growth. The study then recommended that positive repercussions for long-run economic growth improve resource allocation and accelerate productivity growth. In the year 2001, Davies conducted a study to review the contemporary debate on governance within the co-operative sector and make an analysis of the traditional approach taken by the movement. This study found that professional management was inevitably gaining ground against lay directors. The study then recommended that when people identify with co-operative purpose and values, they

would want to be involved. Good governance in co-operatives was more a problem of management culture.

Ofei (2001) carried out a study on Retooling Credit Unions and found that the SACCO Society was diversifying products and services; had established own central services, such as the Central Finance Facility; had a risk management schemes; and had made great strides in the growth of their financial resources, their operational costs are not able to cover its costs to make it self-sufficient. The study recommended that credit unions in Ghana (CUA) Ghana; must charge interest rates that would ensure viability, sustainability and growth, for the benefit of all members; geared to self-sufficiency and increasing reliance on self-generated funds and needed to adopt the World Council of Credit Union's PEARLS system to enable her monitor the performance of the Credit Unions in Ghana.

A study by USAID (2001) found that co-operative autonomy was associated with success; governance structures need to be strong, transparent and honest; co-operatives needed to perform well to survive, endure and thrive; and support to co-operative development that creates dependency undermined the mutual self-reliance that is central to cooperation. This led to their recommending that co-operatives needed to develop professional management in order to adapt, innovate, and take rational risks to satisfy the expectations of their owners; and co-operatives succeeded when they consistently delivered value to their owners.

In another study by Agrawal et al., (2002) on the role of member-funds in multi-purpose co-operatives, it was found that; member funds had a central role in enhancing co-

operative performance; funds provided voluntarily were of high quality and externally compelled member funds were of low quality. The study then recommended that the members' share capital which provided permanent capital, long-term capital and short-term capital was very useful to performance of the SACCO Society for it provides quality and quantity. Remezani et al., (2002) conducted a study associating corporate performance and SACCOs value creation to growth in earnings and found that; EVA, ROE and ROI would rise earnings and sales growth; firms with moderate growth in earnings showed highest rates of returns and value creation for their shareholders. In their recommendations, they said that; growth should not be the input to strategic planning but an outcome of sound investment strategy that is geared towards accepting value creating projects; and managers needed to shift their strategic goals from creating growth at the moment and waiting for surpluses later to enhancing profitable growth now.

Agrawal and Chadha (2005) and Agrawal and Cooper (2007) conducted another study to examine whether certain corporate governance mechanisms were related to the probability of a firm restating its earnings. In this study, they found that the key governance characteristics such as independence of boards and audit committees, and the provision of non-audit services by outside auditors were unrelated to the probability of a company restating earnings. They recommended that independent directors with financial expertise were valuable in providing oversight of a firm's financial reporting practices. Other studies were carried in the year 2004 on growth of wealth. For example, Brounen (2001) carried out a study to measure corporate governance and firm performance. Brounen then found that better-governed firms were relatively more profitable, more valuable, and paid out more dividends to their shareholders. This study noted that good

governance was associated with the firm performance. In another study, Det-Wet (2004) found that sales growth minus sustainable rate of growth did not contribute significantly to SACCOs' value; there was significant correlation MVA and Estimated Value Added (EVA); and that there was a weak correlation between the Market Value Added (MVA) and main drivers of (EVA). His recommendation was that managers needed to use the finding to optimize their approach to SACCOs' value management.

Adeyemo and Bamire (2005) in their study found that unavailability and inadequacy of credit was a major problem; loan repayment and amount of money borrowed were significant variables that influenced saving patterns; and fund borrowed significantly influenced investment patterns. This led to their making recommendation that saving and investment level could be enhanced if loans were adequately made available and proper supervision and monitoring of funds were put in place. In another study, CGAP (2005) found that donors participated in SACCOs to provide funds for growth of their wealth. In this regard, they recommended that the donor needed to; invest in building capacity instead of injecting external funds for lending; encourage sound governance policies; keep financial standards at the core of internal management and external supervision and support competent, independent external supervision of SACCOs. Deji (2005) conducted another study where it was found that there was positive and significant relationship between membership demographic-socio-economic characteristics such as number of children assisting in farm work to the member's contribution to the SACCOs; and membership of co-operative societies was very significant to favorable adoption behaviour of women farmers towards innovations. It was recommended that adoption of

agricultural innovation and improved varieties was crucial to development of members and should hence be encouraged as a strategy for improving their livelihoods.

In the study conducted by Karki (2005), it was found that in developing countries, co-operative was one of the income sources of their rural economy whereas in developed countries, it took a sustainable business. This is where it was recommended that strategic plans were necessary to bring about the internal improvement in co-operative societies, provide quality services through skill, trained and educated manpower, and e-commerce.

In the year 2006, other studies on growth of wealth were also carried out. Archer and Karim (2006) in their study on capital structure, risk sharing and capital adequacy in Islamic banks found that Islamic banks set up reserves with the intention of minimizing any need to forgo management fees. They then recommended that displaced commercial risk was potentially a means of sharing risks between two classes of investor with different risk diversification capabilities and preferences: wealthy shareholders who were potentially well-diversified and less wealthy members who were not.

A study by Chege (2006) found that loan default was subjected to changes in interest rates; demographic changes, credit scores effect, loan default; and values of collateral to security. The recommendations were that there should be; lower interest rates; participatory involvement in regulating monetary policy; introduction of new loan products; and issue of loans of low value for growth to be experienced. Fiorillo (2006) conducted another study where it was found that external funds did not help a weak SACCO Society become strong; wholesale loans to a SACCO society could impact the savings culture of the institution positively or negatively; SACCOs could be very

successful without accessing external funds; efficient capacity building was crucial; and monitoring and reporting requirements imposed could lead to improvements in management practices to be of great value to the SACCOs. The study then recommended that external funding should be discouraged and instead encourage and promote a strong savings culture. In fact, wholesale lenders should not urge institutions with excess liquidity to borrow external funds; and SACCOs should undertake a wide member sensitization programme about the source and implications of the wholesale funding.

In a study by Kaupelytė and McCarthy (2006), it was found that risk management related to credit union development stages such that as a SACCO Society matures, higher standards of risk management should be implemented. In some cases, these changes were accompanied by shifts in the regulatory framework. The study recommended that the regulatory regime was not always aligned with the stage of credit union development and indeed, reflected the economic policies of the country in which they operate.

Nanka-Bruce (2006) conducted another study where it was found that good corporate governance practices positively impacted on performance and recommended that firms needed to impose effective good governance to grow. Ogbimi (2006) in his study found that; the sources of financial resources were many and varied; lack of self-discipline in saving money, impulse buying as well as spending too much on ceremonies were the major problems of financial management of rural women; the problem of no savings would always lead households to financial embarrassment at times of emergencies; and impulse buying could result to non-purchase of needs that were of priority. It was then recommended that trainings in the rural area were important to teach members of households more about financial management. Emphasis should be laid on importance of

savings, the study by Sundaram-Stukel (2006) found that innovative approaches to lending and savings was useful to development; and partnerships with small-scale and large-scale producers had the potential to enhance welfare and improve access to financial services for the poor. This study recommended that there was a potential for many forms of intervention to increase participation and improve access to financial services for the poor.

Lastly, Tache (2006) conducted a study which found that farmers were convinced and decided to have their own financial institution to empower themselves. They showed their readiness and commitment to help themselves by good contribution of registration fees. The study recommended that support was needed to be given to the SACCOs to start computer-based accounting and financial management system; and technical training and monitoring support was needed to promote the SACCOs.

Substantial studies on growth of SACCOs were carried out in the year 2007. Ashers (2007) study found quality of governance and regulation as well as professionalism and modernization were the main factors to development of firms. The governance and regulatory structures needed to be brought in conformity with prospective economic structure; and relevant laws modernized. This study proposed that better understanding of the reasons for differences between well-governed and financially sound firms and those that were not was possible through further research.

Another study was by Nair and Kloeppinger-Todd (2007) which found that Burkina Faso had a special law for SACCOs, prudential regulation requirements, and arrangements for financial supervision, but had inadequate resources and capacity for effective supervision.

In contrast, Brazil presented a case of well-developed regulation and effective supervision. This study recommends that SACCOs would provide financial services in rural areas in developing countries and be profitable if they operate better in environments with prudential regulation and financial supervision.

The study by World Bank (2007) found that failure came where financial co-operative systems were unsustainable, subject to political influence or used by governments for their own purposes. This then led to recommendation that for financial co-operatives to be sustainable, governments needed to provide an enabling environment, not exercise excessive control that restricts growth and consolidation, and not use them as channels to provide subsidized credit. Integration enabled improved governance and the ability to provide a wide range of services.

Aredo (1993) conducted the survey study on the linkage between informal and semi formal financial institutions in Ethiopia. The study used case of selected institutions in Ethiopia. In this study the researcher selected a case of four saving and credit associations which were; Ethiopian Airlines Employees' Savings and Credit Co-operative, Telecommunication Authority Employees' Savings and Credit Co-operative, Assella Truck Loaders and Unloaders' Savings and Credit Co-operative (ATSACC), Addis Ababa University Employees' Savings and Credit Co-operative (AAUSACC). In his study the researcher found out that Savings and credit co-operatives have huge potential for savings mobilization in Ethiopia. Although the rate of growth of these co-operatives has been relatively high since 1978, much remains to be done to realize their existing potential. The case of the model co-operatives has brought to light certain important points. The ingenuity and creativity of those successful co-operatives are admirable; they

are actively investing in income-generating activities. The weaker co-operatives have much to learn from the successful ones. The case of the daily laborers' co-operative has demonstrated that credit unions can thrive even among the uneducated and poor workers operating in the informal sector. It has also found out that Credit co-operatives have linkage with the informal and formal sectors.

Overseas Co-operative Development Council, Arlington (OCDC) (2007) in their study found out that success factors for co-operatives were; legal framework; an economy that permitted all types of competitive businesses; membership that is open to users; equity; high equity/debt ratio; Member-centered services; board of directors elected by and from members only; organization around a resource base and service sufficient to sustain the co-operative as a viable business; Professional management; access to markets; accountability of all employees to the co-operative; management training; membership education; and willingness to use modern technology. It recommended that success of co-operatives would be by; creating an enabling legal and regulatory environment, accessing markets (Local, Regional and Global), moving from government to member control, and reaching scale and emerging from dependency.

The study by World Council of Credit Union (WOCCU) (2007) found that SACCOs had enough products; the members had the capacity to save and repay loans if an appropriate promotion mechanism was devised; and the poor saved if financial organizations took good care by offering good personalized services. It was then recommended that SACCOs were financially sustainable and were in a position to provide a range of products; and it was noted that there was need for collaborative efforts of all stakeholders of SACCOs to ameliorate their existing weaknesses.

Financial Sector Development Secretariat (2007) carried out a study which showed that SACCOs played a significant role in savings mobilization, promotion of investment, economic growth and poverty alleviation. They had huge potential to play a key role in Rwanda's sustainable economic growth based on national resources. The recommendation was that to be effective and successful, this strategy requires a conducive macro-economic environment.

Huyssteen's (2005) study showed that existing rating methodologies could be amended to reflect the unique nature and character of SACCOs in order to reflect their true risk, and ultimately address their funding requirements and liquidity crunches. This could lead to a true indication of the SACCOs risk, as well as neutralize possible discrimination between SACCOs. It recommended that, in order to remain at an acceptable level of liquidity, the bank may place papers in the market, borrow from other financial institutions or make use of its reserves.

Another study by Ogsi et al., (2007) showed that lack of access to finance and high costs of resources were constraint to operations. It further recommended that government and private firms should support financial institutions; business owners should form co-operatives to pool together financial resources for their benefit; informal finance should be encouraged because it did not need collateral securities; and training on co-operative education.

Roselyne (2007) conducted a study which found that factors that influenced repayment of loans in SACCOs were salary, nature of loans, and control recovery measures that the SACCO society has in place to check defaulters. The study recommends that there was

need for SACCOs to implement sound management, sound control and loan recovery measures. Loan advance should be based on past repayment history of the borrower, salary levels and contributions; and there should be diverse loan products. Kinuthia (2007) carried out a study which found that SACCOs were incurring losses due to loan default which affected the wealth of members. The study recommended that SACCOs should provide guidelines on loan policy and credit extension to members; need for integration of SACCOs' information system to employers; and need for Ministry of Co-operative Development and Marketing to liaise with Ministry of Immigration and Registration of Persons to be able to instantly access information on departing employees. The study by Gaita (2007) showed that the lending institutions were not growing significantly due to poor lending practices. It recommended that lending institutions should make products and services more available; stakeholders should be trained; and favorable regulatory and legal framework is important for the growth of the institution.

In another study by Kimani (2007), it was found that the main causes of inefficiency and ineffectiveness in credit administration were unqualified staff in SACCOs; inadequate funds to lend; inadequate training; lack of effective technology; weak internal control systems; and credit management committee is very powerful and able to manipulate the lending. The study recommends that the SACCOs should, therefore, increase the funds for lending through external borrowing; employ competent staff; restructure the organizational structure; funds should be allocated to investment with high returns; increase the loan products (diversify) to satisfy members; embrace teamwork; adopt modern technology; change interest rates to attract members; ensure competition with

other financial institutions; ensure networking with other SACCOs; provide education and training to members and staff; change location of office; participate in corporate social responsibility.

Another study by WOCCU (2007) found that credit unions in all had built extremely high levels of members' goodwill. Members were quite satisfied with their credit unions. Once they joined, respondents tended to be highly loyal; and credit unions had also a significant source of financial sector expansion. This study recommends that marketing capacity and outreach was useful in customer service. SACCOs could reach new markets while cementing the loyalty of existing members. Grell (2007) carried out another study which found that outreach had increased and credit unions were then serving more people; the rate of programme growth had slowed significantly since the WOCCU project ended. Credit unions did not track the surpluses of any credit product and therefore, were not using the cost analysis tool designed by the WOCCU project to track the surpluses. Credit unions had not been as aggressive about expanding the programme as they were when they had technical assistance and oversight from WOCCU. The recommendations in this study were that the program, or some variation of it, could and should be implemented in other countries. Additionally, products that credit unions could implement for downscaling without donor funding, and addressing external challenges and internal programme management problems in group savings and lending programmes with or without education that may impact the sustainability of these programmes over the long run.

Wieland (2007) also conducted a study which found that credit unions were tied to prohibitions. For investment capital to increase it should be invested in trade or a sharing

of risks between the borrower and lender; members could not be paid returns on deposits though they can receive a share of institutions net gains annually; institutions could invest on interest earning accounts unless sanctioned by Sharia compliant; share investment was large and onerous; tax implications were fraught; investing SACCOs required a deeper thought of SACCOs accounts; interest returns would make estimating the institutions position at any point in time more difficult. The study recommends that SACCOs would gather more local acceptance if their products and operations were more recognizable.

In a study by Muruana, (2007) it was found that failing loan portfolio; erosion in value of members' shares and loss of value affected SACCOs' wealth. The study recommended that SACCOs should make adjustment on lending rate in line with inflation, adjust interest rates; and Ministry of Co-operative Development and Marketing (MOCD& M) should develop a policy on how to counter inflation in SACCOs.

Hein (2008) conducted a study where it was found that increasing shareholder power would either have positive (finance-led), negative (normal) or intermediate (profits without investment) effects on capacity utilization, profits and capital accumulation. In the medium run, the positive (finance-led) effects may have to be maintained in a stable environment under very special conditions, whereas the negative (normal) and the intermediate (profits without investment) effects turn into cumulative disequilibrium processes with falling rates of capacity utilization, profits and capital accumulation and rising debt and renters' equity-capital-ratios. The study recommends that increasing shareholder power was associated with decreasing managements' animal spirits, on the one hand, and increasing dividends distributed to shareholders, on the other hand. In another study Baker et al., (2008) found that perceptions of factors that influence

dividend policy differ between managers of financial and non-financial firms. Industry classification also affected how managers viewed statements about the dividend pattern, dividend setting process, dividend policy and firm value, residual dividend theory, and explanations for paying dividends. They recommended that researchers investigating dividends should partition the data by industry type and perhaps other firm characteristics to better understand the dividend puzzle.

The study by Delcoure (2008) found that corporations that owned superior corporate brands exhibited higher surpluses and create SACCOs' wealth independent of economic downturns. It was then recommended that branding efforts added value to the firm and exhibit risk mitigating characteristics. Chava and Roberts (2008) carried out a study which found that capital investment declined sharply following a financial covenant violation, when creditors use the threat of accelerating the loan to intervene in management. The study recommends that reduction in investment was concentrated in situations in which agency and information problems were relatively more severe, highlighting how the state-contingent allocation of control rights could help mitigate investment distortions arising from financing frictions.

Lari (2008) conducted a study which found that best financial ratio was able to bring to light fraudulent financial statements on members' shares and deposits dividend return; members' loan schedule balance/loan ledger balance; financial investment/total assets; (liquid investments + liquid assets – short-term creditors)/total assets; non-earning liquid assets/total assets; net loans to members/total assets; gross loans to members/total assets, members' deposits/total assets. Best were: net profit/total assets ratio; total operating expenses/average total assets ratio; and growth in members' loans rate.

Lastly, Papias and Ganesa (2009) study found out that age, gender and size of the household, purpose for credit, interest rate charges and number of official visits to the credit societies, had a strong effect on loan repayment performance (statistically significant at $p<0.05$) whereas size of credit disbursed, credit processing and disbursing time, borrowers' market place and income transfer from relatives and friends are more or less statistically significant at $p<0.20$ level. The remaining factors have logical and explainable signs but are not statistically significant. This study recommends that an understanding of the socio-economic factors affecting repayment behaviour of rural clients was essential for the outreach and sustainability of the mushrooming co-operative societies in the country.

2.4. Empirical literature overview

Most research studies on financial management of SACCOs have been done globally, regionally and locally. These studies only addressed issues of governance, SACCOs' financial health capital structure, loan default, loan management, capital structure, outreach and SACCOs' sustainability. Other studies addressed such issues as financial stewardship (e.g. effects of governance on wealth, loan default), funds allocation strategy (for example investment), capital structure (e.g. effects of external debt) and growth of wealth independently. Although these studies have been done on growth of SACCOs' wealth, none has addressed the financial stewardship, capital structure and funds allocation strategy as determinants of growth of ESCAs especially in Ethiopia.

For instance, the study by Mrema (1998) showed that there were increased surpluses but it failed to show how the retained earnings increased as profits increased. There was also

no clear definition of the economic power needed to grow the economic levels. Beck et al., (2000) study emphasized on growth of sources but lacked to indicate how these sources impact on the growth of wealth. The main concerns of the study by Davies (2001) were on governance. However, it failed to even link this governance to growth of wealth, it only talked of need for good governance which would make members identify with the SACCOs. Ofei (2001) related growth to interest rates and self- generated funds. The study failed to show how these interest rates related to growth of the wealth and what rates should be charged. Further, the study failed to show a relationship between sources of funds and growth of wealth. The study only talked of sustainability. The study by USAID (2001) very well showed the need for good stewardship but it did not emphasize on how growth should be achieved. It only said that they needed to deliver effectively. This delivery was not particular and never related to the three determinants; stewardship; capital structure and funds allocation strategy to growth.

In a study by Agrawal et al., (2002), emphasis was on the usefulness of share capital but it failed to show how the management of the members' funds, other sources of funds and funds allocation strategy would result to growth of wealth. The study findings by Remezani et al., (2002) were very much concerned with growth of wealth. It, however, only singled out the method of achieving this wealth (stewardship) but failed to include sources of funds and funds allocation in the findings.

The study by Agrawal and Chadha (2005) and Agrawal and Cooper (2007) related the growth of surpluses to the stewardship. It neither touched on the capital structure nor the allocation of funds. The study by Bowen (2004) related the growth of surpluses to good stewardship. It, however, never associated this growth to other factors such as the capital

structure or the allocation of funds. The findings were similar to that of Det Wet (2004). The same was echoed by Sundaram-Stukel (2006), Nanka-Bruce (2006), Grell (2007), Wieland (2007), Muruana (2007). The study by Kaloi (2004) only shallowly dealt with issues that affected liquidity; financial stewardship, capital structure and allocation of capital.

The study by Adeyemo and Bamire (2005) identified lack of funds and poor stewardship and the challenges to growth of wealth. It did not identify the allocation as a determinant of growth of wealth. Although the CGAP (2005) study emphasized on good governance, it did not show how the wealth would grow. The study by Deji (2005) showed how members would benefit from the SACCOs, which is the main objective. However it never showed how the SACCOs' wealth would grow. The study by Karki (2005) failed to show how growth of wealth comes about. It only touched on the stewardship but not on the capital structure and funds allocation strategy.

According to the Archer and Karim's (2006) study, the reserves were only needed for covering fees not paid for service instead of using it to grow the firm. The main concern of the study by Chege (2006) was loan default. The study never even showed how this default affected the growth of wealth leave alone showing the determinants of growth of SACCOs. The main interest on Fiorillo's (2006) study was the effect of external lending. Instead of the study encouraging alternative ways of sourcing funds, they still emphasized on wholesale lending. The study did not at all consider the determinants of growth of wealth. The study by Ogbimi (2006) was very important to educate SACCO members on how to manage their wealth but did not show how the firm's wealth could grow. Tache's (2006) study very heavily needed for formation of SACCOs and the

usefulness of common bond but it never showed how growth can be enhanced by the financial stewardship, capital structure and funds allocation strategy.

Asher (2007) shows that sustainability was related to the stewardship. The study did not at all say how growth of wealth was related to the three determinants; financial stewardship, capital structure and funds allocation strategy. Nair and Kloeppinger-Todd's (2007) study shows that sustainability of SACCOs was related to the stewardship and legal framework. The study did not explain how growth of wealth would be achieved through the three main determinants; financial stewardship, capital structure and funds allocation strategy. According to the World Bank (2007), growth and sustainability of SACCOs was related to the stewardship and legal framework but not also to capital structure and funds allocation strategy. The study by OCDC (2007) touched very lightly on the two determinants, stewardship and capital structure and totally failed to show how funds allocation strategy would contribute to success.

According to WOCCU (2007) growth and sustainability of SACCOs was related to the stewardship and legal framework. The study did not explain how growth of wealth would be related to capital structure and funds allocation strategy. According to Financial Sector Development Secretariat (2007), growth and sustainability of SACCOs was related to the economic environment but there was no relation to capital structure and allocation. The study by Huyssteen (2005) showed that growth and sustainability was related to the stewardship and legal framework. The study did not explain how growth of wealth would be achieved.

Ogsi et al., (2007) study showed that sustainability of SACCOs was related to the capital structure. The study did not explain how growth of wealth would be achieved. The study by Roselyne's (2007) study showed that growth of SACCOs was related to the control of loan default by the stewards. The study did not explain how growth of wealth would be achieved.

The study by Kinuthia (2007) reported that growth of SACCOs was related to the control of loan default by the stewards. The study did not explain how growth of wealth would be achieved. Gaita's (2007) study showed that failures in SACCOs were related to lending. Growth and sustainability was related to the stewardship and legal framework. The study did not explain how growth of wealth would be achieved. The study by Kimani (2007) identified the causes of inefficiency and ineffectiveness in credit administration in SACCOs; and growth and sustainability of SACCOs was related to the stewardship and legal framework. The study did not explain how growth of wealth would be achieved. The study by WOCCU (2007) showed that sustainability of SACCOs was related to the marketing. It did not explain how growth of wealth would be achieved.

According to Hein (2008), the growth of members' wealth was determined by shareholders' power. The study did not relate growth to the three factors; capital structure, stewardship and funds allocation strategy. The study by Baker et al., (2008) did not at all talk about growth of wealth depending on financial stewardship, capital structure and funds allocation strategy.

The growth according to (2008) was related to product diversity. The study did not show any other determinants of growth. The main consideration in the study by Chava and

Roberts (2008) was allocation of funds but the study failed to consider the other factors of growth. In the study by Lari (2008), the main considerations were capital structure which was considerably addressed but the study failed to consider the other factors of growth. The study by Papias and Ganesa (2009) examined the factors contributing to credit repayment behaviour among the members of savings and credit co-operative societies in rural Rwanda. However, it failed to address the factors that determined growth in wealth.

These gaps left by previous studies underscore the need for further research. This study, is therefore, set to fill the gap that currently exists in this area considering the fact that wealth maximization (growth) is the main objective of financial management.

2.5. Conceptual model

The study proposed that the growth of ESCAs is determined by financial stewardship, capital structure and funds allocation strategy as captured in figure 2.1 below.

The basic models for this concept are

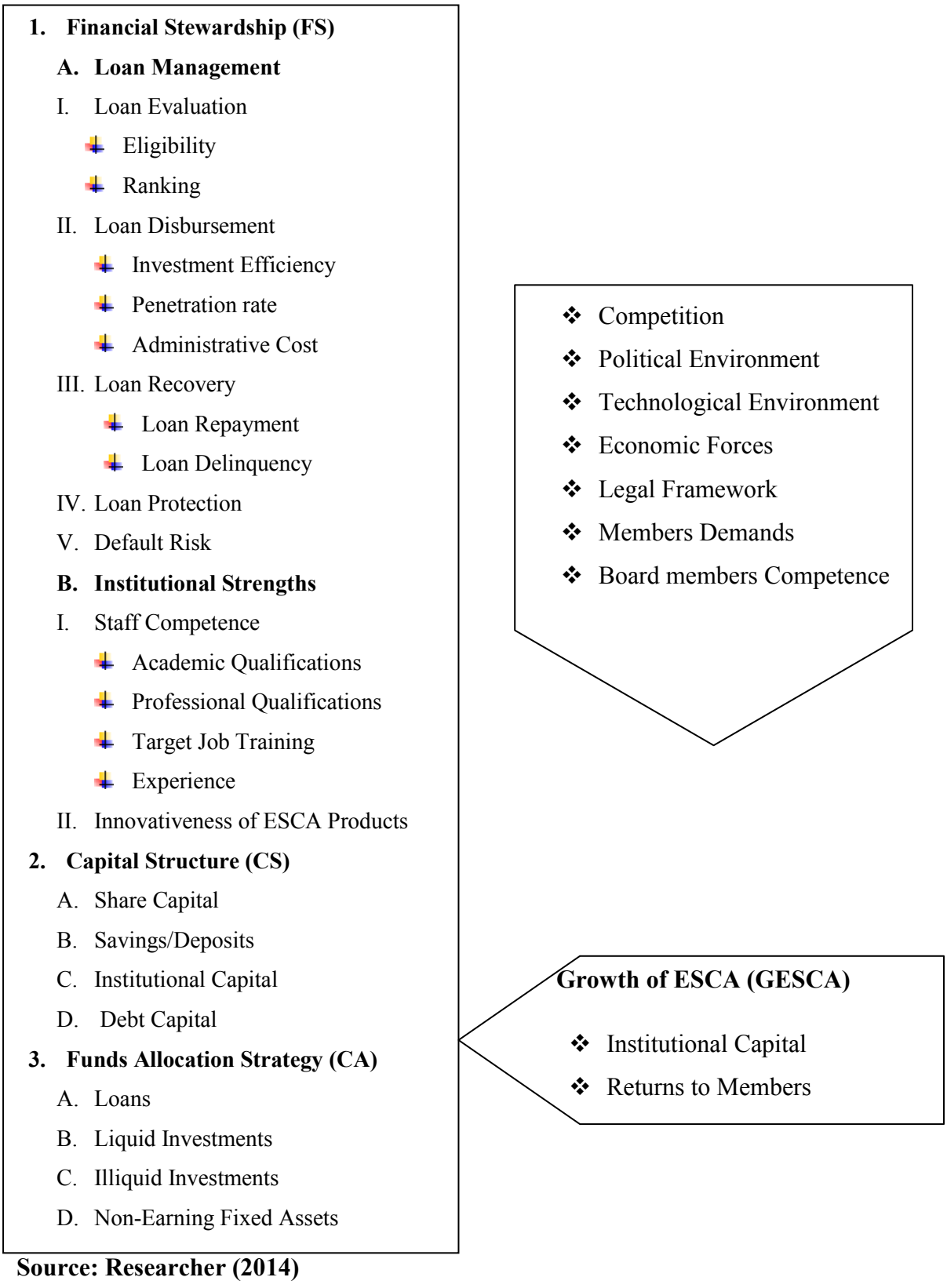
GESCA= f (LE, LD, LR, LP, DR, SA, INN) for Financial stewardship.

GESCA= f (SC, SV, IC, DC) for Capital Structure.

GESCA= f (LO, LI, II, NA) for funds allocation strategy.

Where GESCA is Growth of ESCA, LE is Loan Evaluation, LD is Loan Disbursement, LR is Loan Recovery, LP is Loan Protection, DR is Default Risk, SA is Staff Competence, INN is Innovativeness, SC is Share Capital, SV is Savings, IC is Institutional Capital, DC is Debt Capital, LO is Loans, LI is Liquid Investments, II is Illiquid Investments and NA is Non-earning Fixed Assets

Figure 2.1 Conceptual framework



Source: Researcher (2014)

Further, there are other factors which cannot be controlled by the ESCAs but could intervene in the growth of ESCAs wealth these include Competition, political environment, technological environment, economic forces, legal framework, members' demands and board members' competence are some uncontrollable variables.

2.5.1. Independent variables

The rationale behind the selection of these variables is that first, financial stewardship is viewed, in this study, as the key ingredient in making financial decisions. Thus, the direction given by sound investment decisions determines the future of the growth of ESCAs. In addition, the capital structure adopted by ESCA may also affect the growth of ESCAs. In fact, the way funds are used is of great importance to the growth of the ESCAs. Financial Stewardship is concerned with the accountability of the management as regards the financial decision making processes. Accordingly, the main aspects which are considered to affect the growth of ESCAs' wealth include the level of staff knowledge and skills, techniques used in decision-making on asset management and the ESCAs' product diversity (innovativeness). The proposition is that when the staff making financial decision lack appropriate qualifications, experience, and training, the decisions made may not lead to substantial growth in ESCAs' wealth. In this regard, the staffs need to have requisite skills and uphold professionalism among other competencies to arrive at a sound working investment solution(s). The main components of financial stewardship are Loan Management (LM) and Institutional Strengths (IS).

Loan Management is characterized by Loan Evaluation (LE), Loan Disbursement (LD), Loan Repayment (LR), Loan Protection (LP), and Default Risk (DR). Loan Evaluation is

the assessment of loan application which provides information on the eligibility of the application with regard to the standards set in the ESCAs' by-laws. The loan assessment team (supervisory committee) must ensure that the loan application complies with the by-laws' requirement for it to be approved otherwise it is rejected. So, loan evaluation being the first step in loan processing, must be done according to the laid down rules and regulations (i.e. by-laws of the ESCAs). The considerations of an effective evaluation include application eligibility and ranking. Ineligible applications would lead to losses caused by failure to recover the loan since some of the loanees do not have capacity to repay the borrowed funds and others lack sufficient security.

Ranking involves sequencing of approved loan applications. Failure to rank the loan application means lack of assurance on when an applicant would expect to get a loan which leads to members' dissatisfaction and loss of trust. Eventually, as a result, the members end up reducing their share contribution and/or seeking for loan advances from other sources. This reduces the borrowing as well as the capital base and thereby affecting the ESCAs' growth. Effective decisions on loan disbursement influence the growth potential of ESCAs' wealth while ineffective decisions weaken the earning capacity.

The indicators of the loan disbursement decisions include the efficiency of investment, which is the ratio of loan portfolio to the total assets. This is where an efficient loan disbursement grows the loan portfolio which is the core investment which leads to growth of ESCAs. Another indicator is the Loan Penetration Rate which is the loan coverage ratio. The higher the penetration rate, the higher the availability of loans hence satisfaction of members. A high penetration rate is an indication of spread of risk and

hence reduction of delinquency rate and reduced losses. This would also lead to growth of wealth since there is no loss in principal and interest. The last indicator of loan disbursement is Administrative Efficiency. This is the total cost of administration to loan amount disbursed. The lower, the administrative costs, the lower the amount spent from the earnings and the higher the growth of ESCAs' wealth. On the other hand, the higher the administrative costs, the higher the expense meaningless earnings and less growth of ESCAs' wealth. The administrative costs should be as low as possible, even to being negligible, for the growth of ESCAs to be recognized.

As regards loan recovery, the ESCAs should ensure high earning capacity from investments on loans to reflect growth of ESCAs. This is shown by the Loan Recovery Rate where a high recovery rate indicates growth of ESCAs and low recovery rate the opposite. This recovery of the principal and interest should be done in compliance with a ESCAs' by-laws on loan requirements. Delays in servicing the loan repayment would affect the ESCAs' liquidity in that, the funds traded (principal) and the interest are withheld at no additional profitable gain. Such delay would, therefore, cause loss in the investment resources. Loan repayment being the average collection period of the loan is used to measure the quality of loans in which case a shorter collection period indicates better quality loans and a longer period is an indicator of low quality loans. High quality loans are an indication of growth in ESCAs' wealth. When ESCA efficiently manages loans, there is high quality loan management and the average collection period is short leading to growth of ESCA. The other aspect of loan recovery is loan delinquency in that the loan portfolio occupies the largest proportion of the total assets of the ESCAs; it holds the largest source of risk. As such, the risk of the ESCAs largely depends on the quality

of loan portfolio. Where the collaterals to loan advance are strong, the loan can be recovered by selling out the collaterals. The loan portfolio is measured in terms of Loan Delinquency.

Loan Protection which means safety of shareholders' funds, involves loan loss provision. Inadequate loan loss provision results in inflated asset value (overstatement) and fictitious earnings. Overstatement of loan assets would lead to losses when these non-performing loans are not paid. Loan protection provides safety of the ESCAs' wealth by provisioning for losses on loans disbursed. This being the protection of the ESCAs' assets is made by providing sufficient allowances for loan losses. Since loan loss provision is deducted from the gross loan, lack of adequate provision for loan loss in ESCAs leads to inflated asset value and reporting of fictitious earnings. However, realistic protection leads to reduced overstatement which enhances shareholders' confidence retention, attraction of prospective members, and prevention of potential crises. Such is an indication of growth of ESCAs. A healthy ESCA should have adequate provision allowances for non-performing loans. Any loan not performing for more than 12 months is considered a bad debt. The last aspect of loan management is default risk assessment which measures the loan default probability. It should be noticed that default risk analysis is the assessment of loans in order to avoid or reduce the probability of loan default. When the default risk analysis is effective then risk prone loans would be identified and then means of avoiding these risks are established thereby reducing or avoiding the probability of default. This would increase the growth of ESCA by avoiding loan losses. It should be noted that loan recovery is a very critical factor in financial sustainability and

growth of the ESCAs where failure to recover loans (loan default) affects the growth of the ESCAs' wealth by causing losses of funds invested and profits to be earned.

The Institutional Strength involves decisions on; Staff competence (SA), Asset Management (AM) and Innovativeness (INN). The staff competence, which determines the financial decision-making abilities, is indicated by the finance staff Academic Qualifications, Professional Qualifications, Short-Term Target Oriented Training and experience. Staff competence has a considerable contribution to the growth of ESCAs in that finance staff without the relevant qualifications and adequate experience would not make quality financial decisions for the ESCAs. The financial decisions made by such staff do not lead to the optimal capital structure or even viable investments. Such decisions would, therefore, lead to losses in the investment hence failure to have considerable growth of ESCAs' wealth. Highly qualified finance staff makes viable strategic decisions on the ESCAs' financial practice.

The other aspect of institutional strength is technology which is innovativeness on loan products. It involves quality of loan products and diversity of these products. A wide variety of ESCAs' products attracts more borrowing from the members and non-members thereby drawing more clientele which leads to increased trading hence growth of ESCAs' wealth.

On the area of capital structure**,** the key aspect affecting the growth of ESCAs is the choice of financing and the actual capital mix. The stewards need to establish a capital mix that magnifies the ESCAs' growth. The stewards need to establish the most suitable capital structure for the projects being implemented to arrive at considerable growth of

the ESCAs' wealth. Capital structure of the ESCAs comprises the various internal and external sources of finance, shares (SC), Savings/Deposits (SV), retained surpluses commonly known as Institutional Capital (IC), and Debt Capital (DC). ESCAs must employ the most optimal capital structure for a significant growth to be experienced. The key aspects affecting the growth of ESCAs' wealth include the methods and structure of financing mix. The stewards need to establish the most suitable capital for the projects being implemented to arrive at a considerable growth of the ESCA. Where a number of sources are available, the appropriate capital structure must be followed to maximize the surpluses for growth in ESCAs Wealth. Each component should generate sufficient returns to cover the related costs and contribute to institutional capital.

Further, prudent funds allocation strategy would yield or maximize returns with minimum risk and enhance growth of the ESCAs and ESCAs' wealth thus leading to the achievement of its objectives. The growth in ESCAs' net assets is another area where this growth can easily be seen or felt. The key aspect affecting growth of ESCA is the choice of investments and the actual mix. Importantly, assets are the economic resource of the ESCAs acquired through investment of, members' shares, savings deposits, institutional capital and loans. Two options exist for the ESCAs on earnings from investments, namely; re-investment and distribution (payment to the members as dividends). Thus, it is upon the management to make appropriate decisions on the utilization of the income acquired from the ESCAs' investments. In this case, if re-investment is a viable option, then it should be capable of generating considerable growth in wealth. Further, the way the income is going to be distributed affects the growth of the ESCA and its wealth. The decision in the allocation of funds of ESCAs is critical.

Loans (LO)**:** That loan portfolio is the core investment; the income from loans must achieve the ESCAs' objective and growth of ESCAs. The income generated from investment on loans must be sufficient to pay all the operating costs, grow the institutional capital, and finance rebates and dividend to the shareholders. When this happens, then there is growth of ESCAs as a result of growth in total loans. If loans growth keeps pace with growth in total assets, there is likelihood that surpluses will be maintained. Higher growth in loan portfolio signals maintenance of surpluses. Growth in savings deposits affects the growth in loan portfolio and total assets.

Liquid Investments (LI): it is advisable that a SACCO Society maintains these short-term assets which can be converted into cash within a short notice to finance liquidity gaps. However, these assets should be capable of contributing towards the surplus. Illiquid Investments (II): Since these are non liquid investments, they should pay for all their recurrent costs, pay back the initial outlay and provide the ESCAs' sinking fund. Growth in ESCAs' wealth is not experienced when these investments are depending on other sources for recurrent costs and they are not able to pay back their initial outlay thus cannot finance other projects later. Non-Earning Fixed Assets (NA): Since non-earning fixed assets do not generate any stream of income, they should be acquired wisely such that their acquisition cost must not exceed the outsourcing cost. The outsourcing cost must outweigh the purchase cost to justify outright purchase. In that event, the non-earning fixed assets will be deemed to lead to growth of the wealth.

Chapter Three

Research Methodology

3.1. Introduction

This chapter presents the design used in the thesis, target population, sampling procedure, study site, area of study, research data collection instruments and procedures, empirical model, measurement of variables, and how data were analyzed. It has explained why specific techniques and methods were used in design, analysis and data collection.

3.2. Research design

This study used a descriptive survey (Describing the characteristics of existing phenomenon) in soliciting information on the determinants of growth of ESCA. Descriptive survey design was used since it provides insights into the research problem by describing the variables of interest. It was used for defining, estimating, predicting and examining associative relationships. This helped in providing useful and accurate information to answer the questions based on who, what, when, and how.

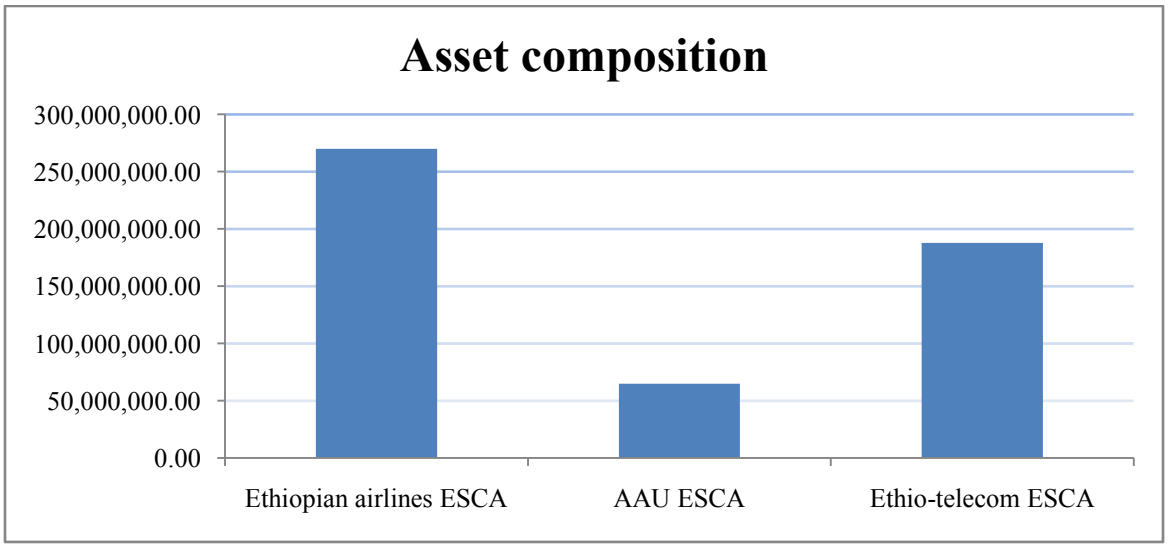
Historical research was used to relate events that have occurred in the past to current events. It also enabled the researcher to relate the research problem to the missing gaps of other research work which have been covered and also show what the other researchers overlooked possibly due to time differences or economics and social factors (Kombo &Tromp, 2006).

3.3. Target population and sampling

The target population was all ESCA in Addis Ababa which had been in existence for over five years. Three ESCAs were selected conveniently based on their size, years of

operation and their role in investments. An Ethiopian airline ESCA is the oldest association with over than 49 years of services and large sized, owning diversified investments association in Ethiopia. Addis Ababa University ESCA and Ethio Telecom ESCA are also the second largest of the sectors in terms of asset composition, deposits, members, years of operation and their investments in different sectors.

Figure 3.1 Asset composition of sampled ESCAs, 2013



Source: Each ESCA

Ethiopian airlines ESCA own more varied assets than other sample of ESCAs. The largest share of asset of EAL ESCA is its different financial assets. The cooperative sectors earn their cash directly from contribution or regular payment of their stakeholders, AAU ESCA, posses diversified assets. Loan receivable is a periodic terminal claim of every employees and credit associations. The receivables are the major portion of current assets of the AAU ESCA. The major sources of assets for Ethio-telecom ESCA is loan receivable, office equipment, staff receivable and cash in bank the same as that of EAL ESCA and AAU ESCA. The association has investment of birr 1.5 million in different investment areas.

Sample Design

The study used census study methodology which enabled the researcher to gather more information to assist in analysis and arriving at accurate results and sample of 15 respondents were selected. The respondents were the managers, accountants, finance heads, and auditors of these ESCAs owing to their position in the association and supportive staffs. These respondents were selected to collect primary data. Further, all the selected ESCAs were accessible and they had different common bonds which make census more appropriate in sampling.

3.4. Data collection

3.4.1. Data collection instruments

Data were collected from primary and secondary sources. Primary data were collected using a semi structured questionnaire which had both open and closed-ended questions. Secondary data were collected from the records and ESCAs' financial statements using document review guide.

3.4.2. Data collection procedure

During data collection, the researcher first sought an appointment with the respondents. Arrangements were then made on when and how to conduct the data collection. When collecting primary data, the researcher assisted the respondent's of ESCA to fill the questionnaire and at the end confirmed any issues arising out of the data supplied.

3.5. Reliability and validity testing

The study conducted a pilot test of the study tools on employees' savings and credit cooperatives (ESCCs) that did not participate in the study before administering the

research tools. Pilot testing was conducted in an attempt to test the reliability and validity of the research tools. The research tool was administered to the respondents who were allowed ample time to respond.

The data were tested for reliability to establish issues such as data sources, methods of data collection, time of collection, presence of any biasness and the level of accuracy. The test for reliability established the extent to which results were consistent over time. Reliability test was carried out to test the consistency of the research tools with a view to correcting them.

The researcher improved the instrument by reviewing or deleting items from the instrument. To test for reliability, the study used the internal consistency technique by employing the Cronbach coefficient alpha test for testing the research tools. Internal consistency of data is determined by correlating the scores obtained from one time with scores obtained from other times in the research instrument.

The result of correlation is the Cronbach coefficient alpha which is value between -1 and 1. The coefficient is high when its absolute value is greater than or equal to 0.7 otherwise it is low. A high coefficient implies high correlation between these items which means there is high consistency among the items and such items should be retained in the tools. This study correlated items in the instruments to determine how best they relate. Where the coefficient was very low, then the item was reviewed by either removing it from the tool or correcting it. Validity of instrument which is the accuracy and meaningfulness of inferences was measured using content validity test. Content validity measures the degree

to which data collected using a particular instrument represent a specific domain of indicators or content of particular concept.

3.6. Data analysis

Collected data were checked for errors of omission and commission. The data collected was classified, operationalised, analyzed and interpreted to establish how and when these determine the growth of ESCAs. The data collected were analyzed, with respect to the study objectives, using both descriptive and inferential statistics.

Univariate analysis which is the distributional properties of a variable was carried out first for each variable to describe that variable and as a preparation for multivariate analysis. This is largely a quantitative analysis where each variable was analyzed independently. The study used chi-square test to test dependence of growth of ESCAs on financial stewardship, capital structure and funds allocation strategy. Thus, the study employed multiple linear regressions in its multivariate analysis to establish the nature of the relationship between financial stewardship, capital structure and funds allocation strategy. Software Package for Social Sciences (SPSS) software was used to analyze data.

Chapter Four

Data analysis, Presentation and Interpretation

4.1. Introduction

This chapter presents findings of the study. Data collected were both qualitative and quantitative. Data were analyzed using descriptive statistics such as mean and standard deviation, and inferential statistics such as chi-square test and regression. Data were presented using tables and graphs.

4.2. Response rate

As shown in table 4.1 below total of 15 questionnaires were given out to respondents of the three ESCAs out of which 13 were returned giving a response rate of 86.7%. According to Mugenda and Mugenda (1999), a 50% response rate is adequate, 60% good and above 70% rated very good. Based on this assertion the response rate for this study can be said to be very good at 86.7%.

Table 4.1 Summary of response rate

No. of questionnaires distributed				**No. of questionnaires collected**			
AAU ESCA	Ethio telecom ESCA	Ethiopian Airlines ESCA	**Total**	AAU ESCA	Ethio telecom ESCA	Ethiopian Airlines ESCA	**Total**
5	4	6	**15**	4	4	5	**13**

Source: Each ESCA

4.3. Reliability analysis

The questionnaires were used as items that were to be responded to. For reliability analysis Cronbach's alpha which is a measure of internal consistency was calculated by application of SPSS. Cronbach alpha ranges between 0–1. A higher value shows more reliable generated scale. Table below illustrates the results of the reliability analysis. It involved questionnaires from 13 respondents.

Table 4.2 Reliability testing results

Variables	Cronbach's alpha	No. of items
Financial Stewardship	0.410	23
Capital Structure	0.838	4
Funds Allocation Strategy	0.433	12

Source: Computed using SPSS

Grayson (2004) have indicated Cronbach's alpha 0.7 to be an acceptable reliability coefficient. As shown in table 4.2, it was clear that the alpha coefficients of the instruments of financial stewardship and funds allocation strategies were less than 0.7. It could, therefore, be concluded that the instruments did not have an acceptable reliability coefficient and it was thus important to assess what the alpha coefficient would be after each item was deleted from the instruments. Items of alpha of below 0.4 where adjusted which caused the alpha coefficient to increase to acceptable level of 0.7 and above (See appendix III). After adjustment of the instruments the alpha coefficient was again calculated and the findings were as shown in table 4.3.

Table 4.3 Reliability testing analysis for adjusted instruments

Variables	Cronbach's alpha	No. of items
Financial Stewardship	0.735	19
Capital Structure	0.838	4
Funds Allocation Strategy	0.844	7

Source: Computed using SPSS

4.4. Analysis of response using mean and standard deviation

This section presents analysis of primary data collected by conducting questionnaires to respondents of the sampled ESCAs for each variables, i.e. growth of ESCAs, financial stewardship, capital structure and funds allocation strategy, separately.

4.4.1. Growth of ESCAs

To assess financial practice as determinants of growth of employees' savings and credit associations it was considered important to find out the indicators of growth of ESCA. To accomplish this, it was considered of primary importance to establish the profitability and distribution of income in the ESCA and the findings were as shown in table 4.4.

Table 4.4 Profitability and distribution of income

Component items	Mean	Std. Dev.
Our ESCA has been making a surplus every year from 2009 to 2013	3.38	1.12
Our ESCA has been declaring dividends for the last five years	3.31	1.18
Dividends per share have been increasing in the last five years	3.15	1.34
The ESCA has also been contributing to retained earnings	3.69	1.11
The retained earnings have been growing annually from 2009 to 2013	3.77	1.01

Source: Computed using response from respondents

Table 4.4 above shows that majority of the respondents agreed that the retained earnings have been growing annually from 2009 to 2013 and that the ESCA has also been contributing to retained earnings as indicated by a mean of ≈4 and a standard deviation of ≈1. It was also revealed that majority of the respondents disagreed that their ESCA had been making a surplus every year from 2009 to 2013, their ESCA had been declaring dividends for the last five years and that dividends per share had been increasing in the last five years as indicated by a mean of ≈3 and a standard deviation greater than 1. This is an indicator that ESCAs consistently grew their wealth. It was further sought to find out how the surplus distributed as dividends, rebates and institutional capital (retained earnings) had been determined and the findings were as illustrated in figure 4.1.

The fact that the respondents were neutral on the indicators of growth of ESCA's wealth shows that ESCAs in Addis Ababa on average have been experiencing moderate growth of their wealth. The ESCAs which are able to retain surpluses declare dividends and rebates that grow their equity capital and net assets. Growth in retained earnings prevents ESCAs from heavy reliance on external funding which has forced many ESCAs into financial distress. One can justifiably say that ESCAs should endeavor to minimize their operational costs, grow their surplus and hence be able to build their institutional capital.

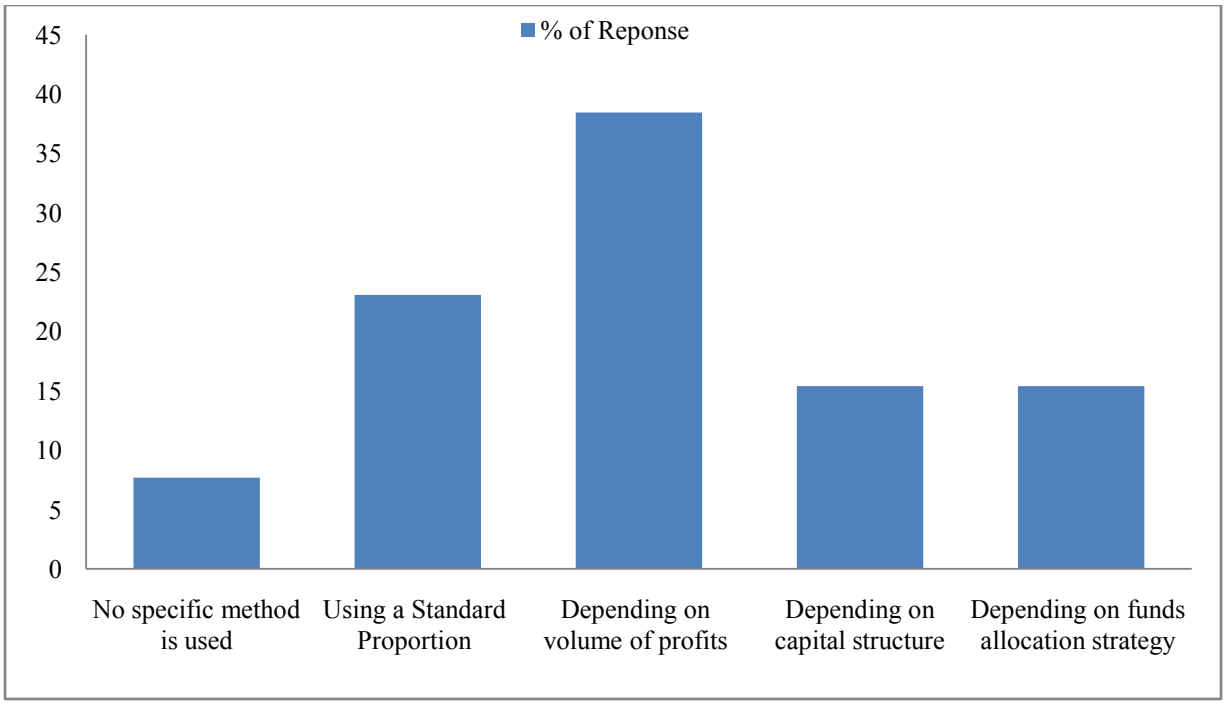


Figure 4.1 Determination of methods used to measure distributed surplus

Figure 4.1 illustrates that majority of the respondents (38.46%) indicated that surplus distributed as dividends, rebates and institutional capital (retained earnings) was determined depending on volume of profit while only 7.69% of the responses indicated that it was not determined by any method.

The other 15.38% of the responses indicated determination by capital structure and fund allocation each. It was stated that 23.07% of the responses indicated using standard proportion to determine surplus. This is an indicator that the majority of ESCAs distribute surpluses as dividends, rebates and institutional capital depending on profitability of ESCAs. The fact that 23.07% of ESCAs uses standard proportion of distribution of profits indicated very weak dividend policy. This may be explained by the weak regulatory framework and human resource capacity.

4.4.2. Financial stewardship

Having determined the growth of ESCAs wealth the study also tried to determine the factors that influence the growth. One of the determinants of ESCAs' growth was financial stewardship. Financial Stewardship is concerned with the accountability of the management as regards to the routine financial decision-making process. The findings of the components of financial stewardship were as shown in table below.

Table 4.5 Summary of responses concerning financial stewardship

Component items	Mean	Std. Dev.
Loan Eligibility	3.85	0.90
Ranking	3.45	1.27
Loan Repayment	3.69	1.11
Innovativeness	3.77	1.09
Loan Protection	2.85	1.07
Loan Disbursement	4.08	0.86
Default Risk	4.00	0.82

Source: Computed using response from respondents

Table 4.5 reveals that majority of the respondents agreed that loan applications were approved by special committee in their ESCAs and that ESCAs by-law was the basis of loan evaluation. This is indicated by a mean (≈4) and standard deviation (≈1). Majority of the respondents were neutral as to whether ESCAs do loan applications ranking or not, this is indicated by the mean (≈3) and standard deviation (≈1). Majority of the respondents agreed that loan pay-out had been increasing in their ESCA for the last five

years and that their ESCA always disbursed loans as they became due. This is indicated by the mean (≈4) and standard deviation (<1). This is a clear indication that higher loan disbursement builds loan portfolio and interest earnings hence contributing to growth of wealth. Majority of the respondents agreed that loan borrowers always honored loan repayment on due date, loan delinquency had been minimized in the last five years, loan delinquency was avoided at all costs and that members of their ESCA were eager to repay their loans promptly. This is indicated by the mean (≈4) and standard deviation (≈1). This promotes liquidity hence enhancing growth of ESCAs.

Majority of respondents were neutral as to whether their ESCA had provision for irrecoverable loans as indicated by the mean (≈3) and standard deviation of greater than one. Majority of the respondents agreed that their ESCA awards loan depending on the borrower's ability to pay, loan with lower default risk are paid in full to the ESCA and that where default risk is high, the ESCA awards loan depending on the borrower's ability to pay. This reduces impairment of the loan assets and interest income hence promoting growth of ESCAs. Majority of the respondents agreed that all loan products were designed to fit members' needs, there were regular diversification of products in their ESCAs as indicated by a mean (≈4) and standard deviation (>1). This is an indicator that products which are inciting, attractive and affordable attract more clientele hence growth in loan portfolio.

4.4.3. Capital structure

ESCAs need to establish stable and consistent capital structure because they require finances to invest in capital and operational expenses for the achievement of their

objectives. In performing this function of sourcing for funds, the management team determines the most optimal capital structure to be employed. The findings on capital structure were as shown below.

Table 4.6 Summary of responses concerning capital structure

Component items	Mean	Std. Dev.
The ESCA uses cost of capital when determining the source of funds	4.15	0.69
The ESCA makes careful evaluations when deciding sources of funds	4.31	0.75
Profitability is a determinant of the source of funds in this ESCA	4.08	0.76
This ESCA mobilizes funds after consulting the experts in finance.	3.85	0.99

Source: Computed using response from respondents

Table 4.6 indicates that majority of the respondents agreed that the ESCA uses cost of capital when determining the source of funds, the ESCA makes careful evaluations when deciding sources of funds, profitability is a determinant of the source of funds in their ESCA and that their ESCA mobilizes funds after consulting the financial managers. These are indicated by the mean (≈4) and standard deviation (≈1). This implies that prudent decisions on financing of ESCAs lead to growth.

4.4.4. Funds allocation strategy

Prudent funds allocation strategy would yield or maximize returns with minimum risk and enhance growth of the ESCAs wealth and thus leading to the achievement of their objectives. Having established the capital structure as a determinant of ESCAs' growth, the study sought to find out the fund allocation strategy of ESCAs. When the income generated from investment on loans is sufficient to pay all the operating costs, grow the

institutional capital, and finance rebates and dividend to the shareholders, then growth in loan asset will lead to growth of wealth. The study sought to find out whether the income generated from loans was sufficient and the findings were as indicated in table 4.7.

Table 4.7 Summary of responses concerning funds allocation strategy

Component items	Mean	Std. Dev.
Loan	3.77	1.09
Liquid Assets	3.46	0.88
Illiquid Assets	2.92	0.86

Source: Computed using response from respondents

The above table indicates that majority of the respondents agreed that income from loans covered all operating costs and that income from loans in their ESCA maintained retained earnings. Majority of the respondents were neutral as to whether or not non-financial investments paid their recurrent costs, always paid initial outlay, provided for sinking fund, supported other projects and that buying of assets was always justified using cost/benefit analysis .

Majority of the respondent agree that the ESCAs are prudent in management of their financial investment which promotes their liquidity and profitability. Non- liquid investments should pay for all their recurrent costs, pay back the initial outlay and provide the ESCAs' sinking fund. They should also be able to finance other projects later.

The study deemed it important to determine the performance of the non-liquid investments and the results were that majority of the respondents were neutral as to whether or not Illiquid investments paid their recurrent cost, always paid initial outlay,

provided for sinking fund or supported other projects. This is indicated by the mean (≈3) and standard deviation (≈1). This shows that most investments are able to pay recurrent costs, initial outlay and provide for sinking fund.

4.5. Chi square test on dependence between independent variables and growth of ESCAs

One of the statistical tests that are used to test the association among variables is chi-square test. However, the test uses specifically grouped or categorical variables (ordinal or nominal). To apply this, the study categorized ESCAs according to their Growth of wealth index and compared it with the magnitude of financial stewardship (FS), capital structure (CS) and funds allocation strategy (CA).

The growth of ESCAs indices in the study is within an interval of 1-5, therefore, the study categorized the ESCAs as level 1 and level 2. Growth level 1 or High Magnitude FS, CS and CA are represented by index of 3, 4 and 5 while Growth level 2 or Low Magnitude FS, CS and CA are represented by index of 1 and 2.

The study based the test on 5% (0.05) level of significance meaning that the conclusions made in this study were at 95% confidence level. In chi-square test, there are three coefficients (statistic) that are vital in the study namely; **Pearson chi-square**, **Phi and Cramer's V.** Pearson Chi-square is used to test the associations while Phi and Cramer's V are to test the strength of association.

Table 4.8 Chi-Square tests on associations between growth of ESCA and financial stewardship, capital structure, and funds allocation strategy

	Pearson Chi-square	p-value	Strength(Phi/Cramer's V)	P-values
Financial stewardship	36.000	0.000	0.960	0.000
Capital structure	15.840	0.000	0.663	0.000
Funds allocation strategy	19.800	0.000	0.742	0.000
Size=3, Level sig.0.05				

Source: Computed using SPSS

Since the p-values (.000) are smaller than level of significant of the study (0.05 or 5%) as shown in the table 4.8, then the test of the study is in favor of the research hypothesis; therefore we reject the null hypothesis and conclude that all the determinants of financial practice i.e. financial stewardship (36.000, p-value, 0.000) capital structure (15.840, p-value, 0.000) and funds allocation strategy (19.800,p-value,0.000) were associated to the growth of ESCA. While financial stewardship (0.960, p-value, 0.000) and funds allocation strategy (0.742, p-value, 0.000) have strong effect on Growth of ESCA, capital structure has moderate effect. This therefore shows that financial stewardship, capital structure and funds allocation strategy are important determinants of growth of ESCA.

4.6. Multiple regressions of independent against the dependent variable

This section presents analysis of statistical results found by conducting multiple regressions using SPSS for testing of variables and regressing of growth of ESCAs against financial stewardship, capital structure and funds allocation strategy separately.

4.6.1. Testing study variables for normality

The study tested for normality using Shapiro Wilk test (numerical method) since the sample population was small (less than 50). The results obtained are in Table 4.9.

Table 4.9 Results of normality tests on study variables

Variables	Shapiro Wilk test
Growth	0.842
Financial Stewardship	0.732
Capital structure	0.898
Funds allocation strategy	0.915

Source: Computed using SPSS

The p-values for respective variables were greater than 0.05, level of significance, indicating that the data were normally distributed. Absence or presence of heteroscedasticity did not render estimators (coefficients) biased, inconsistent and insufficient, therefore it wasn't diagnosed.

The study didn't focus on the variability of the error term with respect to time, making autocorrelation check not necessary. However, the study tested existence of multi-collinearity and obtained the results in Table 4.10.

Table 4.10 Results of multi-collinearity tests on independent variables

Predictor Variables	Tolerance(1-R^2)	VIF(Variance Inflation Factor)
Loan evaluation(LE)	0.824	1.213
Loan disbursement(LD)	0.570	1.754
Loan repayment(LR)	0.923	1.034
Loan protection(LP)	0.959	1.042
Default risk(DR)	0.932	1.072
Innovativeness(INN)	0.724	1.038
Staff competence(SA)	0.916	1.092
Savings(SV)	0.919	1.088
Share capital(SC)	0.537	1.862
Institutional capital(IC)	0.908	1.101
Debt capital(DC)	0.852	1.173
Loans(LO)	0.527	1.897
Liquid investments(LI)	0.935	1.675
Illiquid investments(II)	0.421	2.375
Non-earning fixed assets(NA)	0.956	1.046
Size=3		

Source: Computed using SPSS

Since the tolerance for all predictor variables were greater than 0.1 or 10%, the study concluded that there is no problem of multi-collinearity among them. So the estimators computed were considered reliable.

4.6.2. Regression of financial stewardship against growth of ESCA

The study regressed growth of ESCAs wealth against components of the financial stewardship to estimate a model for explaining the growth of ESCAs in terms of Financial Stewardship. The growth of ESCAs was the dependent variables and the financial stewardship components were independent variables.

To achieve this, a multiple linear regression was done on the indicators of financial stewardship i.e. loan evaluation (LE), loan disbursement (LD), loan repayment (LR), loan protection (LP), default risk (DR), staff competence (SA) and innovativeness (INN) as independent variables of the growth of ESCA's wealth. The assumption is that, mean of wealth index changes at a constant rate as the values of independent variables decreases or increases.

The model is given as:

$$GESCA = C + \beta_1 LE + \beta_2 LD + \beta_3 LR + \beta_4 LP + \beta_5 DR + \beta_6 SA + \beta_7 INN + \varepsilon$$

Where: C – constant term

$\beta_1 - \beta_7$ – coefficients of independent variables

ε – Error term

Table 4.11 Results of regression of growth of ESCAs against financial stewardship indicators

Predictor Variables	Coefficients	P – values
Constant	-4.578	0.0001
Loan evaluation	1.159	0.0003
Innovativeness	0.544	0.0001
Loan disbursement	7.028	0.0001
Loan repayment	3.432	0.0002
Loan protection	2.347	0.0002
Staff competence	0.119	0.0002
Default risk	-0.046	0.0004
Size=3 R^2=0.966	Adjusted R^2= 0.965	

Source: Computed using SPSS

The estimated equation is:

GESCA = – 4.578 + 1.159LE + 0.554INN + 7.028LD + 3.432LR + 2.347LP + 0.119SA – 046DR

Table 4.11 shows that loan evaluation; loan disbursement, loan repayment, loan protection, staff competence and innovativeness have positive coefficients. This implies that the variables are directly proportional to the growth of ESCAs i.e. an increase in one or all except default risk lead to an increase in growth of ESCAs. Default risk has a negative coefficient which shows that it inversely proportional to Growth of ESCA. I.e. an increase in default risk leads to decrease in growth of ESCAs.

When considering of the growth of ESCAs and financial Stewardship, table 4.11 shows 96.5% of variation in growth of ESCAs is explained by loan evaluation(LE), loan disbursement(LD), loan repayment(LR), loan protection(LP), default risk(DR), staff competence(SA) and innovativeness (INN). Therefore, financial stewardship indicators are strong determinant of growth of ESCA**.**

4.6.3. Regression of capital structure against growth of ESCA

To estimate a model to explain growth of ESCAs in terms of the capital structure indicators, the study regressed the growth against components of the capital structure. Growth of ESCAs was the dependent variables and the components of the capital structure were the independent variables. To achieve this, a multiple linear regression was done on the indicators of capital structure i.e. share capital(SC), savings(SV), institutional capital(IC) and debt capital(DC) as independent variables of the growth of ESCAs. The assumption is that, mean of growth of ESCAs index changes at a constant rate as the values of independent variables decreases or increases.

The model is given as:

$$GESCA = C + \beta_1 SC + \beta_2 SV + \beta_3 IC + \beta_4 DC + \varepsilon$$

Where: C – constant term

$\beta_1 - \beta_4$ – coefficients of independent variables

ε – Error term

Table 4.12 Results of regression of growth of ESCAs against capital structure

Predictor Variables	Coefficients	P – values
Constant	0.685	0.0003
Share capital	5.492	0.0004
Savings	1.833	0.0003
Institutional capital	1.052	0.0004
Debt capital	5.434	0.0001
Size=3 R^2=0.784	Adjusted R^2= 0.778	

Source: Computed using SPSS

The estimated equation is:

GESCA = 0.685 + 5.492SC + 1.833SV + 1.052IC + 5.434DC

Table 4.12 shows that share capital, savings, institutional capital and debt capital have positive coefficients. This shows that proper combination of the four components of capital structure would lead to growth of ESCAs. The coefficient of determination is 0.778, meaning that 77.8% of change in growth of ESCAs by capital structure.

4.6.4. Regression of funds allocation strategy and growth of ESCAs

To estimate a model to explain the growth of ESCAs in terms of funds allocation strategy components and growth, the study regressed the growth against components of funds allocation strategy. The growth of ESCAs was the dependent variable and the funds allocation strategy components were the independent variables. To achieve this, a multiple linear regression was done on the indicators of funds allocation strategy i.e.

growth of ESCA as dependent variable against loans (LO), liquid investments (LI), illiquid investments (II) and non-earning fixed assets (NA) as independent variables of the growth of ESCAs. The assumption was that, mean of growth of ESCAs index changes at a constant rate as the values of independent variables decrease or increase.

The model is given as:

$GESCA = C + \beta_1 LO + \beta_2 LI + \beta_3 II + \beta_4 NA + \varepsilon$

Where: C – constant term

$\beta_1 - \beta_4$ – coefficients of independent variables

ε – Error term

Table 4.13 Results of regression of funds allocation strategy against GESCA

Predictor Variable	Coefficients	P – values
Constant	-0.162	0.0003
Loans	2.323	0.0003
Liquid investments	9.653	0.0002
Illiquid investments	3.432	0.0027
Non-earning fixed assets	-3.860	0.0001
Size=3 R^2=0.798 Adjusted R^2= 0.792		

Source: Computed using SPSS

The estimated equation is:

GESCA = – 0.162 + 2.323LO + 9.653LI + 3.432II – 3.860NA

Table 4.13 shows that loan investments, liquid investments and illiquid investments had positive coefficients while non-earning fixed assets had a negative coefficient. This shows that any increase in loan, liquid, and illiquid investments leads to increase in growth of ESCAs. A decrease in non earning fixed assets leads to increase in growth of ESCAs because non earning fixed assets do not generate returns but only support cash generating units. Considering the growth of ESCAs and funds allocation strategy the table 4.13 indicates that 79.2% of variation in growth of ESCAs is explained by loan investments, liquid investments, illiquid investments, and non-earning fixed assets i.e. funds allocation strategy.

Table 4.14 Summary of results of tests of hypothesis and related objectives

Objective	Hypothesis	Results	Remarks on hypothesis
To assess whether there is association between financial stewardship and the growth of employees' savings and credit associations.	H0: There is no association between growth of ESCAs and financial stewardship.	P = 0.000 This is less than the significance level of 0.05.	Rejected
To determine whether the growth of employees' savings and credit associations is determined by capital structure.	H0: There is no association between growth of ESCAs and capital structure.	P = 0.000 This is less than the significance level of 0.05.	Rejected
To determine whether the funds allocation strategy affect the growth of employees' savings and credit associations.	H0: There is no association between growth of ESCAs and funds allocation strategy.	P = 0.000 This is less than the significance level of 0.05.	Rejected

Source: Researcher, 2014

Chapter Five

Discussion of Findings, Conclusion and Recommendations

5.1. Introduction

The data were analyzed and presented in form of tables and charts. The relationship between the determinants (independent variables) and the growth of ESCAs (dependent variable) was tested. The policy implications from the findings and areas for further research are also presented. The study recommended to ESCAs management, staff and government various requirements that will ensure growth of ESCAs.

5.2. Summary of findings

This section presents the findings from the study in comparison to what other scholars say as noted under literature review. It looks at the relationship between financial stewardship, capital structure, and funds allocation strategy with growth of ESCAs.

The first objective was designed to assess whether there is association between financial stewardship and the growth of ESCAs. This was established by analyzing the individual components of financial stewardship. It was found that the majority of respondents agreed that loan applications were approved by special committee and that ESCA by-law was the basis of loan evaluation. Most ESCAs also ranked applications according to the by-laws. Loan evaluation contributes positively to the growth of ESCAs as shown by a positive coefficient of regression. This is to mean that ESCAs' wealth increase with the increases in loan evaluation.

Most of the respondents were in agreement that the loan payout in ESCAs has been increasing in the last five years and the ESCA always disbursed loans as they became due. Loan disbursement depicted positive influence on growth of ESCAs. This means that proper loan disbursement increases the growth of ESCAs. Most of the respondents were indifferent on whether ESCAs had made provisions for irrecoverable loans as shown by a mean of 2.85. Loan protection showed a positive influence on the growth of ESCAs. This means that as loan protection increases the growth of ESCAs also increases.

It was observed that the default risk had a negative influence on the growth of ESCAs. This clearly shows that any increase in default risk negatively affects growth of ESCAs. This shows that as default risk decreases the growth of wealth increases. Gaita (2007) showed that the lending institutions were not growing significantly due to poor lending practices and recommended that lending institutions should make products and services more available. He also recommended that favorable regulatory and legal framework is important for the growth of the institution. This agrees with the current study in that when ESCAs efficiently manages loans, there is high quality loan management and the average collection period is short leading to growth of ESCAs. In addition, realistic protection leads to reduced overstatement which enhances shareholders' confidence retention, attraction of prospective members, and prevention of potential crises.

It was noted that most of the employees in ESCAs had attained diploma in their academic qualifications. None of the respondents had attained a Ph.D. Most of the employees had attained technician and diploma levels in their professional qualifications. Majority of the respondents agreed that ESCAs did not provide employees with the opportunity to attend short-term target oriented courses. The low levels of academic and professional

qualifications can be attributable to poor remunerations and poor working conditions in ESCAs. It was observed that staff competence had a strong positive relationship.

The findings showed that most of loan products were applied for by borrowers, were designed to fit members' needs and there was regular diversification of products in ESCAs. This ensures satisfaction of members in meeting their needs. ESCAs should, therefore, design proper mechanisms so as to enhance innovativeness which leads to variety and quality loan products hence growth of ESCAs.

Innovativeness showed a positive relationship with a growth of ESCAs. Having looked at components of financial stewardship, it is therefore important for ESCAs to promote financial stewardship so as to promote growth of ESCAs. This is based in the fact that financial stewardship showed significant positive relationship with the growth of ESCA.

According to Mudibo (2005), the major financial decisions involved in financial stewardship include product innovation. Brounen (2001) found that better governed firms were relatively more profitable, more valuable, and paid out more dividends to their shareholders. This is in agreement with this study in that the staffs making financial decision need to have requisite skills and uphold professionalism among other competencies to arrive at a sound working investment solution. However, he laid more emphasis on the value of governance to the shareholders while this study lays more emphasis on the value to the ESCAs.

The second objective was to determine whether the growth of ESCAs is determined by capital structure. The findings on individual components of capital structure showed that most of the ESCAs use cost of capital when determining sources of funds and careful

evaluations are made when determining sources of funds. The study analyzed individual components of capital structure and it was observed that share capital showed a significant positive relationship with growth of ESCAs.

Institutional capital also showed a significant positive relationship with growth of ESCAs. This could be attributable to the fact that it is an internal fund which is cost free. Adequate institutional capital should, therefore, be accumulated so as to cushion the ESCAs against losses. It was also observed that the relationship between savings and growth of ESCAs was weak. This could be attributed to the fact that these are member's funds which are withdrawable on demand.

Debt capital is external fund hence it tends to be costly to ESCAs. The ESCAs should, therefore, apply proper capital mix in their financing. ESCAs should aim at minimizing the use of debt capital in their financing so as to be able to pay the related costs.

The significant relationship between capital structure and growth of ESCAs could be attributable to appropriate mix of internal and external funds in financing the firm's assets. This implies that proper capital structure mix can lead to growth of ESCAs. WOCCU (2007) indicated that savings and credit cooperatives should be funded by pre-determined financing mix. This mode of financing would discourage flexibility in the choice of financing options. This study emphasizes on the accumulation of internal financing for long-term sustainability.

Agrawal et al., (2002) found that members' funds had a central role in cooperative performance. This agrees with this study to some extent as it also emphasizes on the use of share capital and accumulation of institutional capital. This study does not embrace the

use of members' savings in financing in view of the fact that these are withdrawable on demand and carry fixed charges. Fiorillo (2006) found that external funds did not help a weak savings and credit cooperatives society become strong. It was recommended that external funding should be discouraged and instead encourage and promote a strong saving culture.

The third objective was defined as to determine whether the funds allocation strategy affect the growth of ESCAs. This involves the prudent funds allocation strategy which boosts the volume of returns with minimum risk. The study revealed that returns on loan investment had a positive significant relationship with growth of ESCAs. This is attributable to the fact that loans are the core investment for ESCAs.

Liquid investments showed a strong positive significant relationship with growth of ESCAs. This could be attributable to the fact that liquid investments can be converted into cash easily to meet short-term obligations. This finances liquidity gaps hence enhancing stability of ESCAs. Non-earning fixed assets showed a negative relationship with growth of ESCAs. This implies that acquisition of those assets should be done wisely so that they are able to repay their current cost. It also depicts that investment in such assets should be minimized as they do not generate any returns but only support cash generating units.

The illiquid investments showed a positive coefficient. This means that any increased investment in illiquid investments leads to a decline in growth of ESCAs. On overall, funds allocation strategy and growth of ESCAs showed strong positive significant relationship. Prudent investment strategies therefore enhance growth of ESCA. Kaloi

(2004) found that among other factors, failure to invest in illiquid investments led to losses hence no growth. This is not in agreement with this study since the study emphasizes on investment in liquid investments.

Ogbimi (2006) found that the sources of financial resources were many and varied; lack of self-discipline in saving money, impulse buying as well as spending too much on ceremonies were the major problems of financial management of rural women.

The above mentioned studies resound what has been observed in the current study in that the way the income is going to be distributed affects the growth of the ESCAs and its wealth. The decision in the allocation of funds of ESCAs is critical.

5.3. Conclusion

To sum up the study the collected data have been analyzed and discussed with the boundary of the objective of the study. So the issue addressed in the study in relation to the determinants of growth of employees' savings and credit associations is concluded as follows:

The multivariate model is used to analyze the determinants of growth of employees' savings and credit association. Using the secondary data collected from financial records of ESCAs, the growth of ESCA and independent variables are estimated for this analysis. Based on the results of tests of hypotheses the study made the following conclusions:

On hypothesis number one: there is no association between financial stewardship and growth of ESCAs, the study accepted the alternative hypothesis and concluded that financial stewardship is an important determinant of growth of ESCA.

Hypothesis number two: there is no association between capital structure and growth of ESCAs is rejected. The study accepted the alternative hypothesis and concluded that capital structure is determinant of growth of ESCAs.

Hypothesis number three: there is no association between funds allocation strategy and growth of ESCAs, the study accepted the alternative hypothesis and concluded that funds allocation strategy is an important determinant of growth of ESCAs.

The study also used mean and standard deviation to analyze primary data and concluded that the use of institutional capital as a mode of financing ESCA's activities would ensure their sustainability in the competitive cooperative sector. That growth of ESCAs' wealth significantly depends on financial stewardship, capital structure, and funds allocation strategy.

5.4. Recommendations

The study finds it prudent to make a few recommendations which are considered important to guide other readers, the ESCAs and policy-makers. From the study the following directions for growth of ESCAs are recommended:

i. ESCAs credit policies should be the one that would enhance the evaluation of loan applications by ensuring that loan applications are evaluated and ranked according to the by-laws. High compliance would lead to growth because the loan eligibility depicted a positive relationship with growth of ESCAs. ESCAs should ensure proper loan disbursement to facilitate loan recovery and minimize administrative costs. Loan disbursement would, therefore, lead to growth of ESCAs.

ii. ESCAs should make adequate loan provisions to promote safety of funds. This will ensure that loan assets are not overstated.

iii. ESCAs should make arrangements for their employees to attend more short term target oriented trainings. The academic, professional and short term target oriented trainings ensure growth of ESCAs.

iv. The ESCAs should apply proper financing mix in their capital structure. This is due to the fact that capital structure showed a strong insignificant relationship with growth of ESCAs. There should, therefore, be optimum mix between share capital, institutional capital, savings and debt capital since any improper mix does not contribute significantly to the growth of ESCAs.

v. The government should oversee ESCAs to ensure that institutional capital is used to grow ESCA's wealth.

vi. The study observed that the relationship between non-earning fixed assets and growth of ESCAs was inversely proportional. ESCAs should minimize investment in the non-earning fixed assets since any increased investment in these assets leads to decrease in growth.

From this study the following directions for future research in growth of ESCAs are recommended:

1. Study to be done on effects of board members decisions on growth of ESCAs.
2. Study on capital structure methods and growth of ESCAs.
3. Study to investigate methods of funds allocation strategy and growth of ESCAs

References

Abdullah, H. & Valentine, B. (2009), fundamental and ethics theories of corporate governance, *journal of middle eastern finance and economics,* 4, 88-96.

ACCOSCA, 1990, savings and credit cooperative development office in-country training programme Addis Ababa, 1-13 April (Nairobi).

Adeyemo, R. & Bamire, A. S. (2005), saving and investment patterns of cooperative farmers in southwestern Nigeria*, journal of social science*, 11(3): 183-192.

Agrawal, A. & Chadha, S. (2005), corporate governance and accounting scandals, *journal of law and economics*, 48, 371-406.

Agrawal, A. & Cooper, T. (2007), c*orporate governance and accounting scandals: evidence from top management, CFO and auditor turnover*. Tuscaloosa: Culverhouse College of Business.

Agrawal, R., Raju, K. V., Reddy, K.P., Srinivasan, R., & Sriram, M. S. (2002), *member-funds and cooperative performance,* research paper, Indian institute of management, state of Andhra Pradesh, India.

Ahmed, H.J.A, & Hisham, N. (2009), revisiting capital structure theory: a test of pecking order and static order trade-off model from Malaysian capital market, *international research journal of finance and economics,* 30, 58-65.

Aneshensel, C. S. (2004), *Univariate analysis: central tendency, spread, and associations,* illustrated edition, Los Angeles: University of California.

Archer, S. & Karim, R.A.A. (2006), on capital structure, risk sharing and capital adequacy, in Islamic banks, *International journal of theoretical and applied finance,* 09(03), 269-280.

Asher M. G.. (2007), reforming governance and regulation of urban co-operative banks in India, *journal of financial regulation and compliance,*15(1), 20-29.

Baker, H. K., Dutta, S. & Saadi, S. (2008), impact of financial and multinational operations on manager perceptions of dividends, *global finance journal, 2008,* 19(2), 171.

Banjerjee, B. (2005), *financial policy and management accounting,* 7th edition, Mumbai: PHI Learning Pvt. Ltd.

Beck, T., Levine, R. & Loayza, N. (2000), finance and the sources of growth, *journal of financial economics* 58(1), 261-300.

Benninga, S. & Czaczkes, B. (2000), *financial modeling*, 2nd edition, cambridge: MIT Press.

Bhimani, A. (2008) making corporate governance count: the fusion of ethics and economic rationality, *journal of management and governance*, 2(2), 135-147.

Bierens, H.J. (2007), M*ulticollinearity*, University Park, Pennsylvania state university.

Blair, M.M. (1995), *ownership and control: rethinking corporate governance for the twenty-first century*, Washington DC: Brookings Institution.

Bowen (2004), growth of surplus and financial stewardship in savings and credit cooperative societies, research paper, center for business and corporate finance, Nigeria.

Brounen, D. & Eichholtz, P. A. (2001), capital structure theory evidence from European property companies' capital offerings, *journal of real estate economics,* 21(4, 615-632.

Bujang, I. & Nassir, A.M. (2007), the relevance of Gordon's model and earnings multiplier approaches in emerging stock market: test with appropriate refinements, *journal of international research journal of finance and economics,* 7,140-152.

CGAP. (2005), *working with savings and credit co-operatives: helping to improve donor effectiveness in microfinance, donor brief No. 25,* Washington, DC: Pact Publications.

Chava, S. & Roberts, M. R. (2008), How does financing impact investment? The role of debt covenants, *journal of finance, 2008,* 63(5), 2085-2121.

Chege, A. (2006), *an investigation in determinants of loan defaults within the banking industry, a case study of HFCK*.

Chen, J. (2006), *a comparison with behavioral theories,* University of Northern British Columbia, Prince George: BC, Canada.

Chorafas, D. N. (2004), *economic capital allocation with Basel II: Cost, benefit and implementation procedures*, illustrated edition, London: Butterworth-Heinemann.

Clarke, T. (2004), *Theories of corporate governance: The philosophical foundations of corporate governance*, 1st edition, Routledge: London and New York.

Daly, C.M., Dalton, D.R. & Canella, A.A. (2003), corporate governance: Decades of dialogue and data, *academy of management review,* 28(3), 371-382

Davies, P. (2005). The governance of cooperatives under competitive conditions: Issues, processes and culture, *journal of corporate governance*, 1, 28-29.

Davis, P. & Worthington, S. (2005), Continuity in capital accumulation the case of the British cooperative bank, *journal of business ethics*, 12(1), 849-859.

Dejene Aredo (1993), the informal and semi-formal financial sectors in Ethiopia: A study of the Iqqub, Iddir and savings and credit co-operatives, Ottawa, Canada.

Deji, O. F. (2005). Membership of cooperative societies and adoption behavior of women

farmers: Implication for rural development, *Journal of social science*, 10(2), 145-147.

Delcoure, N (2008). Corporate branding and SACCOs' wealth, *journal of business industry & economics*, 12, 313-367.

DeMarzoy, P. M., Fishmanz, M. J., Hex, Z. & Wang, N. (2010), *Dynamic agency and the q Theory of investment,* Columbia: MIT.

Det Wet J.H.H.(2004). *A strategic approach in managing shareholders wealth of companies listed on the JSE securities exchange South Africa*.

Donaldson, T. and Preston, L.E. (1995), the stakeholder theory of the corporation: Concepts, evidence and implications, *academy of management review,* 20, 65-91.

Easterby-Smith, M., Thorpe, R. & Jackson, P. (2008), *Management research*, 3rd edition, London: SAGE Publications Ltd.

Eriksson, P. & Kovalainen, A. (2008), *Qualitative methods in business research*, 1st edition. London: SAGE Publications Ltd.

Evans A. C. (2001), *Strengthening credit unions in Sri Lanka*: Research monograph, world council of credit unions, Madison: WI, USA.

Financial Sector Development Secretariat (2007), *Umurenge SACCOs strategy,* Kigali, Rwanda: ministry of finance and economic planning.

Fiorillo, A. (2006), *the effects of wholesale lending to SACCOs: A* case study in Kampala, Uganda.

Flannery, M. J. & Hankins K. W., (2007), *A theory of capital structure adjustment speed*, working paper, University of Florida, USA.

Gaita, S. (2007), Factors that influence the growth of enterprises, a case study of enterprises

participating in Msingi loan from Bomas in Thika district, Kenya.

Gardner, B. & Lerman, Z. (2006), Agricultural cooperative enterprise in the transition from socialist collective *farming, journal of rural cooperation* 34(1), 1- 8.

Gijselinckx, C. & Develtere, P. (2007), *The cooperative trilemma, cooperatives between market, state and the civil society*, research paper, Catholis University, Leuven, Belgium.

Grayson, D. (2004), some myths and legends in quantitative psychology, understanding statistics, Vol. 3 No. 1.

Grell, S. (2007), *Deepening outreach through credit unions, A review of the WOCCU Ecuador rural savings and credit with education project*, Research monograph, world council of credit unions, Madison: WI, USA.

Hein, E. (2008), *Shareholder value orientation, distribution and growth-short-and medium-run effects in a Kaleckian model, working paper No. 120,* Pre Vienna University of economics, Vienna.

Ho, R. (2006). *Handbook of Univariate and Multivariate data analysis and interpretation with SPSS*, central queensland University, North Rockhamton, Australia.

Horne, J. C. (2003), *Financial Management Policy*, 4th edition, Texas: Prentice hall.

Hung, D. (2008), Price earnings to growth by the numbers (Part 1 of 2), *Review of economics and statistics*, 41(2), 99-105.

Huyssteen, W. (2005), *A proposed credit rating methodology for cooperative banks in South Africa*. Conf., 18th annual SAFA conference, Cape Town, RSA.

Jensen, M. (2001), Value maximization, stakeholder theory, and the corporate objective function, *journal of applied corporate finance*, 22, 32-42.

Jensen, M.C. & Meckling, W.H. (1976). Theory of the Firm: Managerial behaviour, agency costs, and ownership structure, *journal of financial economics,* 3, 305-360.

Kaloi, J.M. (2004), *Factors contributing to liquidity problems on saving credit cooperatives*, Moi University, Kenya.

Karki, B.B. (2005), Strategic planning in cooperative sector: A study on dairy cooperative, *The Journal of Nepalese business studies,* II (1), 72-80.

Kaupelytė, D. & Mccarthy. O. (2006), Risk Management in Lithuanian and Irish credit unions: trends and impacts on credit union development, *journal of rural cooperation*, 34(2), 179-194.

Keasey, K., Thompson S., & Wright M. (eds) (2004), *Corporate Governance: An international perspective*, London: Wiley.

Kim, E.H., Morse, A.& Zingales, L. (2006), What has mattered to economics since 1970, *journal of economic perspectives,* 20(4),189–202.

Kimani, A.W. (2007), *Inefficiency and ineffectiveness in credit administration, a case study of Chuna SACCO Society ltd*.

Kinuthia, P.M. (2007), *Management of loan default problems in SACCOs in Nairobi province.*

Kombo, D.K. & Tromp D.L.A. (2006), *Proposal and thesis writing an introduction,* Makuyu: Pualines Publications Africa.

Lari, L. (2008), *the power of financial ratios in detecting fraudulent financial reporting: The case of savings and credit cooperative societies.*

Maina, D. T., (2007), *corporate finance*, Nairobi: regional institute of cooperatives development and management.

Moreland, P. W. (1995), Alternative disciplinary mechanisms in different corporate systems, *Journal of Economic Behaviour and Organization,* 26, 17-34.

Mrema. M. (1988), Tanzanian women and progress in "Tuke" Consumers' marketing cooperative, PULA: *Botswana Journal of African Studies,* 8 (2), 18-36

Mudibo, E. K. (2005), Corporate governance in cooperatives: the East African experience, Conf. Pan-African consultative forum on corporate governance 2005, Dakar, Senegal.

Mugenda O.M & Mugenda A.G (1999), Research methods: quantitative and qualitative Approaches, African centre for technology studies press.

Munyiri, C. (2006), Study visit on the role of women in development of microfinance in Africa, *Digest 03*, 3, 1-6.

Muruana, M. N. (2007), *Effects of inflation on share capital and loan portfolio with the cooperative organizations: A case study of Chai saving and credit co-operative society.*

Mwakajumilo, S.L.I. (2011), *the role of informal microfinance institutions in saving mobilization, investment and poverty reduction, a case of savings and credit cooperative Societies in Tanzania from 1961-2008*, Turks and Caicos Islands of British west.

Nair, A. & Kloeppinger-Todd, R. (2007), *Reaching rural areas with financial services: Lessons from financial cooperatives in Brazil, Burkina Faso, Kenya, And Sri Lanka*. Discussion paper No. 35, World Bank, Washington, DC: USA

Nanka-Bruce, D. (2006), corporate governance, capacity utilization and growth, case study of Nepal cooperatives, *international review*, 20, 2.

Ofei, K.A. (2001), *Retooling credit unions: The case of credit union association of Ghana, IFLIP research paper 01-3*, international labor organization, University of Ghana, Legon.

Ogbimi,G.. E., Soyebo, K.O. & Alabi, D.L. (2006), Minimizing financial practices problems among rural women for sustainable economic empowerment. *Research journal of social sciences*, 1(1), 51-55.

Ogsi, O.D., Oghotomo, O.R., Taruhr, M.E. & Inoi, O.E. (2007), cooperative societies and the development of small scale furniture and tailoring enterprise: Evidence from Delta State Nigeria. *Pakistan journal of social sciences* 4(1), 69-77.

Overseas cooperative development council [OCDC], (2007), *Cooperatives: Pathways to economic, democratic and social development in the global economy*, Falls church, Virginia: US OCDC.

Padilla, A. (2002), Can agency theory justify the regulation of insider trading, *the quarterly Journal of Austrian economics*, 5(1), 3-38. 122

Pandey, I. M. (2010), *Financial management,* 9th edition, New Delhi: India Vikas publishing House PVL Ltd.

Papias, M. M. & Ganesan, P. (2009), Repayment behaviour in credit and savings cooperative societies: Empirical and theoretical evidence from rural Rwanda, *International journal of social economics,* 36(5), 608-625.

Philippon, T. (2006), *the y-theory of investment, stern school of business*, *working paper No. FIN-056-039*: New York University: NBER and CEPR.

Pischke, J.D. (1996), *Capital formation in agricultural cooperatives in developing countries: research issues, findings and policy implications for cooperatives and*

donors summary of an analytical paper, research paper, FAO cooperative, Rome, Italy.

Remezani, C.; Soenen L. & Jung, A. (2002), corporate surpluses and shareholder wealth creation: *financial analyst journal*, 58, 4

Richardson, C. (2001*), Surpluses gap theories of investment,* Conf., the University of Western Australia, Perth, Australia.

Ritter, J. R. & Huang, R. (2008), Testing theories of capital structure and estimating the speed of adjustment, *journal of financial and quantitative analysis*, Forthcoming, 1-14.

Rorden, S & Kristofer W. K. (2010), *Measuring and handling risk: How different financial institutions face the same problem*, MBA project, Malardalen University, Sweden.

Roselyne, J, (2007), *Loan defaulting among members in SACCOs: A case study of kevom cooperative society,* Kenyatta University of agriculture and technology, Juja, Kenya.

Ross, S. A. (1998), *Fundamentals of corporate finance* 4th edition, New York, U.SA: McGraw Hill.

Singh K.D. (2003), *Management economics theory and application*. 1st edition, Dehra Dun , India : Pal Singh.

Small Stocks Harris, M. & Raviv, A. (2008). Theories of capital structure. Journal of Finance, 46(1), 297-355.

Stein, J. C. (1988), Takeover threats and managerial myopia, *the journal of political economy*, 96(1), 61-80.

Steve L., Xiuping S. (2002), Corporate governance: paradigms, dilemmas and beyond, *journal of Leeds law school, Leeds Metropolitan University*, 2(1), 200.

Sundaramstukel, R. (2006), *Evaluating the role of Peruvian credit unions: A case study of 8 credit unions*, Research monograph, main street economics, world council of credit unions, Madison: WI, USA.

Tache, G. M. (2006), *SACCO promotion and development-Lira region*, Research paper, chemonics international, USAID, Lira, Uganda.

USAID. (2001), *Report to congress on the implementation of the support for overseas cooperative development act,* Washington: USAID.

Wieland, R. (2007), *Supporting credit union development in Afghanistan, An overview of issues important to the development of Sharia compliant cooperative finance*, Research monograph, main street economics, world council of credit unions, Madison: WI, USA.

World Bank (2007), *providing financial services in rural areas: A fresh look at financial cooperatives*, Washington DC, USA: World Bank.

World Council of Credit Unions [WOCCU] (2007), *Credit union growth program member income survey – 2007*, Research monograph, main street economics, world council of credit unions, Madison: WI, USA.

World Council of Credit Unions [WOCCU], (2007), *Cases study of four savings and credit cooperative societies (SACCOs) operating in the Hills of Nepal*, Research monograph, world council of credit unions, Madison: WI, USA.

Zetzsche, D. A. (2007), *an ethical theory of corporate governance history*, Research paper, Center for business and corporate law, Dusseldorf, Germany.

Appendices

Appendix I

Questionnaire

An assessment of determinants of growth of employees' saving and credit associations

This questionnaire is prepared by Msc in accounting and finance student of Addis Ababa University, college of business and economics. The objective of this questionnaire is to collect information concerning the determinants of growth of employees' saving and credit associations. You are kindly request to complete this questionnaire sincerely and honestly. All information you provide will be kept with strict for academic purpose and will not be used for other purpose than the intended purpose.

General direction

- Please take a few minutes to complete this questionnaire
- Please answer the questions correctly and as accurate as possible
- Tick the correct answer in the boxes provided against the questions where provided.
- Write brief answers where explanation is required.
- You need not write your name on the questionnaire.

Abbreviations

SD Strongly disagree for which response scores 1

D Disagree for which response scores 2

N Neutral for which response scores 3

A Agree for which response scores 4

SA Strongly agree for which response scores 5

ESCA Employees' Savings and Credit Associations

Section A: Background information

1. When was your ESCA started? _____

2. Please indicate the staff in which you are working in your ESCA.

	Staff your are working on	**Year of experience**
Finance staff		
Accounts staff		
Other Staff (specify)		

Section B: Growth of shareholders' wealth

3. Please tick the one corresponding to the correct answer in each statement regarding profitability and distribution of income in your ESCA.

	SD	**D**	**N**	**A**	**SA**
Our ESCA has been making a surplus every year from 2008 to 2013					
Our ESCA has been declaring dividends for the five years					
Dividends per share have been increased in the last five years					
The ESCA has also been contributing to retained earnings					
The retained earnings have been growing annually from 2008 to 2013					

4. How do your ESCA determine the surplus distributed as dividends, rebates and institutional capital (retained earnings)? Please tick the box corresponding to the correct answer to the question. Tick only one box

No specific method is used ☐

Using a standard proportion ☐

Depending on volume of profits ☐

Depending on the capital structure ☐

Depending on funds allocation strategy ☐

Other……...……...

……

Section C: Financial stewardship

Part I: Loan evaluation

5. Loan Eligibility.

Please indicate the level of agreement or disagreement with each of the following statement regarding loan evaluation in your ESCA.

	SD	**D**	**N**	**A**	**SA**
Loan applications are approved by special committee in our ESCA					
Our ESCA by laws are the basis of loan evaluation					

6. Rankings.

Please indicate the level of agreement or disagreement with each of the following statement regarding loan application rankings in your ESCA.

	SD	**D**	**N**	**A**	**SA**
Loan applications in our ESCA are ranked according to by-laws					
Our ESCA staff sometimes do not rank loan applications at all					

Part II: Loan disbursement

7. Please indicate the level of agreement or disagreement with each of the following statement regarding loan disbursement in your ESCA.

	SD	D	N	A	SA
Loan pay-out has been increasing in our ESCA the last five years					
Our ESCA always disburses loans as they fall due					

Part III: Loan recovery

8. Please indicate the level of agreement or disagreement with each of the following statement corresponding to the correct answer in the table below

	SD	D	N	A	SA
Loan borrowers always honor loan repayment on due date					
Loan delinquency has been minimized in the last five years					
Loan delinquency is avoided at all costs					
Members of our ESCA are eager to repay their loans promptly					

Part IV: Loan protection

9. Please indicate the level of agreement or disagreement with each of the following statement as regards loan protection in your ESCA.

	SD	D	N	A	SA
Our ESCA has a provision for irrecoverable loan					
All irrecoverable loan over one year are written off					

Part V: Default risk

10. Default risk assessment

Please indicate the level of agreement or disagreement with each of the following statement.

	SD	D	N	A	SA
This ESCA awards loans depending on borrower's ability to pay					
Loans with lower default risks are paid in full in the ESCA					
Where default risk is high the ESCA awards loan depending the borrower's ability to pay					

Part VI: Staff competence

11. Academic qualifications

Please indicate your academic qualification

Secondary school	Undergraduate degree	Masters degree	PhD	Other (specify)
1	2	3	4	5

12. Professional qualifications

Please indicate your professional qualification

None..... 1

Technician (e.g. ATC) 2

Diploma (e.g. CPA I)..... 3

Professional level I..... 4

Professional level II 5

Professional level III..... 6

13. Target oriented training

Please explain the average period provided for you to attend short term courses/seminars/ workshops on financial practice each year? _____

Part VII: Innovativeness

14. Please indicate the level of agreement or disagreement with each of the following statement regarding loan products in your ESCA.

	SD	**D**	**N**	**A**	**SA**
All loan products are applied for by borrowers to our ESCA					
There is regular diversification of products in our ESCA					
There are difficulties in marketing some loan products in our ESCA					
All loan products are designed to fit members' needs in our ESCA					

Section D: Capital structure

15. Please indicate the level of agreement or disagreement with each of the following statement regarding capital structure of your ESCA

	SD	**D**	**N**	**A**	**SA**
The ESCA uses cost of capital when determining the source of fund					
The ESCA makes careful evaluations when deciding source of fund					
Profitability is a determinant of the source of fund in this ESCA					
This ESCA mobilizes fund after consulting the financial managers					

Section E: Funds allocation strategy

16. Please indicate the level of agreement or disagreement with each of the following statement corresponding to the correct answer in the table below

	SD	D	N	A	SA
Income from loans cover all operating costs					
Income from loans in our ESCA maintains retained earnings					
The ESCA always pays dividends after profits are announced					

17. If you have any non financial investments then please indicate the level of agreement or disagreement corresponding the correct answer in each statement below

	SD	D	N	A	SA
Non-financial investments pay their recurrent cost in our ESCA					
Non-financial investments always pays initial outlay in our ESCA					
Non-financial investments support other projects in our ESCA					
Buying of fixed asset is always justified using cost/benefit analysis					

18. If you have any illiquid investments then please indicate the level of agreement or disagreement corresponding to the correct answer in each statement below

	SD	D	N	A	SA
Illiquid investments pay their recurrent cost in our ESCA					
Illiquid investments always pays initial outlays in our ESCA					
Illiquid investments provides for sinking fund in our ESCA					
Buying of fixed asset is always justified using cost/benefit analysis					

Thank you for your cooperation

Appendix II

Document review tool

Section A: Growth of ESCAs

1. Please fill in the table below correctly. Indicate the value on each of the following items for the years given

Items / Years	2009	2010	2011	2012	2013
Profits (Birr)					
Dividends declared (Birr)					
Rebates (Birr)					
Number of shares					
Share capital (Birr)					
Opening institutional capital (Birr)					

Section B: Financial stewardship

2. May you please fill the table below on the qualification of the accounts staff? Specify the total number of staff whose highest qualification is the one indicated.

Items / Years	2009	2010	2011	2012	2013
Academic qualifications					
Secondary school					
Undergraduate degree					

Masters degree					
PHD					
Others					
Professional qualifications					
None					
Technician (e.g. ATC)					
Diploma (in accounting)					
Professional level I					
Professional level II					
Professional level III					

(b) Please fill the table below on short term target oriented training and staff experience for the period between 2009 and 2013

Target oriented training	**2009**	**2010**	**2011**	**2012**	**2013**
Number of staff who attended					
Average time taken by each staff					
Work experience	**2009**	**2010**	**2011**	**2012**	**2013**
Average experience					
Average period with current employment					

3. Innovativeness

Please list the type of loans ever offered by your ESCA from 2009 to 2013 and tick corresponding to that product the year it was offered.

Loan products / Years	2009	2010	2011	2012	2013

4. Loan evaluation

Please fill the table below with correct number of loan applications for each requirement in the listed years

Items / Years	2009	2010	2011	2012	2013
Number of loan application approved					
Number of eligible applications approved					
Number of application correctly ranked					
Number of loan applications paid					

5. Loan disbursement

a) Please fill the table below with correct value for each asset in the listed years

Years / Asset	2009 (Birr)	2010 (Birr)	2011 (Birr)	2012 (Birr)	2013 (Birr)
Total loan disbursed this year					
Total assets					
Total number of members who received loans					
Total membership this year					

b) Please fill the table below with correct value for each expense in the listed years

Years / Asset	2009 (Birr)	2010 (Birr)	2011 (Birr)	2012 (Birr)	2013 (Birr)
Sitting allowance when processing loans					
Bank charges for loan disbursement					
Traveling allowances for loan processing					
Other expenses on loan processing					

6. Loan repayment

May you please provide details of monthly loan repayment amount for each application?

_____

_____

_____

_____

_____

_____

_____

7. **Loan protection**

Please fill the table below with correct amount for each item in the listed years

Years / Asset	2009 (Birr)	2010 (Birr)	2011 (Birr)	2012 (Birr)	2013 (Birr)
Irrecoverable (non performing) loans					
Total loans balance					
Provision for loan loss					

8. **Default risk assessment**

May you please provide details of loan disbursements and the loanees earning details?

_____

_____

_____

_____

Section C: Capital structure

9. **Source of funds**

Please fill the table below with correct amount for each item in the listed years.

Years / Item	2009 (Birr)	2010 (Birr)	2011 (Birr)	2012 (Birr)	2013 (Birr)
Total savings					
Total debt capital					
Return on shares					

Return on savings					
Return on retained earnings					
Return on debt capital					
Cost related to shares					
Cost related to savings					
Cost related to retained earnings					
Cost related to debt capital					

Section D: Funds allocation strategy

10. Financial investments

(a) Please fill the table below with correct amount for each item in the listed years on investments on loans

Amount in the years / **Item**	**2009 (Birr)**	**2010 (Birr)**	**2011 (Birr)**	**2012 (Birr)**	**2013 (Birr)**
Income from loans					
Total operating cost					
Liquid investments					
Total Investments					

(b) Please list all the illiquid investments, returns on each investment for the period 2009 to 2013 using the format below:

Item \ Amount in the years	2009 Birr	2010 Birr	2011 Birr	2012 Birr	2013 Birr
Returns					
Investment					
Returns					
Investment					
Returns					
Investment					
Returns					
Investment					

(C) As regards of non-earning fixed assets, please fill the table below for the listed years

Asset	**Cost type**	**2009**	**2010**	**2011**	**2012**	**2013**
	Acquisition Cost (Birr)					
	Depreciation (%)					
	Life span (years)					
	Cost of outsourcing(Birr)					
	Acquisition Cost (Birr)					
	Depreciation (%)					
	Life span (years)					
	Cost of outsourcing(Birr)					
	Acquisition Cost (Birr)					
	Depreciation (%)					
	Life span (years)					
	Cost of outsourcing(Birr)					
	Acquisition Cost (Birr)					
	Depreciation (%)					
	Life span (years)					
	Cost of outsourcing(Birr)					

Appendix III

Items adjusted to improve reliability of instruments

1. Financial stewardship

The items adjusted in financial stewardship are;

- Academic qualification
- Professional qualification
- Target oriented training
- Retention period

2. Funds allocation strategy

The items adjusted in funds allocation strategy are;

- Income from loans covers all operating costs.
- Non –financial investments provide for sinking fund
- Non –financial investment support other projects
- Illiquid investments always pay initial outlay
- Illiquid investments always support other projects.

3. Capital structure

No item was removed from capital structure

Appendix IV

Operationalization of Variables

Primary Variables		**Component variables**	**Measured as**	**Explanation of regression operetionalization**	**Equation for regression**
Financial stewardship	**Loan management**				
	Loan evaluation (LE)	Eligibility (E)	E = Eligible loan applications approved X 100 / Total loan applications approved	Obtain value of eligibility for each ESCA for a year	LE = F(E,R)
		Ranking (R)	R = Loan applications correctly ranked X 100 / Loan applications disbursed	Obtain value of ranking for each ESCA for a year	
	Loan disbursement (LD)	Efficiency of disbursement (ED)	ED = Total loans disbursed X 100 / Total assets	Obtain value of efficiency of disbursement for each ESCA for a year	LD = F(ED,PR,AE)
		Penetration rate (PR)	PR = Members who received loans X 100 / Total membership	Divide members who received loans to total membership for each ESCA in a year	
		Administrative efficiency (AE)	AE = Total administrative costs X 100 / Returns on loans	Obtain value of administrative efficiency for each ESCA for a year	
	Loan recovery (LR)	Loan repayment (LRP)	LRP = Loan recovery date – Expected loan recovery date	Obtain value of loan repayment for each ESCA for a year	LR = F(LRP,LDL)
		Loan delinquency (LDL)	LDL = Delinquent loans X 100 / Total Loans	Obtain value of loan delinquency for each ESCA for a year	
	Loan protection (LP)	Loan protection (LP)	LP = Provision for loan loss X 100 / Irrecoverable loss	LP as the ratio of provision for loan loss to total Irrecoverable Loans for each ESCAs in a year	LP = F(LP)
	Default risk (DR)	Default risk (DR)	DR = Monthly Net Income X 100 / Monthly Principal and Interest Payment on Loan	Obtain default risk for each ESCA for a year	DR = F(DR)

	Institutional strength				
	Staff competence (SA)	Academic qualification (AQ)	The most frequent academic qualification	Classify the academic qualification and get the most frequent academic qualification classification for all respondents	SA = F(AQ,PQ,TOT,Exp)
		Professional qualification (PQ)	The most frequent professional qualification	Classify the professional qualification and get the most frequent professional qualification	
		Target oriented training (TOT)	$TOT = \frac{\sum_{t=1}^{n}(\text{attended for the year})}{T}$	Average training period in a year for all ESCAs	
		Experience (Exp)	$Exp = \frac{\sum_{t=1}^{n}(\text{exprience in years})}{T}$	Obtain the average mean current experience in years for the staff of all ESCAs	
	Innovativeness	Innovativeness	$INN = \frac{\text{Available loan products}}{\text{Potentioal loan products}}$	The quality of loan and diversity in loan products in each ESCA in a year	INN = F(INN)
	Financial stewardship (FS) = F(LE, LD, LR, LP, DR, SA, INN)				

Primary Variables		**Component variable**	**Measured as**	**Explanation of regression operetionalization**	**Equation for regression**
Capital structure	**Share capital**	Share capital (SC)	$SC = \frac{\text{Return on shares – Related costs}}{\text{Share capital}} \times 100$	Obtain the average rate of surpluses from shares	SC = F(SC)
	Savings/deposits	Savings/deposits (SV)	$SV = \frac{\text{Return on savings/deposits – Related costs}}{\text{Total savings/deposits}} \times 100$	Obtain the average rate of surpluses from savings/deposits	SV = F(SV)
	Institutional capital	Institutional capital (IC)	$IC = \frac{\text{Return on institutional capital}}{\text{Total institutional capital}} \times 100$	Obtain the average rate of surpluses from institutional capital	IC = F(IC)
	Debt capital	Debt capital (DC)	$DC = \frac{\text{Return on debt capital – Related costs}}{\text{Total debt capital}} \times 100$	Obtain the average rate of surpluses from external credit	DC = F(DC)
	Capital structure (CS) = F(SC, SV, IC, DC)				

Primary Variables		Component variable	Measured as	Explanation of regression operetionalization	Equation for regression
Fund allocation strategy	**Loans**	Loans (LO)	LO = Net income from loan as of current year X 100 / Loans disbursed	Obtain the average profit from loans disbursed for each ESCAs in a year	LO = F(LO)
	Liquid investments	Liquid investment (LI)	LI = Total liquid investments as of current year X 100 / Total investment	Calculate the average income from liquid investment	LI = F(LI)
	Illiquid investments	Illiquid investment (II)	II = Net income from illiquid investment as of current year X 100 / Total illiquid investment	Obtain the average income from illiquid investments for each ESCAs in a year	II = F(II)
	Non earning fixed assets	Non earning fixed asset (NA)	NA = Acquisition cost of non earning fixed asset X 100 / Out sourcing cost of non earning fixed asset	Obtain the ration of the acquisition cost of non earning assets to the outsourcing cost of non earning assets	NA = F(NA)
	Fund allocation strategy (CA) = F(LO, LI, II, NA)				