

**EFFECTS OF FINANCIAL INNOVATION ON THE FINANCIAL
PERFORMANCE OF DEPOSIT TAKING SACCOS IN NAIROBI COUNTY**

BY:

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DECLARATION

This research project report is my original work and has not been presented for a degree in any other university.

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DEDICATION

This research project is dedicated to Almighty God the giver of life for his power and favor upon my life. My parents for believing in me and for my upbringing both in life and education. My brothers and sisters for always being a source of encouragement.

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ABSTRACT

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. In recent times Sacco's are facing cut throat competition stemming from the new players that have entered the market for financial services. This study therefore gives a clear insight on the financial benefits enjoyed by Saccos in the event they adopt various financial innovations and the entire benefits accrued in terms of the organisational profitability and sustainability. These financial innovations bring about an efficient customer services system and reduction in operational costs. The objectives of the study were to establish the relationship between financial innovation and financial performance of Deposit taking SACCOs in Nairobi County. The population of interest was all the 44 deposit taking Sacco's in Nairobi County. Secondary data on performance was sourced from the Sacco's annual financial reports and Sacco Societies Regulatory Authority (SASRA) supervisory reports. The data covered the period 2008 to 2012. Data analysis involved reducing accumulated data to manageable levels, developing summaries, looking for patterns and applying statistical techniques.

This Study established that Saccos have started embracing the use of money transfer services such as M-pesa, Zap, Orange Money and Yu cash, but they were yet to link them with their back office financial databases. The study also established that Saccos were slowly adopting internet banking. This has brought about the usage of information technology, Internet, ICT infrastructure, websites, and computer technology, in addition to Internet connectivity technology. This study therefore recommended that SACCO must keep abreast with new trends in the financial market. Such areas include ATMs and other technology driven products. The management of these Saccos should approve the ICT budgets to acquire new software to fully automate its operations which will then form a platform from where new products will be served.

TABLE OF CONTENT

DECLARATION.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENT.....	iv
ABSTRACT.....	v
TABLE OF CONTENT.....	vi
LIST OF TABLES	viii
ABBREVIATIONS.....	ix
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.1.1 Financial Innovation.....	1
1.1.2 Financial Performance.....	3
1.1.3 Financial Innovation and Financial Performance.....	5
1.1.4 Deposit Taking Saccos in Nairobi County	6
1.2 Research Problem.....	8
1.3 Objectives of the Study	8
1.4 Value of the Study.....	9
CHAPTER TWO	10
LITERATURE REVIEW	10
2.1 Introduction	10
2.2 Theoretical Literature.....	10
2.2.1 Constraint Induced Financial Innovation Theory.....	10
2.2.2 Circumvention Innovation Theory	11
2.2.3 Transaction Cost Innovation Theory	11
2.2.4 Regulation Innovation Theory.....	12
2.3 Empirical Literature	14
2.4 Review of Local Research.....	20
2.5 Summary	24
CHAPTER THREE	25
RESEARCH METHODOLOGY	25
3.1 Introduction	25

3.2 Research Design.....	25
3.3 Population and Sample.....	25
3.4 Data and Data Collection Instruments	25
3.5 Data Analysis	26
3.5.1 Conceptual model.....	26
3.5.2 Analytical Model	26
3.6 Data Validity and Reliability.....	27
CHAPTER FOUR.....	29
DATA ANALYSIS RESULTS AND DISCUSSIONS	29
4.1 Introduction	29
4.2 Summary Statistics.....	29
4.2.1 Descriptive Analysis.....	29
4.3 Estimated or Empirical Model	34
4.4 Discussions.....	36
4.5 Summary	39
CHAPTER FIVE:	40
SUMMARY AND CONCLUSION	40
5.1 Introduction	40
5.2 Summary of the Study.....	40
5.3 Conclusion.....	41
5.4 Limitations of the Study.....	41
5.5 Recommendations for Further Research.....	42
REFERENCES.....	44
APPENDIX 1:INTRODUCTORY LETTER.....	47
APPENDIX 1:QUESTIONNAIRE.....	48
APPENDIX III: SUMMARY OF DATA FOR THE LAST FIVE YEARS.....	51

LIST OF TABLES

Table 4.1: Sacco Ownership Category.....	29
Table 4.2: Duration Operated in Kenya.....	30
Table 4.3: Saccos Branches	30
Table 4.4: Areas the Sacco has Undertaken Innovation	31
Table 4.5: Benefits of Financial Innovation	31
Table 4.6: Percentage of Sacco's Introducing Innovation Services	32
Table 4.7: Various Innovations and its Effects.....	33
Table 4.8: Presentation of Statistics of Variables Used.....	34
Table 4.9: Model Summary	34
Table 4.10: Anova (Analysis of Variances).....	35
Table 4.11: Output of Regression-Coefficients	36

ABBREVIATIONS

SACCOS:	Savings and Credit Cooperative Societies
SASRA:	Sacco Societies Regulatory authority
MOCD&M:	Ministry of Co-operative Development and Marketing
OECD:	Organization of Economic Cooperation and Development
FOSA:	Front Office Services Activity
ATM's:	Automated Teller Machines
EPS:	Earnings Per Share

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Generally, performance of a business entity is framed as an ability of enterprise to reach certain results which are subsequently the object of comparison in time or in space. In relation to above mentioned widening, strengthening and global competition, performance of a business entity is often connected with its chance on survival on a market that inevitably joined just to innovations. In present, it is just about the innovations as about a critical process without that business entities are not able to maintain the place on a market. Then, business entities spend great amounts of their resources while it is expected that these investments would be gained back in the form of future profits. Innovation is also said to be the most important factors in establishing and maintaining a competitive advantage.

With markets and technology changing fast, and good ideas quickly copied, there is continual pressure to devise new and better products, processes and services. In addition, fast changing environment leads to shorter product lifetimes and hence a need to replace products sooner. In the contemporary economy, customers have more choice and are more sophisticated, segmented and demanding, and expect more in terms of customization, newness, quality and prices. That is why innovation is now moving to the top of the agenda for organizations and many countries around the world so as to achieve economic development and poverty alleviation.

1.1.1 Financial Innovation

History shows that financial innovation has been a critical and persistent part of the economic landscape over the past few centuries. In the years since Miller's 1986 piece, financial markets have continued to produce a multitude of new products, including many new forms of derivatives, alternative risk transfer products, exchange traded funds, and variants of tax-deductible equity. A longer view suggests that financial innovation like

innovation elsewhere in business is an ongoing process whereby private parties experiment to try to differentiate their products and services, responding to both sudden and gradual changes in the economy. Surely, innovation ebbs and flows with some periods exhibiting bursts of activity and others witnessing a slackening or even backlash. However, when seen from a distance, the Schumpeterian process of innovation in this instance, financial innovation is a regular ongoing part of a profit maximizing economy (Tufano, 2012).

Much of the theoretical and empirical work in financial economics considers a highly stylized world in which there are few types of securities (debt and equity, perhaps) and maybe a handful of simple financial institutions (banks or exchanges.) However, in reality there is a vast range of different financial products, many different types of financial institutions and a variety of processes that these institutions employ to do business. The literature on financial innovation attempts to catalog some of this variety, describe the reasons why we observe an ever-increasing diversity of practice, and assess the private and social implications of this activity.

“Innovate” is defined in Webster’s Collegiate Dictionary as “to introduce as or as if new,” with the root of the word deriving from the Latin word “novus” or new. Economists use the word “innovation” in an expansive fashion to describe shocks to the economy (e.g., “monetary policy innovations”) as well as the responses to these shocks (e.g., Eurodeposits). Broadly speaking, financial innovation is the act of creating and then popularizing new financial instruments as well as new financial technologies, institutions and markets. The “innovations” are sometimes divided into product or process innovation, with product innovations exemplified by new derivative contracts, new corporate securities or new forms of pooled investment products, and process improvements typified by new means of distributing securities, processing transactions.

Schumpeter (1934) described different types of innovation: new products, new methods of production, new sources of supply, the exploitation of new markets, and new ways to organize business. In this research, OECD Oslo Manual (2005), which is the primary international basis of guidelines for defining and assessing innovation activities as well as for compilation and use of related data, has been taken as the fundamental reference

source to describe, identify and classify innovations at firm level. According to the manual, an innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations.

1.1.2 Financial Performance

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregate. Financial performance measures how well a firm is generating value for the owners. It can be measured through various financial measures such as Profit after Tax, Return on Assets and Return on Equity, EPS and any market value ratio that is generally accepted. Generally the financial performance of many financial institutions has been measured using a combination of financial ratios, analysis, benchmarking, measuring performance against budget or a mix of these methodologies. (Ahmad et al, 2011).

A basic tool of evaluation of financial performance of a business entity is financial analysis. Financial analysis, as a system of standard methods of financial assessment of procedures in a company, is constantly an integral part of the company's financial management. Nevertheless, this system is reprehended in many aspects while the most important critics are directed to the fact that traditional approaches of the financial analysis do not respect a range of factors which are supposed as more or less important according to various authors. (Tabas 2012) From these critics new direction of evaluation of company's performance marked as modern measures that press mainly for (Synek 2007); Reflection of implicit costs (especially in the sense of cost of equity), Preference of cash flow over profit, focus on operating activities, Respecting the primary principles of financial management, i.e. time and risk. In the frame of these modern measures of financial performance of company the most often mentioned are as follows; Discounted cash-flow (DCF), Cash-flow return on investments (CFROI), Return on Assets (ROA) and Return on Equity (ROE), Cash return on gross assets (CROGA), Market value added (MVA) and Economic value added (EVA).

Dissection of the measures of DCF and CFROI (e.g. Pavelkova & Knapkova, 2009; Marinič, 2008) detachedly shows that these measures are based on the dynamic methods of evaluation of investment effectiveness. Then, these measures are also mostly used for evaluation of investment effectiveness in respect of demandingness of their application in evaluation of company's performance. Despite of the fact that business entity as a whole is also a kind of investment, it is an investment that is specific in many aspects, especially in the context of duration of its economic life. Theory of the business entity is based on principle of "going concern" that presupposes infinite existence of a company. Then, these measures both are based on prediction of cash-flows in a company. In order to be able to evaluate the financial performance of a company by them, it is necessary to make this prediction for the whole existence of business entity while determination of such a prediction is objectively unrealistic.

The measures of ROA and CROGA (e.g. Pavelkova & Knapkova, 2009) could be marked as standard ratios with regard to their construction. In the context of these indicators, innovation in performance measurement leans mainly on the focus on operating activities. ROA is a better metric of financial performance than income statement profitability measures like return on sales. It takes into account the assets used to support business activities. It determines whether the company is able to generate an adequate return on these assets rather than simply showing robust return on sales. ROE on the other hand focuses on return to the shareholders of the company. It can obscure a lot of potential problems as companies can resort to financial strategies to artificially maintain a healthy ROE for a while and hide deteriorating performance of business fundamentals. (Hagel, et al 2010)

Economic Value Added is also an attribute of financial performance whereby shareholders value is evaluated after the total cost of capital is taken into account. (Higgs 2004). It is a performance measure developed by Stern Stewart & Co that attempts to measure the true economic profit produced by a company. It is useful for investors who wish to determine how well a company has produced value for its investors, and it can be compared against the company's peers for a quick analysis of how well the company is operating in its industry.

Market Value Added is the difference between the current total market value of a company and the capital contributed by investors (including shareholders and bondholders). It is not a performance metric like EVA, but instead is a wealth metric, measuring the level of value a company has accumulated over time. Past research studies have employed several measures of organizational performance. The dilemma faced by researchers is that no single measure of performance may fully account for all aspects of organizational performance. In a bid to address this problem researchers have resorted to the use of multiple measures of organizational performance. (Subramanian et al 1996)

The financial performance of Saccos was measured by way of having computation of Return on Assets over a period of five years.

1.1.3 Financial Innovation and Financial Performance

Theories concerning first mover advantages have typically evolved out of the Schumpeterian argument that new products and processes developed by a firm are protected from imitation for a certain period. A successful innovation thus generates a proprietary competitive position that bestows on the firm a competitive advantage and superior performance. Berger (2003) argues that the relevant aspects of technological change include innovation that reduce cost related to the collection, storage, processing and transmission of information as well as innovation that transforms the means by which customers access bank services. Humphrey et al. (2006) cite ATMs, telephone banking, internet banking and e-money as being among the significant innovations affecting the banking distribution system that influence performance significantly.

The first institutions to adopt successful new technology earn extraordinary profits because of the high prices they impose or the increased market shares they acquire. Consistent with the results of other studies that support the hypothesis that the first mover advantage offers the enterprises better performance, the examination by Dos Santos and Peffers (1995) of the introduction of ATMs by American banks demonstrated that the competitive advantage and performance that is associated with it were not realized by those who subsequently adopted the technology. In their examination of the dynamic of

financial innovation in the banking industry in the UK, Batiz-Lazo and Woldensenbet (2006) stipulated that a distinction between product innovation and process innovation is necessary as much as the adoption of each type of innovation has its own characteristics and has a different impact on banking performance. They argue that product innovations have a market focus and are effectiveness driven, while process innovations have an internal focus and efficiency driven.

1.1.4 Deposit Taking Saccos in Nairobi County

A cooperative is an autonomous association of persons united voluntarily to meet their common economic cultural needs and aspirations through a jointly owned and democratically controlled enterprise. The key idea behind a cooperative society is to pool the scarce resources, eliminate the middlemen and to achieve a common goal or interest (Ministry of Cooperative Development and Marketing, 2007). Cooperatives are good vehicles for assisting the people improve their socioeconomic situation. They are institutions that derive their strength and validity from members' solidarity cooperation and concern for each other.

The SACCO sub-sector is part of the larger cooperative movement in Kenya. There are two broad categories of co-operatives: Financial co-operatives (Savings & Credit Co-operative Societies- SACCOs) and Non-financial co-operatives (includes farm produce and other commodities marketing co-operatives, housing, transport and investment co-operatives). In the recent past Savings and Credit Co-operatives (SACCOs) have witnessed faster growth than other co-operatives. The establishment of SACCO Societies Act 2008 places the licensing, supervision and regulation of deposit taking under the ambit of the SACCO Societies Regulatory Authority (SASRA). Through this new legal framework, prudential regulations have been introduced to guide SACCO's growth and development.

Sacco's comprise over 50% of all cooperatives in Kenya and as financial institutions they play a critical role of financial intermediation in Kenya's financial landscape focusing mostly on personal development, small and micro enterprise sector of the economy. The sub sector comprises of large Saccos, some of which have a total asset base of over Kshs.

15 billion to the very small ones that have under Kshs. 10 million in assets and are well spread across the country from the large cities to the rural Kenya (SASRA Report 2011). Nairobi County has 44 Deposit taking Sacco's as per SASRA supervision report. In the early 1990s, Kenya experienced difficult economic times forcing commercial banks to demand higher minimum operating balances for individual accounts to sustain their businesses. This saw many middle and low income persons unable to operate bank accounts. Saccos became popular among employed persons who had been unable to maintain or operate bank accounts and they responded by introducing a Front Office Service Activity (FOSA) which offered quasi banking services at competitive rates opening a new chapter in the Sacco business. Other innovative strategies that have been embraced by the Saccos include mobile technology adoption, branch network expansion, ATMs, research and marketing initiatives and adoption of agency banking.

The use of mobile phone platform to deliver financial services has seen software vendors in the Sacco subsector partner with the mobile service providers to integrate mobile solutions to their core systems. Nearly all Deposit Taking Saccos are now able to have their members withdraw or deposit money in to the FOSA account, make enquiries on the accounts, get notifications on their loans as well as pay their bills. This is a significant development as it has allowed members to access Sacco services conveniently and efficiently. A case in point is Afya Sacco Society with M-Sacco, a product resulting from the integration of Sacco Banking Solutions with Safaricom's M-PESA money transfer services. Stima Sacco for instance has also been developing very attractive and innovative products and is continuously re-branding and re-packaging them according to market needs and tastes. The FOSA Prime account takes care of customers' regular transactions. The Twiga Savings account assists customers to plan for their future financial needs. The Mustard account fills in the gap when an employee leaves, while the Fixed and Call accounts are designed to address customers' investment needs. The Junior Star Account is for children below 18 years and the X-cel Account is for the members' college and University-going children.

1.2 Research Problem

In recent times Sacco's are facing cut throat competition stemming from the new players that have entered the market for financial services. These institutions target the mid to low income earners who form the basis of Sacco membership. Moreover, commercial banks are now down streaming to reach out to more people in rural areas. Cooperative Societies thus need to keep up with changing demands through innovation. For instance, members want quick and easy access to financial services. If the SACCO cannot provide the loan when it is needed, then it is not meeting its members' needs. In this regard, SACCOs need to provide efficient services and remain liquid at all times which translate to good performance.

Despite the undeniable importance of financial innovation in explaining performance, the impact of innovation on performance is still misunderstood for two reasons. Although studies have been carried out on the contribution of financial innovation to the effectiveness of monetary policy, few studies have sought to relate financial innovation to financial performance in the Sacco sector. Most of the studies also adopt a simplistic approach to the innovation-performance relationship which does not take into account the antecedents to innovation inside and outside the Sacco subsector all of which could influence this relationship.

In Kenya, most of the studies in this area have concentrated on Commercial banks and a few on micro finance institutions. None have dealt with Saccos and thus this study aimed at filling this gap by investigating the relationship between financial innovation and financial performance in the Sacco subsector.

1.3 Objectives of the Study

The objectives of the study was to establish the relationship between financial innovation and financial performance of Deposit taking SACCOs in Nairobi County

1.4 Value of the Study

Findings from this study will be important to SACCOs in developing countries. The government, shareholders and the management of SACCOs will find this study indispensable because it will provide insight into the importance of financial innovation in achieving a competitive edge and its effect on the financial performance.

The policy makers will find the study useful as a basis of formulating policies, which can be effectively implemented for better and easier regulation of SACCOs.

The researchers and academic community could use this study as a steppingstone for further studies on SACCOs.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter covers theoretical framework and empirical studies that have been carried out in the area of financial innovation. It is divided into five sections: 2.1 Introduction, 2.2 Theoretical Literature, 2.3 Empirical Literature, 2.4 Review of local research on the topic, 2.5 Summary of literature review.

2.2 Theoretical Literature

Several theories have been designed by different scholars to explain financial innovation. This study will be guided by four major theories. These include constraint-induced financial innovation theory by W.L.Silber (1983), transaction cost innovation theory by Hicks and Niehans (1983), regulation innovation theory by Davies and Scylla (1982) and Circumvention theory by Kane (1981)

2.2.1 Constraint Induced Financial Innovation Theory

Silber (1983) advanced Constraint induced financial innovation theory. This theory pointed out that the purpose of profit maximization of financial institutions is the key reason of financial innovation. There are some restrictions (including external handicaps such as policy and internal handicaps such as organizational management) in the process of pursuing profit maximization. Though these restrictions not only guarantee the stability of management, they reduce the efficiency of financial institutions so financial institutions strive towards casting them off. Constraint-induced innovation theory discussed financial innovation from microeconomics, so it is originated and representative. But it emphasized “innovation in adversity” excessively. So it can express the phenomenon of financial innovation increasing in the trend of liberal finance commendably.

2.2.2 Circumvention Innovation Theory

American economist Kane (1981) pioneered circumvention innovation theory. He thinks that many forms of government regulations and controls which have the same property of implicit taxation embarrass the profitable activity engaged by the company and the opportunity of earning profit, so the market innovation and regulation innovation should be regarded as the continuous fighting process between independent economic force and political force. Because financial industry is special, it has the stricter regulations. Financial institutions deal with the status such as the reduction of profits and the failure of management induced by government regulations in order to reduce the potential loss to the minimum. Therefore, financial innovation is mostly induced by the purpose of earning profits and circumventing government regulations. It comes true through the game between government and microcosmic economic unity.

Kane's theory is different from the reality. The regulation innovation he assumed is always towards the direction of reinforcing regulation, however, the regulation innovation in reality is always towards the direction of liberal markets innovation, the result of the game is release of financial regulation and markets become more liberal. But his theory is better than constraint-induced financial innovation theory. It not only considered the origin of innovation in the market but also researched the process of regulation innovation and their dynamic relation.

2.2.3 Transaction Cost Innovation Theory

Hicks and Niehans (1983) pioneered the transaction cost innovation theory. They thought that the dominant factor of financial innovation is the reduction of transaction cost, and in fact, financial innovation is the response of the advance in technology which caused the transaction cost to reduce. The reduction in transaction cost can stimulate financial innovation and improvement in financial services. This theory studied the financial innovation from the perspective of microscopic economic structure changes. It thought the motive of financial innovation is to reduce the transaction cost. The theory explained from another perspective that the radical motive of financial innovation is the financial

institutes' purpose of earning benefits. This theory discussed the motive and the process of financial innovation from different sides.

2.2.4 Regulation Innovation Theory

Davis and Scylla (1982) put forward the Regulation innovation theory. They argued researching financial innovation from the perspective of economy development history. The theory proposes that financial innovation connects with social regulation closely, and it is a regulation transformation which has mutual influence and has mutual causality with economic regulation. They thought that it is very difficult to have space of financial innovation in the planned economy with strict control and in the pure free-market economy, so any change brought about by regulation reform in financial system can be regarded as financial innovation. The Omni-directional finance innovative activities can only appear in the market economy controlled by government. When government intervention and the management have hindered the finance activities, there will be many kinds of financial innovation which intend to circumvent or get rid of government controls. The game between the market and the government finally form the spiral development process, namely, "control-innovate-controls again-innovates again"

In this theory which expanded the scope of financial innovation, government activity is also regarded as the origin of financial innovation. Especially, it regards rules and regulations which are used to control as financial innovation. The financial control is the obstructive force of financial innovation, so rules and regulations which are regarded as the symbol of financial control should be the direction of financial reform and innovation.

In this research, OECD Oslo Manual (2005), which is the primary international basis of guidelines for defining and assessing innovation activities as well as for compilation and use of related data, has been taken as the fundamental reference source to describe, identify and classify innovations at firm level. According to the manual, an innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations. In the OECD Oslo Manual (2005), four different innovation types are introduced. These are product innovation, process

innovation, marketing innovation and organizational innovation. Product and process innovations are closely related to the concept of technological developments. A product innovation is the introduction of a good or service that is new or significantly improved regarding its characteristics or intended uses; including significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics (OECD Oslo Manual, 2005). Product innovations can utilize new knowledge or technologies, or can be based on new uses or combinations of existing knowledge or technologies. The term product covers both goods and services.

A process innovation is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software. Process innovations can be intended to decrease unit costs of production or delivery, to increase quality, or to produce or deliver new or significantly improved products (OECD Oslo Manual, 2005). Fagerberg et al. (2004) stressed that while the introduction of new products is commonly assumed to have a clear, positive effect on the growth of income and employment, process innovation, due to its cost-cutting nature, can have a more hazy effect.

A marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing (OECD Oslo Manual, 2005). Marketing innovations target at addressing customer needs better, opening up new markets, or newly positioning a firm's product on the market with the intention of increasing firm's sales.

Finally, an organizational innovation is the implementation of a new organizational method in the firm's business practices, workplace organization or external relations. Organizational innovations have a tendency to increase firm performance by reducing administrative and transaction costs, improving workplace satisfaction (and thus labor productivity), gaining access to non-tradable assets (such as non-codified external knowledge) or reducing costs of supplies (OECD Oslo Manual, 2005). Examples would be the introduction of practices for codifying knowledge by establishing databases of best practices, lessons learnt and other knowledge, so that they are more easily accessible to

others; the introduction of training programs for employee development and improved employee retention; or the initiation of a supplier development program. Thus, organizational innovations are strongly related with all the administrative efforts of renewing the organizational routines, procedures, mechanisms, systems etc. to promote teamwork, information sharing, coordination, collaboration, learning, and innovativeness. This study will consider both product and process innovation.

What functions do innovations help us perform? Merton (1992) functional decomposition identifies six functions delivered by financial systems: moving funds across time and space, the pooling of funds, managing risk, extracting information to support decision making, addressing moral hazard and asymmetric information problems and facilitating the sale or purchase of goods and services through a payment system.

2.3 Empirical Literature

Heffernan et al(2008) in their working paper on Financial Innovation in the UK surveyed over 1100 British financial firms to ascertain the determinants of financial innovation and their sales success using Logit and generalized Tobit models. They found out that the likelihood of financial innovation rises with the size of financial firms, employee education, greater expenditure on research and development, the availability of finance, and the extent to which firms cooperate with each other. R&D, cooperation, and appropriability are the main variables driving the success of financial innovation, measured by the percentage share of innovations sold. Firms in London/the south have a significantly greater tendency to innovate, though Scotland also does well. Stock broking, fund management and related activities are more innovative than firms in the financial intermediation and pension/insurance sectors.

Gunday et al (2011)on the Effects of innovation types of firms performance, sought to explore the effect of the organizational, process, product and marketing innovations on the different aspects of firms performance including innovative, production, market and financial performances, based on an empirical study covering 184 manufacturing firms in Turkey. A theoretical framework was empirically tested identifying the relationships amid innovations and firm performance through an intergrated-perfomance analysis. The

results revealed the positive effects of innovations on firm performance in manufacturing industries. The study also noted that a certain amount of time might however be necessary in order to observe the reflection of innovative performance on financial performance. While financial performance-and also market and production performance is positively linked to innovations, innovative performance acts as a mediator for their positive effects. Possibly, the direct positive impact of innovations on production, market and financial performances is overshadowed by innovative performance. It is foreseeable that increases financial performance occurs as the results of increased market and production performances, which depends on obtaining higher innovative capabilities.

Lin and Chen (2007), an empirical study on SMEs in Taiwan found out that firm innovation capabilities have greater influence on business performance, marketing performance and ultimately influence on financial performance. A total of 28 empirical studies were analyzed. Of these 19 of them used survey method. After examining the studies they found a number of interconnected factors for which empirical evidences show significant relationship. These factors were product and service innovation, process and marketing innovation, strategic innovation, resources allocation and organizing capabilities, marketing capabilities, financial, marketing and business performances, sales value, sales growth, gross profit, cost reduction, revenues market share and customer retention. Based on literature review on firm innovation capabilities have shown that to get a greater impact on the firms overall performance, the organization has to implement effective organization culture in the organization. The organizations which implement such innovative culture, remains ahead of their competitors because these innovations ultimately affects other variables such as business performance, marketing performance and finally financial performance. This will help the organization to grow in a bigger scale.

Zahra and Sirdhartha (1993) in their study on Innovation strategy and financial performance in manufacturing companies: An empirical study examined two models of the association between manufacturing companies' innovation strategy and their financial performance. The first model examined the variations in company financial performance as a function of the simultaneous effect of the dimensions of innovation strategy. The

second is a sequential model that suggests that a causal sequence among the dimensions of innovation strategy that may lead to higher performance. They used data from a sample of 149 manufacturing companies to test the models. The results support the importance of innovation strategy as a determinant of company financial performance; suggest that both models are appropriate for examining the associations between the dimensions of innovation strategy and company performance and show that the sequential model provides additional insights into the direction contribution of individual dimensions of innovation strategy to company performance.

Tabas et al (2012) in their paper on the influence of product innovations on financial performance of small and medium-sized enterprises in the Czech Republic, sought to determine possible effect of product innovations on the financial performance of small and medium-sized enterprises in the Czech Republic. The pilot research has been realized on the statistical sample of 100 companies which were categorized into three basic groups; service companies, trade companies, and production companies. As the measure of innovation effect, the authors applied the deviation of production power, i.e. the ration of EBIT to assets, of a business entity from the industry average while the industry average of production power was selected especially in order to reduce the influence of the economy cycles. In the three categories of companies, different effects of product innovations were observed. In the service companies and trade companies; the positive effect is limited because of potential simplicity of imitation by competitors.

The influence of product innovation on financial performance of a company can be generally assessed as positive, but the effect is different in dependence on a business branch. In service companies, where competitors are able to imitate the range of services offered relatively easy, the innovations have almost immediate effect but this effect is limited with quite short period. Mostly the same results are characteristic also for the trade companies where innovations are based mainly on additional services. The greatest effect of product innovations has been observed in production companies, where the positive average stable change in production power in comparison to the bases, i.e. industry average, was nearly 10 p.p. while before innovation realization, financial performance of all analyzed production companies has been below the industry average.

After realization of the product innovation, performance of all these companies has increase above the industry average, and contrary to service and trade companies it has stabilized above the industry average. From the results of the pilot study, it is evident that continuous innovations are necessary.

DeYoung et al (2007) analyze the US community banks market to investigate the effect of internet banking on bank performance. They compare the brick and mortar banks performance to click and mortar banks which do have transactional websites over a three year period. Their findings suggest that internet banking improved bank profitability, via increase in revenues from deposit service charges. Movements of deposits from checking accounts to money market deposit accounts, increased use of brokered deposits, and higher average wage rates for bank employees were also observed for click and mortar banks. While no change in loan portfolio mix was found, their findings confirm Hernando and Nieto (2007) that internet banking is seen as a complementary channel.

Goddard et al (2007) in their survey of European banking also emphasize the transition process the European Banking is in towards the Single European Banking Market. They mention the importance of technological change especially ATMs, EFTs and internet banking on the banks' performance and profitability. Altunbas et al (1999) and Casu et al (2004) also provide evidence respectively for cost reduction and productivity gains as a result of technological change for European Union banks. Polatoglu and Ekin (2001) show that Internet-banking lowers operational costs while increasing customer satisfaction and retention in the Turkish retail banking sector.

Hernando and Nieto (2007) analyse the Spanish commercial banks over the period 1994-2002 to measure the effect of adoption of a transactional website on financial performance. Their findings suggest that with a lag of one and a half years the increase in banking profitability can be significantly observed via decreases in overhead expenses with respect to staff, marketing and IT. They also mention that internet banking is seen as a complementary delivery channel rather than a substitute to brick and mortar branches. The greater use of Internet in retail banking however brings additional risk components to overall risk profile of the banks. The Basel committee has recognized these related risks and has issued Risk Management Principles for Electronic Banking (July 2003). It aims

to promote safety and soundness of e-banking activities while preserving the necessary flexibility in implementation due to speed of change in technology.

Malhotra and Singh(2009) sought to present the present status of Internet banking in India and its implications for Indian banking industry. A survey of the bank websites during the period of June, 2007 revealed that only 57 percent of the commercial banks operating in India as on March end 2006 offer Internet banking. Using data on the financial performance, the study also analyzed the performance of an Internet group in comparison to non-Internet banking group and impact of Internet banking on banks' performance and risk. A panel data of 85 banks (operating as on March end 2006) was taken for the period of 1998-2006. The analysis indicated several significant differences in the profile of banks that offer Internet banking and banks that do not. Broadly speaking, on an average, they found out that Internet banks are larger, more profitable and are more operationally efficient than non-Internet banks. Internet banks have higher asset quality and are better managed to lower the expenses for building and equipment. In contrast to developed countries Internet banks in India rely substantially on deposits, the traditional source of financing.

They also attempted to see if there is any association between adoption of Internet banking and the banks' performance and risk. The evidence revealed no significant association between adoption of Internet banking by banks and their performance. However, Internet banking has a negative and significant impact on profitability of private sector banks particularly new private sector banks. Thus, adoption of Internet banking was a reason behind the lower profitability of these banks, as Internet banks in new private sector were operating with higher cost of operations, including fixed cost and labour cost, thus affecting negatively the profitability of these banks. On the other hand, internet banking has a negative and significant impact on risk, which shows that, the adoption of Internet banking has not increased the risk profile of banks.

In their book Innovation in Retail and Corporate banking, Anderloni et al (2009, pg.23) noted that financial innovation has the potential to enhance the efficiency of the financial system in the performance of its core functions. The potential benefits of financial innovation that accrue to the financial system include reduced costs of financial

intermediation, matching portfolio preferences and optimal portfolio selection, more responsiveness to consumer requirements, arbitrage potential and wider access to credit. Greenspan (2004, pg4) has argued that credit derivatives have contributed to the development of a more flexible, efficient and hence resilient financial system.

Subramanian and Nilakanta(1996) in their study on organisational innovativeness sought to examine the relationship between organisational determinants of innovation, types of innovation and measures of organisational performance. The domain of the sample was the banking industry specifically, banks in the mid-west region of the United States. They used survey design and found out that substantive relationships do exist between organisational factors, organisational innovativeness and organisational performance. These relationships however, are complex and can be detected if only innovativeness is measured as a multidimensional construct. The limitation of this study was that they assumed that the innovations are similar with respect to their radicalness.

Hall et al (2009) in their study on Innovation and productivity in SMEs: empirical evidence in Italy developed a structural model of innovation that incorporates information on innovation success from firm surveys along with the usual R&D expenditures and productivity measures. They then applied the model to data on Italian SMEs from the Survey on Manufacturing Firms' covering the period 1995– 2003. The model was estimated in steps, following the logic of firms' decisions and outcomes. They found out that international competition fosters R&D intensity, especially for high-tech firms. Firm size and R&D intensity, along with investment in equipment, enhances the likelihood of having both process and product innovation. Both these kinds of innovation have a positive impact on firm's productivity, especially process innovation. Among SMEs, larger and older firms seem to be less productive.

The significance of financial innovation is widely recognized. Many leading scholars, including Miller (1986) and Merton (1992), have highlighted the importance of new products and services in the financial arena. White and Frame(2002) state that, profit seeking enterprises and individuals are constantly seeking new and improved products, processes and organizational structures that will reduce their cost of production, better satisfy customers and yield greater profits. Studies show that since the late 1970s there

has been an enormous amount of innovation in the provision of financial services to poor clients operating at the systemic and institutional levels as well as on financial processes and products. In fact, one of the most wide spread thesis at the international level pertains to the existence of a direct relationship between product and process innovation and possibility of improve productivity, competitiveness and, finally, income performance. (Hall et al. 2009; Gunday et al. 2011).In spite several empirical studies have measured the effect of innovation activities on business performance, the literature still does not provide a unique answer about the impact of innovation since a large number of variables affects the analysis.

The empirical evidence sometimes highlights the negative effect on firm performance of innovation (Subramanian and Nilakanta 1996) or the potential instabilities coming from the company changes, especially before the end of transition phases until the innovation successfully reaches the full exploitation. Often, empirical studies support the positive effect of innovation by analyzing the impact of the different innovation typologies. One of the most common thesis is that the product innovation may create interesting income perspective due to sales growth through the diversification and good market position. By another perspective, the process innovation, whether it has technological nature, might promote the reduction of the cost and the production time and so ensure a more efficient productive resources use and, whether it has organizational nature, could improve the quality of invested capital, internal capabilities and competitiveness in the long term

(Damanpour 2010). The impact of innovation may be delayed, and such a delay is particularly remarkable in the organizational process innovation. Moreover, it can difficult to identify the effects. Nevertheless, some studies argue that such type of innovation is the most crucial factor in explaining business performance, especially sales (Lin and Chen 2007).

2.4 Review of Local Research

Kihumba (2008) on determinants of financial innovation and its effects on bank performance in Kenya,using exploratory research design on a sample of 43 commercial banks in Kenya for a six year period from 2002-2007,sought to investigate the

relationship between financial innovations and financial performance of commercial banks, together with the determinants of financial innovation. The study found out that heavy competition and technology are the major drives of financial innovation. These two factors have led to a great improvement in financial performance. It was noted that specific benefits resulting from financial innovation which have a great influence on financial performance were: improvement in customer service, market expansion and increased bank revenue. The study sample was limited to head offices of all banks in the survey and thus it did not cover the views of the branches of the sampled banks. The scope and depth of the study was also limited by the time factor and financial constraints.

Mikwa (2011) on the determinants of financial innovation and its impact on financial performance of microfinance institutions in Kenya sought to investigate the factors that influence financial innovation in MFI's and its impact on financial performance in microfinance institutions in Kenya. Financial innovation in Microfinance institutions in Kenya has been influenced by new technology, macroeconomic conditions (e.g. interest rates, inflation), demand for financial services and client's ability to use innovation, cost reduction, increase in financial risk, and competition in financial service markets, size of financial institution and legislation and financial supervision. The research project was a census study of MFIs registered with the Association of Microfinance Institutions (AMFI) in Nairobi, Kenya. Primary data was collected through a questionnaire administered to the MFI's. A conceptual model was developed to show factors influencing financial innovation in MFI's and its impact on financial performance. An analytical model was developed to determine the strength of the relationship between variables.

Analysis of the data confirmed that new technology, macroeconomic conditions (e.g. interest rates, inflation), demand for financial services and client's ability to use innovation, cost reduction, increase in financial risk, had the greatest importance in influencing MFI innovation. Financial innovation and financial performance is positively related. As noted, the findings based on the coefficient of regression, new products/services, new processes, institutional innovation, and new technology were found to be positively associated with financial performance in MFIs in Kenya

Ngigi (2012) on Financial Innovation and its effects on financial performance of Commercial Banks in Kenya sought to assess the effect of financial innovation on commercial banks financial performance as the key players in the banking sector over a period of 4 years. The causal research design was used to carry out the study. Study results indicated that financial innovation indeed contributes to and is positively correlated to profitability in the banking sector particularly that of commercial banks. This further supported the uptake of more efficient financial systems in substitution for the less efficient traditional system.

Aduda and Kingoo (2012) on the Relationship between Electronic Banking and Financial Performance among Commercial Banks in Kenya, sought to investigate the relationship between e-banking and performance of Kenya banking system. Specifically, the study established whether there is relationship between the dependent variable i.e., performance measured by return on assets and the independent variables: investments in e-banking, number of ATMS and number of debits cards issued to customers as proxy for e-banking. The study used secondary data. The data was collected from annual report of target banks and Central Bank of Kenya. The study used both descriptive and inferential statistics in analyzing the data. In general the study revealed that e-banking has strong and significance marginal effects on returns on asset in the Kenyan banking industry. Thus, there exists positive relationship between e-banking and bank performance. In general conclusion the electronic banking has made banking transaction to be easier by bringing services closer to its customers hence improving banking industry performance.

Omwenga (2010) on the relationship between financial innovations and financial performance of Commercial banks in Kenya using descriptive survey studied all the 45 licensed commercial banks that were fully registered with Central Bank of Kenya. The study found out that financial innovations improved their operations, improved the liquidity and asset quality in commercial banks in Kenya. This not only increased their markets but also helped the organizations to remain competitive in the market. Adoption of innovativeness improved firm performance; this is the reason why commercial banks

in Kenya are vesting their resources in financial innovations. Financial innovations also deepen liquidity of banks in existing markets, for example by reducing excessive reliance on a narrow base of depositors for funding and improves on earnings, asset quality and this increased efficiency in the operations as a whole and especially in commercial banks in emerging markets and developing countries such as Kenya. By way of recommendation, the researcher indicates that there is need to adopt financial innovations in order to improve banks performance.

In product innovation, the banks should introduce products that are relatively simple and standard and that offer clear value-added. Adoption of financial innovations also enables us to make real economy more efficient through making financial services more available and reducing their prices Allotting large sums of capital to financial innovation will not only make it possible to provide the inputs required for innovation, but will also allow the bank to absorb the costs of innovation, as well as the costs arising from potential failures and thus will enable the bank to take more first mover initiatives in product/service and process innovation.

Githakwa (2011) in his study on the relationship between financial innovation and profitability of commercial banks in Kenya using causal research design on a sample of 44 registered commercial banks in Kenya in the period 2005 to 2010, sought to establish the relationship between financial innovations and profitability of commercial banks in Kenya. The study found out that Kenyan commercial banks conceptualize financial innovation as a means to create impact in the profit performance. Many commercial banks have embraced financial innovation as a way of increasing efficiency and improve bank performance. These innovations have included massive branch network expansion, development of unique products that serve specific groups and automation of banking services that have enabled customers to carry out banking transactions outside the confine of the banking premises, either on their phone or over the internet. The study was limited by lack of available and/or reliable data, lack of prior research studies on the topic, time constraints and sample size.

Jepkorir (2011) on her study on the challenges of implementing financial innovations by commercial banks in Kenya, using descriptive strategy on a sample of 44 licensed

commercial banks sought to determine the challenges of implementing financial innovations by commercial banks and to determine how commercial banks can cope with financial innovation implementation challenges. The study found out that most challenges in implementing financial innovation are mostly due to financial complexities and inadequate technology. The study limitations were centered on the research methodology especially the data collection instrument as some respondents did not quite understand how they were supposed to respond.

2.5 Summary

This chapter has reviewed literature on financial innovation and its impact on financial performance in the Sacco subsector. Different researchers have had different views on how financial innovation has contributed to financial success of many firms while other researchers have been skeptical and could not establish a relationship between financial innovation and financial performance. Most of the studies done relating innovation and financial performance find a positive relationship between the two. Financial innovation indeed contributes to and is positively correlated to profitability in the banking particularly that of commercial banks (Ngigi, 2012).

A study of MFIs in Kenya Mikwa (2011) found a positive relationship between financial innovation and financial performance. The findings based on the coefficient of regression, new products/services, new processes, institutional innovation and new technology were found to be positively associated with the financial performance

Local researches have concentrated on commercial banks and establish a positive relationship between financial innovation and financial performance, none has dealt with Saccos. This study therefore seeks to establish impact of financial innovation on the financial performance of Saccos.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter highlights the research methodology to be used in the study. It is divided into five sections; 3.1 Introduction, 3.2 the research design, 3.3 population and sample, 3.4 data and data collection instruments 3.5 data analysis.

3.2 Research Design

The Causal research design was used to carry out the study. According to Cooper and Schindler (2006), a causal study is designed to establish the influence of one variable(s) on another variable(s) which depicts causation. Causal research is typically structured with a clearly stated objective of discovering associations and causal relationships among different variables. This design was perceived to be suited to this study in that it involved collection, verification and synthesis of evidence to establish facts that defend or refute the hypothesis. This design involved use of secondary sources of data such as official records, report and financial statements and a questionnaire as the primary source.

3.3 Population and Sample

The population of interest was all the 44 deposit taking Sacco's in Nairobi County as at 30th June 2013. No sampling was done due to the small population size and aggregation of secondary data used in the study

3.4 Data and Data Collection Instruments

The study used both primary and secondary data. Secondary data on performance was sourced from the Sacco's annual financial reports and SASRA supervisory reports. The data covered the period 2008 to 2012.

An analytical model of a linear multiple regression equation of the form shown below was developed.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e_1 \dots \dots \dots (2)$$

Y=Financial performance

X₁=Branch network

X₂=Expenditure in ICT

X₃=Number of customers using mobile banking

X₄=Number of ATMs installed

The financial performance of the Saccos was measured by way of having computation of the return on assets over a period of five years from 2008 to 2012 and to find the relative rate of growth in comparison with the Sacco's capacity to innovate. The independent variables were measured using the number of ATMs installed, number of customers using mobile banking and branch network.

Significance of innovation variables as predictors of financial performance were tested using the t-test. The significance of the overall model in explaining performance through the independent variables was measured through the f-test. The analyzed data was then presented using tables.

A correlation analysis was also performed to find how the variables are related to each other in the model.

3.6 Data Validity and Reliability

Face and content validity of the questionnaire was tested. Face validity is in relation to the misunderstanding or misinterpretation of the questions. This was checked by employing the pre-testing method. Content validity on the other hand refers to the capacity of the instrument to provide adequate coverage of the topic. Adequate preparation of the instruments under the guidance of the supervisors, expert opinion and pre-testing of open ended questions helped establish the content validity.

Reliability is a measure of the extent to which an instrument will consistently yield the same result after being administered several times to the same respondents. (Orodho, 2005).To establish the reliability of the research instruments, the test retest method whereby the pilot study respondents were issued with questionnaires for them to fill and the same questionnaires were subjected to a retest to see how the response was.

CHAPTER FOUR

DATA ANALYSIS RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the data analysis results and discussions on the relationship between financial innovation and financial performance of Deposit taking SACCOs in Nairobi County. It is divided into five sections 4.1 Introduction, 4.2 the summary statistics, 4.3 empirical models, 4.4 discussions and finally 4.5 which is the summary of this chapter.

4.2 Summary Statistics

The research targeted all the 44 Sacco's that operate in Nairobi and are profiled in the SASRA database. Secondary data from these 44 Sacco's from the period of 2008 to 2012 was used in the analysis. Regression analysis was used in analysis the data. Both descriptive statistics and inferential statistics were also used to analyze the data. In the descriptive statistics, relative frequencies were used in some questions and other were analyzed using mean scores with the help of Likert scale ratings in the analysis.

4.2.1 Descriptive Analysis

Table 4.1: Sacco Ownership Category

Ownership category	Frequency	Percentage
Government employees	20	45
Teachers	2	5
Private sector employees	16	36
Farmers	2	5
Others	4	9
Total	44	100

Source: Author (2013)

This study wanted to establish the ownership category of saccos where data was collected, from the findings 45% of the respondents indicated that they were government employees, 36% of the respondents indicated that they were private sector employees, 9% indicated others which meant they were saccos attached to various religious groups while as only 5% indicated to be either teachers of farmers Saccos. This was an indication

that almost all Saccos were represented in this study which was a very important thing in this research.

Table 4.2: Duration Operated in Kenya

Years the sacco has operated	Frequency	Percentage
11-15 years	4	9
16-20 years	12	27
over 20 years	28	64
Total	44	100.0

Source: Author (2013)

The study also wanted to establish the duration in which these saccos had operated in Kenya, from the findings, 64% indicated to have operated in the country for a duration over 20 years, 27% indicated to have carried their operations in the country for between 16 to 20 years and only 9% who indicated to have been in operation in the country for between 11 to 15 years. This shows that majority of these Saccos had been in operational for many years and they had gained grounds in the country and innovation would be a fundamental thing in their operations.

Table 4.3: Saccos Branches

Number of branches	Frequency	Percentage
less than 5	33	75
5-10	7	16
more than 10	4	9
Total	44	100

Source: Author (2013)

On the number of branches the Sacco's had, the study revealed that 75% had less than 5 branches in the country, 16% indicated to be having 5 to 10 branches in the country while as only 9% who indicated that they had more than 10 branches in the country. The few which more than 10 branches included Mwalimu Sacco, Ukulima Sacco, Kenpipe Sacco among others. The rest had both only a single branch and the head office. The reason why they had few branches is because majority of these Sacco's had partnered with Cooperative bank, Pesa Point and money link and their member would do withdrawals using the Sacco's ATMs through these channels anywhere in the country.

Table 4.4: Areas the Sacco has Undertaken Innovation

Areas innovation has been undertaken	Frequency	Percentage
New products and services	21	48
New processes	4	9
New technology	14	32
institutional innovations	5	11
Total	44	100

Source: Author (2013)

The study further wanted to investigate the areas in which the Saccos had undertaken innovations in the last 5 years, majority of the respondents indicated that their Saccos had undertaken innovations on their products and services as shown by 48%,32% indicated that they key area in which the sacco had undertaken innovations was in terms of technological advancement,11% indicated institutional innovations while 9% indicated that innovations had been done in terms of new processes in the Sacco. These findings concurs with those of Miller (1986) and Merton (1992) who found out that profit seeking enterprises and individuals are constantly seeking new and improved products, processes and organizational structures that will reduce their cost of production, better satisfy customers and yield greater profits.

Table 4.5: Benefits of Financial Innovation

Financial innovation benefits	N	Minimum	Maximum	Mean	Std. Deviation
Improved customer service	44	3.00	4.00	3.70	0.46
Reduction in operational costs	44	1.00	4.00	2.98	0.85
Improved financial performance	44	2.00	4.00	3.36	0.65
Increased revenue	44	1.00	4.00	3.27	0.76

Source: Author (2013)

On the respondents level of agreement on the above statement on the benefits derived from financial innovation, it was established that majority of the respondents indicated that financial innovations had improved the customer service to a greater extent which was most beneficial as represented by a mean of 3.70. The research further revealed that financial innovations had reduced operational costs, improved financial performance and increased revenue and this was moderately beneficial to the organisation.

These findings tally with those of Omwenga (2010) on the relationship between financial innovations and financial performance of Commercial banks in Kenya. The study found out that financial innovations improved their operations, improved the liquidity and asset quality in commercial banks in Kenya. This not only increased their markets but also helped the organizations to remain competitive in the market. Adoption of innovativeness improved firm performance; this is the reason why commercial banks in Kenya are vesting their resources in financial innovations.

Table 4.6: Percentage of Sacco’s Introducing Innovation Services

Innovation categories	2008	2009	2010	2011	2012
ATM services	23%	26%	13%	22%	16%
Mobile banking	34%	28%	15%	8%	15%
Expenditure on ICT	21%	33%	24%	12%	10%

Source: Author (2013)

The study also wanted to establish the specific years the above financial innovations were introduced in their respective Sacco’s, from the findings majority of the Sacco’s introduced ATM services in the year 2009 as shown by 26%, by 2008 majority of the Sacco’s had introduced the mobile banking and 33% indicated that majority of the Sacco’s started spending on ICT by 2009. This is an indication that by year 2008 majority of the Sacco’s were fully embracing the financial innovation strategies.

Table 4.7: Various Innovations and its Effects

Statements on innovations	N	Minimum	Maximum	Mean	Std. Deviation
Use of ATM in branches	44	1.00	2.00	1.25	0.43
Number of mobile banking transactions has increased	44	1.00	3.00	1.75	0.65
Business volume has increased	44	1.00	3.00	1.52	0.59

Source: Author (2013)

The study also wanted to establish the level of agreement of respondents in regard to various innovations adopted by their Sacco's, from the study majority of the respondents strongly agreed that their Saccos had increased the use of ATM in branches as shown by a mean of 1.25. This was through partnering with cooperative bank which has branches all across the country and other ATM service providers including Pesa point and money link. The Sacco's have their ATM cards whereby members apply at their respective branches. Others respondents agreed that business volume had increased as shown by a mean of 1.52 and finally that the number of mobile banking transactions had increased also as shown by a mean of 1.75 and a STD deviation of 0.65.

These findings are similar to those of Hernando and Nieto (2007) who analyse the Spanish commercial banks over the period 1994-2002 to measure the effect of adoption of a transactional website on financial performance. Their findings suggest that with a lag of one and a half years the increase in banking profitability was significantly observed via decreases in overhead expenses with respect to staff, marketing and IT. They also mentioned the importance of technological change especially ATMs, EFTs and internet banking on the banks' performance and profitability.

4.3 Estimated or Empirical Model

Table 4.8: Presentation of Statistics of Variables Used

Year	Total assets	ROA	branches	Expenditure on ICT	Customer using mobile banking	ATM installed
2012	121,945,825,185	0.078	99	2,626,797,675	382075	90
2011	102,989,928,986	0.070	86	1,148,590,951	292,607	85
2010	94,901,395,152	0.050	79	567634335.3	125,654	81
2009	79,572,486,068	0.045	72	438871811.3	80843.4	72
2008	73,212,575,812	0.042	65	336105543.6	58387.2	56
Total	472,622,211,203	0.007	401	5,118,000,317	939,566	384
Mean	94524442241	0.041	80.2	1023600063	187913.26	76.8

Source: Author (2013)

Sacco's financial performance was measured by return on assets. The researcher calculated return on assets by dividing Saccos' net profit after taxation by the total assets held by the bank over the study period. From the research data, returns on assets of Saccos steadily increased from 2008 to 2012. This study uses the number of branches established by the Saccos, expenditure on ICT, Number of customers using mobile banking and ATMS installed by Saccos as a measure of financial innovations. Number of ATMS installed, increase on ICT expenditure and increase in online banking indicates financial innovation within the Saccos.

Table 4.9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.0.784 ^a	.723	.694	.632

Source: Author (2013)

Adjusted R squared is coefficient of determination which tell us the variation in the dependent variable due to changes in the independent variable, from the findings in the above table the value of adjusted R squared was 0.694 an indication that there was variation of 69.2% on Sacco's financial performance due to changes in the independent

variable which are branch network, expenditure in ICT, number of customers using mobile banking and the number of ATMs installed

This shows that 69.4% changes in Sacco’s financial performance could be accounted for by branch network, expenditure in ICT, number of customers using mobile banking and the number of ATMs installed at 95% confidence interval. R is the correlation coefficient which shows the relationship between the study variable, from the findings shown in the table above there was a strong positive relationship between the study variable as shown by 0.784.

Table 4.10: Anova (Analysis of Variances)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.644	2	0.322	1.3529	.050 ^b
	Residual	9.758	41	0.238		
	Total	10.402	43			

Source: Author (2013)

From the ANOVA statistics in table above, the processed data, which is the population parameters, had a significance level of 5% which shows that the data is ideal for making a conclusion on the population’s parameter as the value of significance (p-value) is less than 5%. It also indicates that the model was statistically significant.

Table 4.11: Output of Regression-Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	Constant	2.321	.433		5.360	.032
	Branch network	1.613	.063	.164	25.603	.036
	Expenditure in ICT	2.316	.086	.237	26.930	.049
	Customers using mobile banking	0.128	.230	.278	0.557	.050
	Number of ATMs installed	0.963	.684	.036	1.408	.038

Source: Author (2013)

The established regression equation for year 2012 was

$$Y = 2.321 + 1.613 \text{ Branch network} + 2.316 \text{ Expenditure in ICT} + 0.128 \text{ Mobile banking} + 0.963 \text{ ATMs installed}$$

From the above regression equation it was revealed that holding branch network, expenditure in ICT, number of customers using mobile banking and the number of ATMs installed by the Sacco's at 95% confidence interval to a constant zero, financial performance of the Sacco's would stand at 2.321, a unit increase in Branch network would lead to increase in financial performance by a factors of 1.613, unit increase in Expenditure in ICT would lead to increase in financial performance by factors of 2.316, unit increase in customers using mobile banking would lead to increase in financial performance of the Sacco by a factor of 0.128, further unit increase in number of ATMs would lead to increase in financial performance of the Sacco by a factors of 0.963.

4.4 Discussions

The study had intended to investigate the relationship between financial innovation and financial performance of Deposit taking SACCOs in Nairobi County. From the findings

on the regression analysis, adjusted R squared is coefficient of determination which tell the variation in the financial performance due to changes in branch network, expenditure in ICT, number of customers using mobile banking and the number of ATMs installed, the study revealed that value of adjusted R square ranged between 0.752 and 0.515, this is an indication that variation in financial performance of the Sacco can be accounted for by branch network, expenditure in ICT, number of customers using mobile banking and the number of ATMs installed. The study further revealed that there was strong relationship between financial performance and branch network, expenditure in ICT, number of customers using mobile banking and the number of ATMs installed

The established regression equation for the five years was

$$Y = 2.321 + 1.613 \text{ Branch network} + 2.316 \text{ Expenditure in ICT} + 0.128 \text{ Mobile banking} + 0.963 \text{ ATMs installed}$$

These findings are consistent with the findings of Lin and Chen (2007), an empirical study on SMEs in Taiwan found that out that firm innovation capabilities have greater influence on business performance, marketing performance and ultimately influence on financial performance. They organizations which implement such innovative culture, remains ahead of their competitors because these innovations ultimately affects other variables such as business performance, marketing performance and finally financial performance. This will help the organization to grow in a bigger scale.

De Young et al (2007) findings suggest that internet banking improved bank profitability, via increase in revenues from deposit service charges. Movements of deposits from checking accounts to money market deposit accounts, increased use of brokered deposits, and higher average wage rates for bank employees were also observed for click and mortar banks. While no change in loan portfolio mix was found, their findings confirm Hernando and Nieto (2007) that internet banking is seen as a complementary channel.

The research findings in this study are consistent with literature reviewed that the potential benefits of financial innovation that accrue to the financial system include

reduced costs of financial intermediation, matching portfolio preferences and optimal portfolio selection, more responsiveness to consumer requirements arbitrage potential and wider access to credit. The influence of product innovation on financial performance of a company can be generally assessed as positive, but the effect is different in dependence on a business branch. In service companies, where competitors are able to imitate the range of services offered relatively easy, the innovations have almost immediate effect but this effect is limited with quite short period.

Other local studies consistent with these findings includes Mikwa (2011) who did an investigation on the determinants of financial innovation and its impact of financial performance of microfinance institutions in Kenya. Analysis of the data confirmed that new technology, macroeconomic conditions, demand for financial services and client's ability to use innovation, cost reduction, increase in financial risk, had the greatest importance in influencing MFI innovation. Financial innovation and financial performance are positively related. These innovations have included massive branch network expansion, development of unique products that serve specific groups and automation of banking services that have enabled customers to carry out banking transactions outside the confine of the banking premises, either on their phone or over the internet.

This study wanted to establish the ownership category of sacco's where data was collected, from the findings 45% of the respondents indicated that they were government employees, 36% of the respondents indicated that they were private sector employees, 9% indicated others which meant they were sacco's attached to various religious groups while as only 5% indicated to be either teachers or farmers Saccos. This was an indication that almost all Saccos were represented in this study which was a very important thing in this research.

The research findings show that most of the Saccos have less than 5 branches in the country. The few which more than 10 branches included Mwalimu Sacco, Ukulima Sacco, Kenpipe Sacco among others. The rest had both only a single branch and the head office. The reason why they had few branches is because majority of these Sacco's had

partnered with Cooperative bank, Pesa Point and money link and their member would do withdrawals using the Sacco's ATMs through these channels anywhere in the country.

It was further revealed that these Saccos had undertaken innovations in the last 5 years, majority of the respondents indicated that their Saccos had undertaken innovations on their products and services and in terms of technological advancement. These findings concurs with those of Merton (1992) who found out that profit seeking enterprises and individuals are constantly seeking new and improved products, processes and organizational structures that will reduce their cost of production, better satisfy customers and yield greater profits.

It also established that financial innovations had improved the customer service to a greater extent which was most beneficial as represented by a mean of 3.70 and this has reduced operational costs, improved financial performance and increased revenue and this was moderately beneficial to the organisation. Saccos had increased the use of ATM in branches and this was represented by a mean of 1.25 and this was through partnering with cooperative bank which has branches all across the country and other ATM service providers including Pesa point and money link. The Sacco's have their ATM cards whereby members apply at their respective branches.

4.5 Summary

In this chapter secondary data and primary data collected from the Saccos in Nairobi County was analysed and findings presented in tables, figures, mean and standard deviation. A regression model has also been derived to bring out clearly the relationship between the dependent variable and the independent variables investigated in this case. The researcher further compared these results with others from other different scholars. Most of the studies done relating innovation and financial performance find a positive relationship between the two. This study revealed that Saccos had undertaken major innovations in the last 5 years especially on their products; services and technological advancement. The study further revealed that there was strong relationship between financial performance and branch network, expenditure in ICT, number of customers using mobile banking and the number of ATMs installed

CHAPTER FIVE:

SUMMARY AND CONCLUSION

5.1 Introduction

This chapter presents the summary and conclusion on the analysis results on the relationship between financial innovation and financial performance of Deposit taking SACCOs in Nairobi County. It is divided into five sections 5.1 Introduction, 5.2 the summary of the study, 5.3 conclusion, and 5.4 limitations of the study and finally 5.5 is the recommendations for further research.

5.2 Summary of the Study

This study was intended to investigate the relationship between financial innovation and financial performance of Deposit taking SACCOs in Nairobi County. The focus was to determine the the effect of financial innovation on financial performance. In order to achieve this objective, the study was designed to collect and analyse the relevant data of 44 deposit taking Sacco's in Nairobi County.

Regression analysis on data from a sample of 44 deposit taking Sacco's in Nairobi County for five years period from 2012 to 2008 was conducted to examine the variables branch network, expenditure in ICT, number of customers using mobile banking and the number of ATMs installed. A suitable regression model was designed in order to capture all the relevant variables of the study.

A positive relationship between financial performance and the other four control variables namely; branch network, expenditure in ICT, number of customers using mobile banking and the number of ATMs installed was established. From the findings on the regression analysis, adjusted R squared is coefficient of determination which tells the variation in the financial performance due to changes in branch network, expenditure in ICT, number of customers using mobile banking and the number of ATMs installed.

5.3 Conclusion

SACCOs in Kenya plays a significant role in savings mobilization, promotion of investment, economic growth and poverty alleviation. They have huge potential as they will play a key role in the Kenya's achievement of vision 2030. To be effective and successful, this requires the embracing of effective financial innovations strategies.

This Study can therefore conclude that, first, Saccos have started embracing the use of money transfer services such as M-pesa, Zap, Orange Money and Yu cash, but they are yet to link them with their back office financial databases. With technology such as cloud computing Sacco organisations can now cut their operation costs by embracing latest technologies which will help them trim the number of their field officers, reduce fraud and increase efficiency.

Secondly, Saccos are slowly adopting internet banking. This has brought about the usage of information technology, Internet, ICT infrastructure, websites, and computer technology, in addition to Internet connectivity technology. Saccos are appreciating the benefits associated with ICT and in particular increased efficiency, improved service delivery, improved operational performance among many others. There have been barriers to ICT usage such as high costs of qualified personnel, and high costs of ICT equipment and services.

Thirdly, majority of the Sacco's have Sacco Link M-banking service. The Sacco Link M-banking Service is available 24 hours a day, 7 days a week making it for efficient and effective for their members all over the country. This has been brought about by the collaboration between all FOSA patrons with Cooperative bank where by the members are given VISA branded ATM cards which allows for 24hrs banking at any Coop bank or any VISA branded ATM worldwide. Sacco link card are also used for paying for goods and services at point of sale, settling hospital bills, hotel expenses, fuel etc.

5.4 Limitations of the Study

This study was not without limitations. Secondary data was collected from the firm financial reports. The study was also limited to the degree of precision of the data

obtained from the secondary source. While the data was verifiable since it came from the SACCO Societies Regulatory Authority (SASRA) publications, it nonetheless could still be prone to these shortcomings.

The study also faced challenges in terms of the financing the research and also the available time frame to fully conclude the entire data collection and make the best conclusions.

The study was limited to establishing the relationship between financial innovation and financial performance of Deposit taking SACCOs. For this reason the Saccos operating outside Nairobi County could not be incorporated in the study. The study was based on a five year study period from the year 2008 to 2012. A longer duration of the study will have captured periods of various economic significances such as booms and recessions. This may have probably given a longer time focus hence given a broader dimension to the problem.

5.5 Recommendations for Further Research

From the above summary and conclusion, the study recommends the following strategies for further follow up and implementation; The Sacco's should embrace innovative strategies to come up with new products, refining existing products or coming up with a single product that serves several needs to be able to serve members efficiently and effectively. This will help the Saccos increase its membership and have numerous branches all across the country.

The SACCO must keep abreast with new trends in the financial market. Such areas include ATMs and other technology driven products. The management of these Saccos should approve the ICT budgets to acquire new software to fully automate its operations which will then form a platform from where new products will be served.

The SACCO needs to make sure it has institutional capacity to handle increased business that results from successful marketing. Otherwise new members could become discouraged and all of the efforts to create a positive institutional image will have been wasted, from problems such as: long lines, tellers who do not know how products work, lengthy application process.

Mobile banking faces various challenges among them being, system delays by the mobile money transfer service providers, slow processing of transactions especially during the weekends, high transactions costs, limit on the amount of money that can be withdrawn in a day and fraud. Saccos can these problems through regular maintenance of mobile money transfer systems which will help in managing the systems' capacity and in turn address the problem of transaction delays and improve customer service through speedy support and lower user charges.

The study focused on the relationship between financial innovation and financial performance in Saccos while its evident its rampant growth impacts on the overall economy as well. Therefore, a study should be conducted to investigate the impact of mobile and internet banking on the Saccos performance. The study found that mobile banking has been adopted at a faster rate than internet banking therefore a study needs to be conducted to investigate why this is the case.

Due to limited resources, this research is not conclusive as such. It is therefore important that further research be carried out other emerging factors affecting marketing of SACCO products, risk management strategies in SACCOs and corporate governance in SACCOs.

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APPENDIX 1:INTRODUCTORY LETTER

Olyvia Njeri Kimata
University of Nairobi
P.O Box 30197-00100
Nairobi.

To whom it may concern

Dear Sir/Madam

RE:RESEARCH PROJECT

I am an MBA student at the University of Nairobi undertaking a research project as part of the requirements of the degree of Masters in Business Administration.The topic of my research is “Financial Innovation and its effects on financial performance of deposit taking Saccos in Nairobi County.”

Your institution hs been selected to form part of the study.I kindly request your assistance by availing time to respond to the questionnaire.Any information provided will be treated with utmost confidentiality and used solely for academic purposes.

A copy of the final report will be made available to you at your request.Your assistance will be highly appreciated.Thanking you in advance.

Yours faithfully

Olyvia Njeri Kimata

MBA student

D61/73133/2012

E-mail:lvkimata@gmail.com

Tel: 0720589106

APPENDIX II:QUESTIONNAIRE

PART A: DEMOGRAPHIC DATA

1. Personal details of Respondent

Name(**Optional**).....

Position in the organisation.....

Company Information

Name of the Sacco.....

2. Please tick the ownership category that best describes your Sacco

Government employees []

Teachers []

Private Sector employees []

Farmers []

Others(please specify).....

3. For how long has your Sacco operated in Kenya?

Less than 5 years []

6-10 years []

11-15 years []

16-20 years []

Over 20 years []

4. How many branches does your Sacco have?

Less than 5 []

5-10 []

More than 10 []

PART B: FINANCIAL INNOVATION

5. In which area has your Sacco undertaken innovation in the last 5 years?

- New products/services []
- New processes []
- New technology []
- Institutional innovation []

6. The following table shows different innovation categories. Tick the category and the year in which you introduced it.

Category	Year of introduction			
	2008-2009	2009-2010	2010-2011	2011-2012
ATM services				
Mobile banking				
Expenditure on ICT				

7. Please indicate the number of customers using the following innovation categories

Category	Year				
	2008	2009	2010	2011	2012
ATM services					
Mobile banking					

8. Please indicate the level of expenditure on ICT in your Sacco.

Category	Year				
	2008	2009	2010	2011	2012
Less than Ksh.500, 000	[]	[]	[]	[]	[]
500,000-1,000,000	[]	[]	[]	[]	[]
1,000,000-5,000,000	[]	[]	[]	[]	[]
Above 5,000,000	[]	[]	[]	[]	[]

9. Please indicate the extent to which each of the following factors best explain the benefits derived from financial innovation on a scale of 1-4, where 1-least beneficial, 2-Slightly beneficial, 3-Moderately beneficial, 4-Most beneficial.

Benefit	Ranking			
	1	2	3	4
Improved customer service				
Reduction in operational costs				
Improved financial performance				
Increased revenue				

10. To what extent do you agree with the following statements on various innovations and its effects on a scale of 1-5, (where 1- Strongly agree, 2- Agree, 3- Neutral, 4- Disagree, 5- Strongly disagree)

Statement	Ranking				
	1	2	3	4	5
Use of ATM's in branches increased					
Number of mobile banking transactions has increased					
The business volume has improved both in customer base as well as savings mobilization					

END OF THE QUESTIONNAIRE

THANK YOU

APPENDIX III: SUMMARY OF DATA FOR THE LAST FIVE YEARS

Year: 2012

Name of the sacco	ROA	Branch network	Expenditure in ICT	Customers using mobile banking	ATMs installed
Ardhi	0.00646	1	13	5	2
Elimu	0.0156	5	15	7	3
Lenga tumaini	0.40183	1	14	5	2
Nest	0.24353	1	13	4	2
Reli	0.01186	1	16	6	2
Teleposta	0.02836	1	13	6	2
Transcom	0.00092	1	11	7	1
Ufanisi	0.01697	1	12	5	2
Ufundi	0.00559	1	13	7	2
Ukristo na ufanisi	0.01969	1	13	6	2
Afya	0.00244	10	18	9	3
Airports	0.00221	1	12	5	2
Asili cooperative	0.0412	1	11	4	2
Chai	0.00884	1	11	6	2
Chuna	0.01288	1	13	5	2
Comoco	0.00541	7	16	8	3
Fundilima	0.00257	1	11	5	2
Harambee	0.01026	5	15	7	3
Hazina	0.01066	1	11	4	2
Jamii	0.03414	1	11	5	1
Kenpipe	0.02268	22	17	11	3
Kenversity	0.05247	1	11	4	2
Kenya bankers	0.00155	1	12	4	2
Kenya police	0.03695	4	13	6	3
Kingdom	0.00931	6	14	7	3
Magereza	0.00776	1	11	4	2
Maisha bora	0.01289	1	11	5	2
Mwalimu national	0.03211	11	18	9	2
Mwito	0.00777	1	13	5	2
Nacico	0.00154	1	12	5	1
Nafaka	0.01027	1	11	5	1
Naku	0.00286	2	12	6	2
Nassefu	0.03161	1	11	4	2
Nation staff	0.01519	1	11	4	2
Orthodox	0.03829	1	12	5	2
Safaricom	0.00809	1	13	5	2

Sheria	0.003	1	12	4	1
Stima	0.02328	1	11	5	1
Tembo	0.01821	1	11	5	2
Ukulima	0.00642	98	18	13	4
United nations	0.01482	1	11	4	2
Wanaanga	0.01272	1	12	6	1
Wanandege	0.00541	3	15	8	3
Waumini	0.02581	1	11	5	1

Year:2011

Name of the sacco	ROA	Branch network	Expenditure in ICT	Customers using mobile banking	ATMs installed
Mwalimu	0.06366	11	15	10	3
Harambee	0.04701	4	14	11	3
Afya	0.05796	10	17	10	2
Kenya police	0.06429	4	13	10	3
Stima	0.06486	1	11	9	2
Ukulima	0.06774	96	18	10	3
Kenya bankers	0.04822	1	11	9	1
United nation	0.04502	1	12	7	2
Magereza	0.0504	1	11	9	2
Nacico	0.05327	1	13	9	2
Chuna	0.05171	1	12	8	3
Teleposta	0.04139	1	12	7	2
Sheria	0.5498	1	11	7	2
Chai	0.4533	1	11	8	2
Airports	0.06214	1	13	7	2
Wanandege	0.3452	3	16	7	3
Jamii	0.06494	1	11	9	2
Waumini	0.04708	1	12	9	3
Asili	0.0507	1	11	9	2
Ardhi	0.0046	1	11	8	1
Maisha bora	0.01951	1	11	7	3
Nassefu	0.0741	1	11	8	2
Kenversity	0.07069	1	12	7	2
Reli	0.05952	1	11	8	3
Ufundi	0.05605	1	12	7	3
Wana anga	0.08347	1	11	7	2
Nation staff	0.6432	1	11	8	2
Elimu	0.12455	5	18	9	2
Comoco	0.07671	6	16	7	3

Mwito	0.04908	1	12	8	1
Transcom	0.03788	1	11	7	1
Tembo	0.07811	1	12	7	2
Fundilima	0.04683	1	11	7	2
Ukristo na ufanisi	0.07061	1	11	9	2
Kingdom	0.0567	5	15	8	3
Safaricom	0.01888	1	13	7	2
Nafaka	0.5436	1	12	8	1
Kenpipe	0.56743	20	11	6	1
Ufanisi	0.06881	1	11	6	2
Naku	0.06222	1	12	5	2
Orthodox development	0.10549	1	11	7	2
Lenga tumaini	0.5763	1	12	6	1
Nest	0.9876	1	12	7	2
Hazina	0.0497	1	11	7	1

Year :2010

Name of the sacco	ROA	Branch network	Expenditure in ICT	Customers using mobile banking	ATMs installed
Mwalimu	0.07264	11	15	10	3
Harambee	0.04711	4	14	10	3
Afya	0.03546	10	17	9	2
Kenya police	0.06123	4	13	9	3
Stima	0.0647	1	11	8	2
Ukulima	0.06508	96	18	9	3
Kenya bankers	0.04856	1	11	9	1
United nation	0.07115	1	12	7	2
Magereza	0.04929	1	11	8	2
Nacico	0.05783	1	13	8	2
Chuna	0.04487	1	12	7	3
Teleposta	0.03418	1	12	7	2
Sheria	0.0506	1	11	8	2
Chai	0.06351	1	11	8	2
Njiwa	0.0626	1	13	6	2
Wanandege	0.06695	3	16	7	3
Jamii	0.05883	1	11	8	2
Waumini	0.05212	1	12	8	3

Asili	0.0691	1	11	8	2
Ardhi	0.05443	1	11	8	1
Maisha bora	0.06735	1	11	7	3
Nassefu	0.07662	1	11	7	2
Kenversity	0.06511	1	12	7	2
Reli	0.03378	1	11	8	3
Ufundi	0.05314	1	12	6	3
Wana anga	0.08885	1	11	6	2
Nation staff	0.06265	1	11	6	2
Elimu	0.08776	5	18	8	2
Comoco	0.0472	6	16	6	3
Mwito	0.04739	1	12	7	1
Transcom	0.03873	1	11	6	1
Tembo	0.03872	1	12	6	2
Fundilima	0.0614	1	11	6	2
Ukristo na ufanisi	0.05631	1	11	7	2
Kingdom	0.05424	5	15	7	3
Pcea	0.00118	1	13	6	2
Nasca	0.042	1	12	5	1
Ufanisi	0.06734	1	11	5	2
Gurudumu	0.05373	1	12	5	2
Orthodox development	0.07143	1	11	6	2
Lenga tumaini	0.01978	1	12	6	1
Nest	0.13519	1	12	6	2
Mata	0.04648	1	11	6	1
Kenpipe	0.06255	20	11	6	1

Year:2009

Name of the sacco	ROA	Branch network	Expenditure in ICT	Customers using mobile banking	ATMs installed
Nacico	0.04051	1	10	8	0
Kenya bankers	0.05473	1	9	7	2
Kenversity	0.0741	1	9	6	0
Comoco	0.00609	5	14	5	1
Elimu	0.00938	4	11	7	1

Chai	0.03926	1	10	8	1
Asili	0.00657	1	11	7	1
Jamii	0.04921	1	12	7	0
Ardhi	0.04847	1	11	6	1
Afya	0.06496	7	16	9	1
Kingdom	0.03089	4	15	5	2
Fundilima	0.00922	1	12	5	1
Transcom	0.00278	1	11	8	1
Magereza	0.05873	1	11	7	1
Wanandege	0.06098	1	13	5	1
Reli	0.05124	1	12	7	1
Nassefu	0.05077	1	11	7	0
Pcea	0.00324	1	12	9	1
Stima	0.08849	1	11	6	1
Sheria	0.065	1	11	7	1
Harambee	0.02178	3	13	5	1
United nation	0.00412	1	11	5	0
Ufundi	0.03383	1	12	4	1
Lenga tumaini	0.04567	1	11	8	1
Nation staff	0.11057	1	12	7	1
Tembo	0.053	1	11	8	1
Ufanisi	0.00416	1	11	9	1
Mwalimu	0.08327	9	18	7	1
Chuna	0.00262	1	16	8	1
Mater	0.01704	1	12	7	1
Kenya police	0.00769	3	14	5	1
Ukristo na ufanisi	0.00086	1	12	5	0
Waumini	0.00275	1	11	7	1
Ukulima	0.026	95	18	7	1
Gurudumu	0.00462	1	12	5	1
Nasca	0.00599	1	13	5	1
Maisha bora	0.08624	1	12	5	0
Finnlemm	0.00743	1	11	5	1
Shirika	0.07652	1	10	6	1
Wana anga	0.00365	1	11	5	1
Njiwa	0.01108	1	12	6	0

Nest	0.00068	1	11	5	1
Teleposta	0.00079	1	11	5	1
Mwito	0.00471	1	12	7	1

Year:2008

Name of the sacco	ROA	Branch network	Expenditure in ICT	Customers using mobile banking	ATMs installed
Nacico	0.03984	1	9	7	0
Kenya bankers	0.06675	1	8	7	2
Kenversity	0.0235	1	8	5	0
Comoco	0.01164	5	13	5	1
Elimu	0.00422	4	10	7	1
Chai	0.04104	1	10	7	1
Asili	0.01186	1	11	7	1
Jamii	0.00065	1	11	7	0
Ardhi	0.04401	1	11	6	1
Afya	0.04309	7	14	8	1
Kingdom	0.00268	4	13	5	2
Fundilima	0.00564	1	12	5	1
Magereza	0.06184	1	11	7	1
Wanandegge	0.08627	1	11	6	1
Nassefu	0.00626	1	13	5	1
Stima	0.07748	1	12	7	1
Sheria	0.00723	1	11	6	0
Harambee	0.05436	1	12	9	1
United nation	0.00418	1	11	6	1
Ufundi	0.08208	1	11	6	1
Nation staff	0.00963	3	15	5	1
Tembo	0.04784	1	11	5	0
Ufanisi	0.00392	1	12	4	1
Mwalimu	0.08142	1	11	8	1
Chuna	0.00234	1	11	6	1
Kenya police	0.00252	1	11	8	1
Ukristo na ufanisi	0.00178	1	10	9	1
Waumini	0.00461	9	14	7	1
Ukulima	0.01526	95	14	8	1
Maisha bora	0.09348	1	12	5	1
Wana anga	0.00428	3	15	5	1
Orthodox development	0.01179	1	12	5	0
Transcom	0.00329	95	16	6	1

Reli	0.01138	1	13	7	1
Pcea	0.00372	1	12	5	1
Lenga tumaini	0.02827	1	11	5	1
Mater	0.02144	1	12	4	0
Gurudumu	0.0054	1	11	5	1
Nasca	0.00226	1	10	4	1
Finnlemm	0.00756	1	11	5	1
Shirika	0.07108	1	10	6	0
Njiwa	0.01377	1	11	5	1
Nest	0.02807	1	11	4	1
Teleposta	0.0025	1	10	6	1