THE RELATIONSHIP BETWEEN FINANCIAL INNOVATION AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

BY

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DECLARATION

This research project study is my original work and has not been presented to any other examination body. No part of this research proposal should be reproduced without my consent or that of University of Nairobi.

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ROBERT MUIRURI GITAU REG: **D61/72940/2009**

This research project has been submitted with the approval of the University Nairobi Supervisors.

Signed……………………………………….. Date ……………………………

MIRIE MWANGI

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DEDICATION

I would like to dedicate this study to my loving family .There is no doubt in my mind that without their continued support and counsel I could not have completed this process.

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ABSTRACT

This study sought to determine the relationship between financial innovation and financial performance of commercial banks in Kenya. This study took on a Quasi-experimental research design. The data collected was edited for accuracy, uniformity, consistency and completeness and arranged to enable coding and tabulation before final analysis. Qualitative and quantitative analysis techniques were used. Qualitative data will be analyzed by categorizing and grouping thematic contents through content analysis to address the research questions. Quantitative analysis will be analyzed through descriptive statistics such as measure of central tendency to generate relevant percentages, frequency counts, mode, and median and mean where applicable. The study will also use multiple linear regressions to analyze the data.

The study concluded that commercial banks had adopted process, product and institutional innovation. Product innovation strategies adopted by the commercial banks were Credit cards,business club and unsecured loans.Institutional innovations adopted were Insurance services,credit refrence bureau and Islamic bannking.Process innovation adopted were RTGS, mobile and internet banking.It was clear that adoption of financial innovation resulted in strong financial results of commercial banks.

The study therefore the suggests that further research should be conducted in all the commercial banks to investigate into the effects of financial innovation strategies on other aspects of the bank in achieving competitive edge.

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ABBREVIATIONS

ARMs- Adjustable Rate Mortgages

ATM- Automated Teller Machine

CDO- Collateralized debt obligations

CDS- Central Depository System

CRB-Credit referencing bureau

ICT-Information and communication technology

NSE- Nairobi Stock Exchange

RTGS-Real time gross settlement

SAP- Structural Adjustment Programme

SPSS-Statistical Package for Social Sciences

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Innovation is clearly an important phenomenon in any sector of a modern economy. Innovation generally refers to the introduction or use of new ideas, or ways of doing things. Financial innovation consists of commercial banks developing new products or services or new production processes. Although standard microeconomic theory focuses much of its attention on the issues of static resource allocation and economic efficiency, there is nevertheless general appreciation that performance over time is driven by a variety of dynamic factors, including innovation. Accompanying the development of the capital markets is the increase in innovations in the financial sector. Banking systems both in developing and developed countries are subjected to ongoing environmental change and questions about the main drivers of such change would promptly receive the following answers: trends in financial service demand; technological innovation; deregulation and subsequent regulation, known as regulatory dialectic; mergers, acquisitions and strategic agreements; competition; globalization; supply diversification; economic volatility (Freeman,1981).

This process has been pursued with varying intensities according to the different institutional contexts. Tufano (2002) broadly categorizes financial innovations into two types, product and process innovations. Product innovation can be illustrated by corporate securities or derivative contracts, while process innovation can be demonstrated by new means of distributing securities, processing transactions or payment system technologies.

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. Empirically, Tufano (1989) showed that of all public offerings in 1987, 18% (on a dollar-weighted basis) consisted of securities that had not been in existence in 1974. These innovations are not just critical for commercial banks in the financial services industry, but also impact other companies: for instance, enabling them to raise capital in larger amounts and at a lower cost than they could otherwise.

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 customer demands, and yield greater profits. Sometimes this search occurs through formal research and development programs; sometimes it occurs through more informal "tinkering" or trial-and-error efforts. When successful, the result is an innovation (Nasr, 2007). The centrality of finance in an economy and its importance for economic growth Ross Levine (1997) naturally raises the importance of financial innovation. Since finance is a facilitator of virtually all production activity and much consumption activity, improvements in the financial sector will have direct positive ramifications throughout an economy.

Financial innovation, like other economic behaviors, generally arises in anticipation of material gains following a cost-benefit analysis. The innovation makes possible either a reduction in costs or an increase in revenues, or both. On the cost-reducing side, in particular, exogenous technological change provides room for cost reduction that induces innovation. For example, advances in information technology have significantly lowered the cost of accounting-intensive products such as mutual funds. Other product innovations relying on speedy calculation and action, such as portfolio insurance and index arbitrage transaction, have similarly been made feasible by upgrade in computer speed. The ATMs, which reduce banks' operating costs by efficiently executing much of a teller's duty over the retail counter, is one of the renowned innovations that benefit from technological advances.

In a broader sense, financial innovation can be defined as the emergence of new financial product or service, new organizational form, or new processes for a more developed and complete financial markets that reduce costs and risks, or provide an improved service that meets particular needs of financial system participants. Generally, innovation has generated a wide interest as a research subject in social sciences with a particular focus on the relationship between innovation and competitive advantage. In a highly turbulent environment, a successful innovation creating a unique competitive position can give the company a competitive advantage and lead to a superior performance (Roberts and Amit, 2003). Generally speaking, all profit-seeking enterprises including banks are constantly seeking new and improved products, processes, and organizational structures that can reduce their costs of production, better satisfy their customers' needs, and yield higher profits. Bank customers demand for variety,

convenience and new services. They want products that can meet their precise, individual needs. Technology boom in the past decades have helped banks to respond to this challenge.

Competition has also emerged between traditional commercial banks and other financial institutions. The development and globalization of financial markets have intensified the need for modifying the current structure and condition of the financial system. Financial regulations have been modified, usually towards reducing or eliminating constraints on financial activity, such as interest rate liberalization. This type of financial deregulation, as it may be called, triggers off the incentive for innovation.

1.1.1 Commercial Banks in Kenya

In Kenya, banking sector is composed of the central bank of Kenya (CBK) as the regulatory authority and the regulated are commercial banks, on-bank financial institutions and forex bureaus. As at 31st December 2010 the banking sector comprised of 45 institutions 44 of which were commercial Banks and one Mortgage finance companies, they are licensed and regulated under the banking act cap 488.Out of the 44 commercial banks, 32 are locally owned and 12 are foreign owned translating to 71% and 29% respectively. The locally owned financial institutions comprised of 3 banks with significant government shareholding, 28 privately owned and one Mortgage finance companies (MFC'S).

Financial performance of the banking sector was rated strong as institutions achieved satisfactory financial performance and improved financial results despite high market competition as each bank scramble for a significant market share. Financial innovations have been introduced into the market as a result of raising competition. The banks remained well capitalized, shareholders funds deposits and asset s increased 35.2% and 31.9% respectively (CBK, 2010)

1.1.2 Financial Innovation and Financial Performance

The Kenyan financial sector has undergone tremendous changes in the last two decades. A lot of reforms have been undertaken in the sector that have led to proliferation of financial products, activities and organizational forms that have improved and increased the efficiency of the financial system. Advances in technology and changing economic conditions have created impetus for this change. All these developments coupled with changes in the international financial environment and the increasing integration of domestic and international financial markets have led to rapid financial innovation (Nyangosi, 2008).

Commercial banks in Kenya have developed new financial innovations that have influenced their financial performance; these include Mobile and internet banking, RTGS, ATM withdrawals and deposits, online account opening, unsecured lending among many others. All these financial innovations contribute heavily in building customer base, capital base as well as enhancing their profitability which results to improved financial performance. Financial performance of banks is usually measured using a combination of financial ratios analysis, benchmarking, measuring performance against budget or a mix of these methodologies (Barley, 2000) the common assumption which underpins much of the financial performance research and discussions is that increase of financial performance leads to improved functions and activities of the banks.

The Kenyan banking sector has demonstrated a solid growth since 2003 when most of the financial innovations were adopted. The industry continues to offer significant profit opportunities for the major participants; profit after tax for the overall banking sector grew by 38.61 % or 5.08 Billion from 13.15 Billion to 18.22 Billion in December 2005.(The Kenya banking sector report,2007)

The other measure used for financial performance is CAMEL, acronym for the five components of a banks condition that are assessed; these are capital adequacy, asset quality, management quality, earnings and liquidity. Sixth component, banks sensitivity to market risk was added in 1997 hence the acronym CAMELS. The rating scale is from 1(best) to 5(Worst).Capital adequacy, earnings and liquidity are the key dimensions of measuring performance in commercial banks. Ratings are assigned for each component in addition to the overall rating of a banks financial performance (Jose, 1999)

1.2 Statement of the Problem

Locally some research studies have been conducted on financial innovations; Mwangi (2007) carried out a study on Factors Influencing Financial Innovation of 48 Companies listed at Nairobi Stock Exchange.Mwangi argued that global financial competition and integration had an influence on financial innovation with increased financial competition amongst financial institutions influencing financial innovation the most. Kihumba (2008) conducted a study on the determinants of financial innovations and its effects on banks performance in Kenya. Kihumba study focused on financial innovation as a strategy and hence this did not cover the relationship between financial innovation and financial performance of commercial banks in Kenya. Kamotho (2009) carried out a study on Mobile Phone Banking usage experiences in Kenya and observed that competition triggers innovation and creativity. Continuous innovation not only yield new products but rather promotes efficiently in the performance of activities. Hence lowering the transaction cost. These studies have shown that there exists a relationship between financial innovation and financial performance of commercial banks (Tufano, 1989).

Financial services market in Kenya has been subject to radical transformation since Kenya started to register economic growth in early 2003.Banks in Kenya started to compete for Kenya's hugely untapped and unbanked population. The distribution of retail financial services received growing attention in academic and professional literature as it has been hailed as an increasingly important factor in determining whether banks compete effectively in their chosen market Pasha (2009).The rapid rate of innovation in the financial sector as well as the rising importance of the sector in modern economics has generated a research question, what is the relationship between financial innovation and financial performance of commercial banks in Kenya?

Motivated by this knowledge gap, this study seeks to determine the relationship between financial innovation and financial performance of commercial banks in Kenya.

1.3 Objective of the Study

The objective of this study was to determine the relationship between financial innovations and financial performance of commercial banks in Kenya

1.4 Significance of the Study

Findings would indicate how financial innovation contributes to banks' financial performance. Therefore, bank managers would clearly understand the same and would strive to encourage or discourage financial innovation based on such findings.

This study would be of importance to the Kenyan consumers who would benefit from increased financial innovations should the study positively apprise the same. Such innovations such M-pesa would end up contributing positively to the economy and reduce the number of unbanked citizens in the country.

The study would form a good literature base upon which further studies and references would be drawn. Academicians would, thus, benefit from the findings of this study as it would add to the body of existing knowledge in finance. These would comprise of the Kenyan current and future scholars and researchers since it would broaden their knowledge on the how financial innovation contributes to banks' financial performance.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter summarizes the information from other researchers who have carried out their research in the same field of study. The specific areas covered here are theories of financial innovation in section 2.2, the impact of financial innovations on financial performance in section 2.3, the forms of financial innovation namely; products and services innovation, process innovation, organization innovation, summary of empirical evidences in section 2.4, and a chapter summary in section 2.5.

2.2 Theories of Financial Innovation

Silber (1975, 1983) presented the theory of constraint which is one of the most influential theories of financial innovation. This theory considers product innovation as response of organization to the constraints placed up on it. Innovations have many causes. Firms may need to stop the loss of deposits, enter new geographic or product markets and deliver services with cheaper and better technology. In addition, they may want to increase their capital base, alter their tax position, reduce their risk profile or cut operating costs (McConnell and Shwarch 1992).Christensen and Raynor's theory of the innovator's solution is a brilliant analysis of why companies fail to innovate. It explains convincingly why corporate managements don't learn about good ideas, and why managers succumb to inherent pressures to run away from the challenge of disruptive competition rather than stand and fight. The decisions made as a result of these pressures make sense in the short run to the individuals involved, but in due course they send the organization into an inexorable death spiral (Anthony and Christensen, 2008).

But while their analysis of the causes of failure to undertake disruptive innovation is effective, their proposal for solving the dilemma of disruptive innovation is less helpful. The central premise of their thesis – the innovator's solution – is to accept the grim reality that big companies are inherently and constitutionally disinclined to tackle disruptive innovation. A modern organization will crush disruptive new ideas, because they represent a threat to management, to

careers, to power structures, to customary ways of things, to client bases, to brands, to corporate culture. The authors' solution is to protect genuine innovators and their disruptive change ideas from these hostile forces. According to Christensen and Raynor, corporate leaders should put up a wall between the innovation and the existing hierarchy. Leadership should create an independent business unit, which will provide a safe and protected environment for innovation. There the innovation can flourish without having to fight off the interferences and intrusions and anti-innovation attitudes of the hierarchy.

Allowing a different culture to flourish in a separate organization eventually leads to repeated power struggles and culture clashes, which members of the mainstream organization invariably win. Interest in the new ventures tends to be cyclical. Brief surges of enthusiasm, triggered by abundant resources and the desire to diversify, are followed by sharp declines. The life spans of both internal venture units and corporate venture capital funds, therefore, tend to be short – on average, only four to five years.

Christensen and Raynor's innovator's solution theory rests on the hope that if one can build enough commercial success in the marketplace, he/she has a better chance of eventually winning that battle of persuasion. Surely, their argument goes, the hard numbers will win the war. Unfortunately the track record shows that even with strong commercial success, numbers and reason are not enough to dislodge the forces of stasis and inertia.

Christensen's framework – while having its share of admirers and detractors – has certainly heightened practitioner awareness of the basic phenomenon of creative destruction described by Schumpeter, i.e. that market churn is a fundamental feature of competition and the evolution of economic systems. The dilemma this situation appears to pose for incumbent firms is also a "perennial" issue in research on the economics of innovation, technology evolution, firm strategy, marketing and entrepreneurship. This means that potentially relevant literature is enormous. So in our review of the literature below, we restrict ourselves to summarizing three central issues that are historical staples in the literature, plus an overview of current conversation. The latter is based on 145 peer-reviewed articles that specifically refer to "Christensen", "the innovator's dilemma", or both.

First, the economic incentives for incumbent firms to engage in uncertain innovative activities have been examined in detail in the literature on the economics of technological innovation and firm strategy (Reinganum, 1983). The central proposition of this research is that incumbent firms will experience disincentives to create new technologies that disrupt existing technologies because the new technology cannibalizes the rent stream from the old. Non-incumbent challengers do not face this disincentive. So they rationally invest more and as a result will contribute a disproportionally large share of major innovations (Reingenum, 1983). Thus, incumbents face the unsavory prospect of having to decide when to start cannibalizing themselves in the full knowledge that much uncertainty pervades this choice. If they listen to their existing customers too much and stay with them too long they face being disrupted by an entrepreneurial attacker; if they listen inadequately to their existing customers and migrate to a new technology too early then they lose the rent stream from the old product. The uncertainty surrounding this choice is indeed deep, as Rosenberg (1996) has cautioned.

The simultaneous advance in new technology, along with the substantial upgrading of old technology, underlines the pervasive uncertainty confronting industrial decision makers in a world of rapid technological changes (Rosenberg, 1996).

Second, the marketing literature has focused on a central and unsettling suggestion that the innovator's dilemma consists in the fact that by doing the right thing (i.e. listening to current customers) leading firms often end up losing their markets to upstart newcomers. This is unsettling because compelling evidence exists in the marketing literature that market orientation leads to positive business performance (Matsuno et al., 2002). The essence of this debate suggests a trade-off between two fundamental functions of good management: the creation of satisfied customers and the creation of innovations. The trade-off is echoed in Im and Workman (2004), who recently concluded in line with Christensen and Bower (1996)

Third, organizational researchers have been concerned with the questions that the innovator's dilemma poses for organizational change, in particular the problem that disruptive technologies pose for organizational capabilities (Henderson, 1993). The essence of this problem is very well understood in the literature on organizational learning: it is an example of organizations having to cope with the difficulties inherent in trading-off the exploitation of existing technologies,

capabilities and markets with the exploration for new technologies, capabilities and markets. March captured this trade-off as the relationship between exploration of new possibilities and exploitation of old certainties (March, 1991). Firms balance exploration with exploitation by trading-off the costs of exploration (investments in survival) with the benefits of exploitation (maximizing returns to investors). Organizations sit atop the horns of a dilemma between investing in tomorrow's capabilities that support long-run sustainability (but which capabilities) and harvesting short-run benefits from today's capabilities.

2.3 The Impact of Financial Innovation on Financial Performance

The study focus on the first mover advantage as it may be more probable in the banking industry than in other industries due to the importance of bank-client relationship (Berger and Dick, 2006). 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. The imitation that occurs during the Schumpeterian process of creative destruction then generates the need for enterprises to produce still more innovations in order to maintain a competitive advantage. Price theory regards price as a mechanism that delivers first mover advantages. On the one hand, establishing high prices prior to the entry of imitators allows innovators to recover the cost of investing in innovations. On the other hand, these monopoly rents are temporary and are eroded once imitation appears. This is the classic monopoly argument upon which Van Horne (1985) relied to explain the performance of financial innovators. Berger (2003) argues that the relevant aspects of technological change include innovations that reduce costs related to the collection, storage, processing, and transmission of information, as well as innovations that transform the means by which customers access bank services. Humphrey et al. (2006) cite ATMs (automated teller machines), telephone banking, internet banking, and e-money as being among the significant innovations affecting the banking distribution system that influence banking performance significantly. Goddard et al. (2007) add that client relation management systems, bank management technologies, and various other technologies are among the major changes in internal banking systems that also have exercised a positive influence on banking performance and profitability. The first institutions to adopt

successful new technologies earn extraordinary profits because of the high prices they impose or the increased market shares they acquire. Other banks follow their lead in order to avoid losing market share. If the process of innovation continues and new technologies are introduced over time, innovative banks can continue to earn high profits on the various new or improved products. However, extraordinary profits will dwindle as innovations are adopted widely

Berger and Mester (2003), Consistent with the results of other studies that support the hypothesis that the first mover advantage offers the enterprise better performance, the examination by Dos Santos and Peffers (1995) of the introduction of ATMs (Automatic Teller Machines) 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 U.K, Batiz-Lazo and Woldesenbet (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 are efficiency driven. In fact, product innovations are introduced to satisfy an external user or market need, while process innovations are defined as new elements introduced into the firm's production or into the services it provides. The latter are essentially introduced by the firm with a view towards improving its efficiency.

2.4 Financial Innovation and Banking

According to the literature, financial innovations are specifically driven by technological change and consumer demand Nasri, (2007). The major discussions are focusing on the lines of: new products & services, new production process and new organizational forms:

2.4.1 Products Innovation

Mortgage loans are one suite of products that have experienced a great deal of change. In 1980, long-term fully amortizing fixed-rate mortgages were the norm and this product was offered

primarily by thrift institutions Pasha (2009). Moreover, these loans required substantial down payments and a good credit history and the accumulated equity was relatively illiquid.

These characteristics have markedly evolved. The first big change occurred in the early 1980s with the widespread introduction of various types of adjustable-rate mortgages (ARMs), which had previously been banned by federal regulators. In USA, Tax Reform Act of 1986, which ended federal income tax deductions for non-mortgage consumer debt, spurred substantial growth in home equity lending. One mortgage innovation more directly tied to technological change is subprime lending, which was originally predicated on the use of statistics for better risk measurement and risk-based pricing to compensate for these higher risks. However, the subprime mortgage crisis has uncovered significant shortcomings in the underlying statistical models (Rakesh, 2004).Other examples of product innovations are;Airtel and Safaricom mobile phone money transfer services M-pesa and Zap to tap the potential for small scale transactions at reasonable costs. Equity Bank partnering with Safaricom to introduce the M-kesho service, Products tailored to suit specific status groups such as Excel, Priority, Premier and Executive Banking services Bank accounts tailored for specific age groups such as Barclay's Bank's Junior eagle account for children, premier and premier life banking for the affluent.

2.4.2 Service Innovation

Service innovation primarily relate to enhanced account access and new methods of payment-each of which better meets consumer demands for convenience and ease. Automated Teller Machines (ATMs), which were introduced in the early 1970s and diffused rapidly through the 1980s, significantly enhanced retail bank account access and value by providing customers with around the clock access to funds Rakesh (2006). ATM cards were then largely replaced through the 1980s and 1990s by debit cards, which bundle ATM access with the ability to make payment from a bank account at the point of sale. Over the past decade, remote access has migrated from the telephone to the personal computer. Online banking, which allows customers to monitor accounts and originate payments using "electronic bill payment," is now widely used. Stored-value, or prepaid, cards have also become ubiquitous Montiel (2000).

Debit Cards: Debit cards are essentially "pay-now" instruments linked to a checking account whereby transactions can happen either instantaneously using online (PIN based) methods or in

the near future with offline (signature based) methods. Consumers typically have the choice of using online or offline methods, and their selection often hinges on the respective benefits. Online debit allows the cardholder also to withdraw cash at the point-of-sale, and offline provides float (Bencivenga and Smith, 1991). According to ATM & Debit News (2007), there were approximately 26.5 billion debit transactions in the U.S. during 2006. This is up from 6.5 billion transactions in 1999 – a four-fold increase.

Online Banking: As households and firms rapidly adopted internet access during the late-1990s, commercial banks established an online presence. According to De Young (2005), the first bank websites were launched in 1995: and by 2002 nearly one-half of all U.S. banks and thrifts operated transactional websites. As of 2007, bank call report data suggests that 77.0 percent of commercial banks offer transactional websites (and these banks control 96.8 percent of commercial bank deposits (Reddy, 2005).

The primary line of research relating to online banking has been aimed at understanding the determinants of bank adoption and how the technology has affected bank performance. In terms of online adoption. Furst, Lang, and Nolle (2002) find that U.S. national banks (by the end of the third quarter of 1999) were more likely to offer transactional websites if they were: larger, younger, affiliated with a holding company, located in an urban area, and had higher fixed expenses and non-interested income. Turning to online bank performance, De Young, Lang, and Nolle (2007) report that internet adoption improved U.S. community bank profitability primarily through deposit-related charges. In a related study, Hernando and Nieto (2007) find that, over time, online banking was associated with lower costs and higher profitability for a sample of Spanish banks. Both papers conclude that the internet channel is a complement to – rather than a substitute for physical bank branches.

Prepaid Cards: As the name implies, prepaid cards are instruments whereby cardholders "pay early" and set aside funds in advance for future purchases of goods and services. (By contrast, debit cards are "pay-now", and credit cards are "pay later"). The monetary value of the prepaid card resides either of the card or at a remote database. According to Mercator Advisory Group, prepaid cards accounted for over $180 billion in transaction volume in 2006 (Reddy, 2006).

Prepaid cards can be generally delineated as either "closes" systems (e.g., a retailer-specific gift card, like Macy's or Best Buy) or "open" systems (e.g., a payment-network branded card, like Visa or MasterCard). Closed-system prepaid cards have been effective as a cash substitute on university campuses, as well as for mass transit systems and retailers.

2.4.3 Process Innovation

The past 25 years have witnessed important changes in banks production processes. The use of electronic transmission of bank-to-bank retail payments, which had modest beginnings in the 1970s, has exploded owing to greater retail acceptance, online banking and check conversion. In terms of intermediation, there has been a steady movement toward a reliance on statistical models. For example, credit scoring has been increasingly used to substitute for manual underwriting and has been extended even into relationship-oriented products like small business loans. Similar credit risk measurement models are also used when creating structured financial products through "securitization". Statistical modeling has also become central in the overall risk management processes at banks through portfolio stress testing and value-at-risk models – each of which is geared primarily to evaluating portfolio value in the face of significant changes in financial asset returns. Real Time Gross Settlement (RTGS) system is a funds transfer mechanism where transfer of money takes place from one bank to another on a ―real time and Gross basis. Real time means the transactions are processed as they are received. Gross settlement means the transactions are settled on one to one basis without batching with any other transaction. RTGS system is primarily for large value transactions. As soon as transactions are remitted by the paying bank they are credited in the receiving bank.

Asset Securitization: Asset securitization refers to the process by which non traded assets are transformed into securitization is widely used by large originators of retail credit – specifically mortgages, credit cards and automobile loans. As of year-end 2007, federally sponsored mortgage pools and privately arranged ABS issues (including private-label mortgage-backed securities) totaled almost $9.0 trillion in U.S. credit market debt outstanding.

By contrast, as of year-end 1990, these figures were $1.3 trillion, respectively. One recent innovation in the structured finance/securitization area is the introduction of collateralized debt

obligations (CDOs). According to Longstaff and Rajan (2006) these instruments, which were first introduced in the mid-1990s, are now in excess of $1.5 trillion.

Risk Management: Advances in information technology (both hardware and software) and financial theory spurred a revolution in bank risk management over the past two decades. Two popular approaches to measuring and managing financial risks are stress-testing and value-at-risk (VaR). In either case, the idea is to identify the level of capital required for the bank to remain solvent in the face of unlikely adverse environments.

2.4.4 Organizational Innovation

Organization innovations or institutional innovations are those that affect the financial sector as a whole. They relate to changes in business structures, establishment of new types of financial intermediaries and changes in the legal and supervisory framework. There are several examples of these innovations and they include; Credit Reference Bureaus which collect manage and disseminate customer information to lenders within a provided regulatory framework. Banks getting into stock brokerage services – Commercial banks are moving to acquire stock brokerage and investment banks to get involved in the stock market activity. Examples include NIC Bank, Equity Bank, and Co-operative Bank Banks offering insurance services on behalf of insurance companies, Islamic Banking – Banking that is guided by Islamic Sharia Law. The Islamic banks include Gulf African Bank, Barclays Bank of Kenya, and First Community Bank

2.4.5 Empirical Studies

Tufano (1989) did a research on Financial Innovation and first mover advantages. The objective of the study was to determine whether financial products innovators enjoy first mover advantages. The data was collected from 1,944 publicly traded securities, where he specifically, used a sample of 58 innovation to test whether investment banks that create new securities benefits by charging higher prices (underwriting charges) than imitators or by capturing large quantities. The study was conducted over the period 1974-1986.

Tufano concluded that investment banks that created new financial products did not charge higher prices in the period before imitative products appear and in the long run charges lower

than rivals. However these innovators did underwrote more public offerings that they innovated, than did the imitating rivals. Overall, Tufano's results was not consistent with monopoly pricing of new securities issues by innovators, but rather with the presence of cost advantages that allow these institutions to capture market shares.

Lerner (2006) investigated the origins of innovation in US financial Service firms between 1990 and 2002; He identified two sources -Wall Street Journal Index (WSJI) from Wall Street articles as an innovation indicator and Factiva Database. Of the total 20916 observations or entries in the journal only 651 new stories meets the required criteria for innovations. The distribution was further reclassified into various panels and industry of innovators. The analysis focuses on the nature of the financial institutions that undertake the innovations. He estimates both pool and random effects panel data models under different specifications (e.g. negative binomial, poisson). He finds that smaller firms account for a disproportionate share of the innovations, as do less profitable firms though their profitability increases significantly in subsequent years. Older, less leveraged firms and those located in regions with more financial innovation are more innovative.

Furst, Lang, and Nolle (2002) analyzed survey data on internet banking in the 3rd quarter of 1999 to find out the characteristics of banks that offer internet banking using the Logit models and found out that the adoption of internet banking is dictated by urban area locations, affiliation to a holding company, higher fixed expenses and higher non interest income. Additionally, the study concluded that for the banks which offered internet banking, a great number of their service offerings were positively correlated to the size of the bank and the length of period of offering internet banking related services.

Ben-Horim and Silber (1977) carried out a study to determine whether regulatory restraints encourage financial innovation using Federal Reserve data from 1952-1972. They constructed a linear programming model to estimate the opportunity costs (shadow prices) of deposits, debentures, and capital (net worth) for large banks from 1952-1972.They found out that the increasing shadow prices, as they approached regulatory constraints (such as Regulation Q), were associated with some of the major innovations of the 1960s, such as the negotiable CD.

Sullivan (2000) compared banks in the 10th Federal Reserve district (that is banks in Colorado, Kansas, Missouri, Nebraska, New Mexico, Oklahoma, and Wyoming) that used Internet web-sites for transactional services to banks that did not offer the service in the first quarter of 2000; using survey data of the 1st quarter of 2000. The study established that internet based transactional services were larger in areas with an educated populace with a higher proportion of the population being in the 18-64 age brackets. The banks that were offering transactional Internet web-sites also had higher non interest income and non interest expenses.

While studying the attributes of large banks that adopted the SBCS (small business credit scoring) and its effect on the their commercial loan portfolio under $100,000 for 1997 Frame, Srinivasan, and Woosley (2001) found out that the likelihood of adopting the SBCS was negatively correlated to the number of subsidiaries but positively correlated to4 bank branch number. Therefore, suggesting a relationship between the organizational chart and certain technology adoption.

Locally, Mwangi (2007) carried out a study on Factors Influencing Financial Innovation of 48 Companies listed at Nairobi Stock Exchange. The objective of the study was to explain the macro-environmental and micro-environmental factors influencing financial innovation in Kenya's securities market.

The population used in this study was 48 companies listed on the Nairobi Stock Exchange in 2005. An exploratory survey was conducted between September 2005 and March 2006, of which 31 respondents was obtained. The data was analyzed using descriptive statistics. Semi-structured questionnaire, drop and pick method was employed. Data in this study was summarized and presented in forms of tables, percentages, frequencies, mean scores and standard deviations.

Based on regulatory factor, the finding concluded that Kenyan laws protecting investors was the major factor influencing financial innovation. This result is similar to the finding by Frame and White (2002). Further, the research finding showed that unstable forex rates were the most important factor influencing financial innovation among market volatility factors. Mwangi also observed that the absence of automated trading systems as a technological factor was found to influence financial innovations regularly.

Finally he argued that global financial competition and integration had an influence on financial innovation with increased financial competition amongst financial institutions influencing financial innovation the most.

Kamotho (2009) carried out a study on Mobile Phone Banking usage experiences in Kenya The study cover the two main dominant mobile banking service providers; Safaricom and Zain during the three year period 2006-2008, from inception with total outlets of 8000 agents. This number tripled compared to 876 branches and 1424 ATM for commercial banks (CBK, 2008) The study is informed by a quantitative survey on M-Banking services and demand. Data on usage and exploitation patterns was gathered through reliable cluster sampling techniques using comprehensive questionnaire. Kamotho; observed that competition triggers innovation and creativity. Continuous innovation not only yield new products but rather promotes efficiently in the performance of activities. Hence lowering the transaction cost. This finding is also confirmed by Tufano (1989). Contrary to popular wisdom that mobile phone money services are meant for funds transfer and remittances, his findings concluded that 96% of the respondents used the M-banking service as form of funds storage.

2.5 Chapter Summary

The foregoing literature review highlights the relationship of financial innovation strategies on financial performance in these challenging times of changing external environments. It's therefore important that commercial banks in Kenya adopt the relevant strategies for competitive advantage that will lead to increased profitability. It's true that effectiveness of monetary transmission mechanism hinges on changing forms and character of financial diversity and depth of financial markets. In this context, the author contends that with an increasing role of the capital market, investors have greater options to diversify their financing away from banks through the issue of bonds and equities. Accordingly, such changes in the financial system impact on the effectiveness of monetary policy by increasing or decreasing lags from changes in the Central Bank policy rate to the cost of funds to business and households, as well as relative returns of different asset classes for savers and investors. For instance, greater reliance on alternative sources of financing by business and corporations may delay speed and magnitude of transmission of policy rates to the actual cost of financing. This is especially important if

alternative sources of financing have significantly different funding structures not directly influenced by Central Bank's policy rate.

Knowledge Gap

The study has surveyed the nine empirical studies of financial innovation that we were able to uncover, using quite broad criteria. It is worth noting, however, that only two separate phenomena are covered, since some financial innovations are examined by more than one study. Some summary characteristics are in order that only two studies precede the 1990s and seven have appeared since 2000 and only two studies address the environmental conditions that encourage financial innovations. Thus, the hypotheses advanced by the broad descriptive literature on innovation remain largely untested. Five studies address the characteristics of the customers for and users of financial innovations. Six studies address the diffusion of financial innovations. The remaining studies examine consequences and (explicitly or implicitly) welfare effects.

My study studies will cover financial product and service innovations (e.g., debit and credit cards, unsecured loans) and financial process innovations (e.g., RTGS, internet and mobile banking); and some studies will cover institutional innovations (e.g., CRB, Islamic banking). Taken together, these relatively few studies are suggestive (but not definitive) of some broader conclusions that financial innovation does spur financial performance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methods and procedures that will be followed in conducting research with the aim of evaluating the relationship between financial innovation and financial performance of the commercial banks. The chapter was thus outlined into research design in section 3.2, population and sample in section 3.3, data collection procedures in section 3.4, research models in section 3.5 and data analysis in section 3.6

3.2 Research Design

This study took on a Quasi-experimental research design. A Quasi-experimental design involves selecting groups upon which a variable is tested without any random pre-selection processes (William, 2006). This design appeared to be inferior to randomized experiment but taken as a group, they were easily more frequently implemented than the randomized experiment. Quasi-experimental design had a better chance of studying exactly what was chosen for study hence this method unequivocally enjoyed advantage over all other designs. It provided proof of causal sequence while descriptive design relied upon correlation.

3.3 Population and Sample

In line with the subject matter of the study, the target population of the study will be all the commercial banks in Kenya. These commercial banks were 44 in number by the end of 2010. (CBK Report, 2010) The accessible population were all the commercial banks as at 31st December 2010 and had operated uninterrupted period of not less than 5 years (that is, from January 1st 2006 to 31st December 2010.The study was conducted using census survey owing to the number of commercial banks in Kenya.

3.4 Data Collection

The study used both primary and secondary data sources. While secondary data on financial innovation was found from the companies' financial results and publications, primary data was gathered through the use of questionnaires. Use of questionnaires was chosen since questionnaires had advantages over some other types of data collection instruments in that they are cheap, do not require as much effort from the questioner as verbal or telephone surveys, and often have standardized answers that make it simple to compile data. The questionnaire had both open and close-ended questions.

3.5 Research Model

3.5.1 Empirical Model

This study will take on Multiple regressions which is a flexible method of data analysis that may be appropriate whenever quantitative variables (the dependent) is to be examined in relationship to any other factors (expressed as independent or predictor variable). Relationships may be non-linear, independent variables may be quantitative or qualitative and one can examine the effects of a single variable or multiple variables with or without the effects of other variables taken into account, (Coben, Cohen, West and Aiken, 2003).

Financial performance or increase in revenue or cost reduction (Dependent variable) of commercial banks depends on technology, product, market and process (Independent variable).

The multiple regression model equation is:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \alpha$

Where,

Y-Financial performance of commercial bank
β_0-the regression coefficient
X_1 = Technological
X_2 = Product

X_3 = Market

X_4 = Process

α = Error term

3.6 Data Analysis

The data collected will be edited for accuracy, uniformity, consistency and completeness and arranged to enable coding and tabulation before final analysis. Since the questionnaire will be semi-structured (with both open and close-ended questions) both qualitative and quantitative analysis techniques will be used. Qualitative data will be analyzed by categorizing and grouping thematic contents through content analysis to address the research questions. Quantitative analysis will be analyzed through descriptive statistics such as measure of central tendency to generate relevant percentages, frequency counts, mode, and median and mean where applicable. The study will also use multiple linear regressions to analyze the data.

Correlation analysis will be used to describe the degree to which one variable is related to the other. The relationship, if any, is usually assumed to be linear. In this study coefficient of correlation (**r**) and coefficient of determination (**r^2**) will be estimated to determine the nature and magnitude of the relationship. Correlation coefficient will be used to measure the degree of relationship between financial innovation and financial performance of the commercial banks. The data will be entered into Statistical Package for Social Sciences (SPSS) version 17 for analysis along with variables and values to get the correlation coefficients. The magnitude of the sample coefficient of correlation indicates a weak or strong linear relationship.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents analysis and findings of the study as set out in the research methodology. The study findings are presented on to determine the relationship between financial innovations and financial performance of commercial banks in Kenya. Financial performance has been measured in the study using the three aspects of financial innovations which are; product innovation, process innovations and organizational innovation. The data was gathered exclusively from the questionnaire as the research instrument. The questionnaire was designed in line with the objectives of the study.

4.1.1 Response Rate

The study targeted 44 respondents from the commercial banks. From the study, 37 out of the 44 sample respondents filled-in and returned the questionnaires making a response rate of 84%. This reasonable response rate was made a reality after the researcher made personal calls and visits to remind the respondent to fill-in and return the questionnaires.

Figure 4. 1: Financial innovations strategies that had been adopted by the institutions
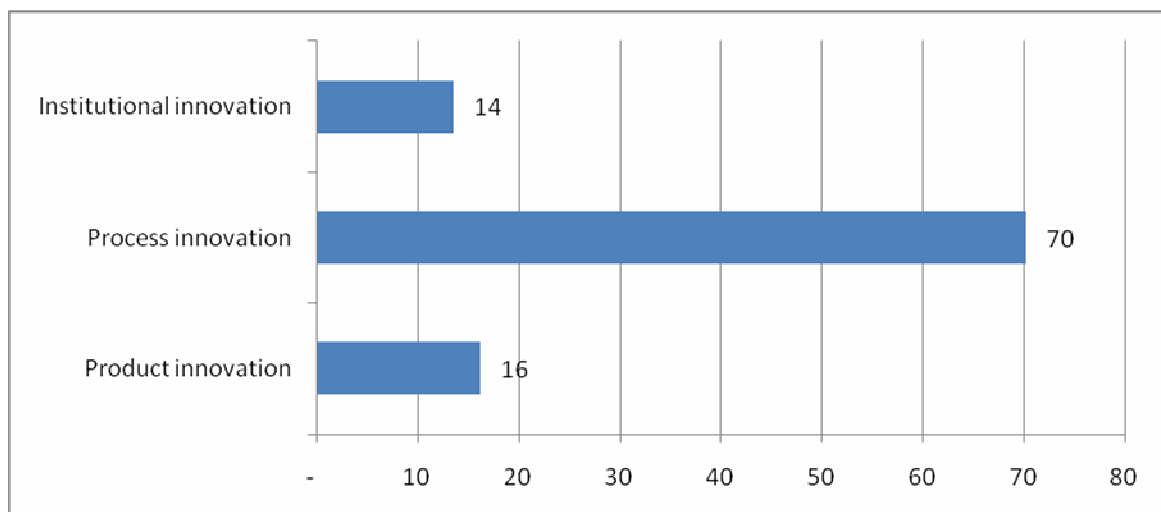
The study sought to find out the financial innovations strategies that had been adopted by the institutions. According to the findings, 70% of the institutions had adopted process innovation, 16% of the institutions had adopted product innovation and 14% of the institutions had adopted institutional innovation. This implies that the most adopted innovation strategy was the process innovation. This had enabled the banks to serve more clients within a shorter time.

4.2 Product innovation

Table 4. 1: Types of product innovation strategies adopted by the institutions

products	Frequency	Percentage
Credit cards	32	86
Business club	2	5
Unsecured loans	3	8
Total	37	100

The study sought to find out the types of product innovation strategies adopted by the institutions. According to the findings, 86% of the respondents indicated that product innovation strategies adopted by the institutions was credit cards, 8% of the respondents indicated that product innovation strategies adopted by the institutions was unsecured loans and 5% of the respondents indicated that product innovation strategies adopted by the institutions was business club.

4.3 Process innovation

Figure 4. 2: Types of process innovation strategies adopted by the institutions
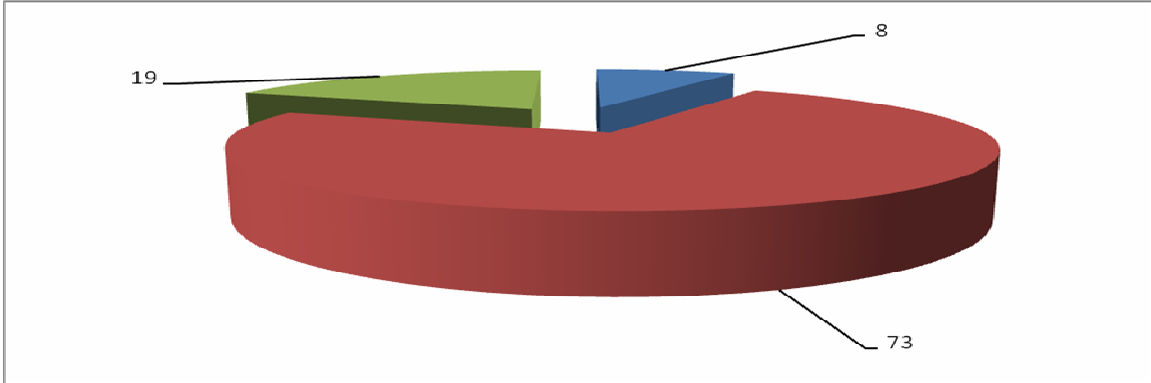
The study sought to find out the types of process innovation strategies adopted by the institutions. According to the findings, 73% of the respondents indicated that the institutions used mobile banking process innovation, 19% of the respondents indicated that the institutions used RTGS process innovation and 8% of the respondents indicated that the institutions used internet banking process innovation.

4.4 Organization innovation

Table 4. 2: Types of institutional innovation strategies adopted by the institutions

strategies	Frequency	Percentage
Insurance services	15	41
Credit referencing bureau	20	54
Islamic Banking	2	5
Total	37	100

The study sought to find out the types of institutional innovation strategies adopted by the institutions. According to the findings, 54% of the respondents indicated that the bank used credit refrencing bureau.41% of the respondents indicated that the institutions had Insurance services and 5% of the respondents indicated that the institutions had islamic banking.

4.5 Financial innovation and Financial performance

Table 4. 3: Extent that the bank made use of the financial innovations to influence the financial performance of the bank

| Financial innovation	very great extent	great extent	moderate extent	little extent	no extent	Mean	Stdev
Mobile banking	55	35	5	3	2	4.38	0.1
RTGS	2	2	6	30	60	1.56	0.3
Internet banking	2	3	10	75	10	2.12	0.2
Atm deposits	5	10	30	30	25	2.4	0.4

The study sought to find out the extent that the bank made use of the financial innovations to influence the financial performance of the bank. According to the findings, the bank made use of

mobile banking to a great extent as shown by a mean of 4.38, the bank made use of ATM deposits to little extent as shown by a mean of 2.4, the bank made use of internet banking to little extent as shown by a mean of 2.12 and the bank made use of RTGS to little extent as shown by a mean of 1.56.

Figure 4. 3: Adoption of financial innovation is very important in the improvement of financial performance of commercial banks
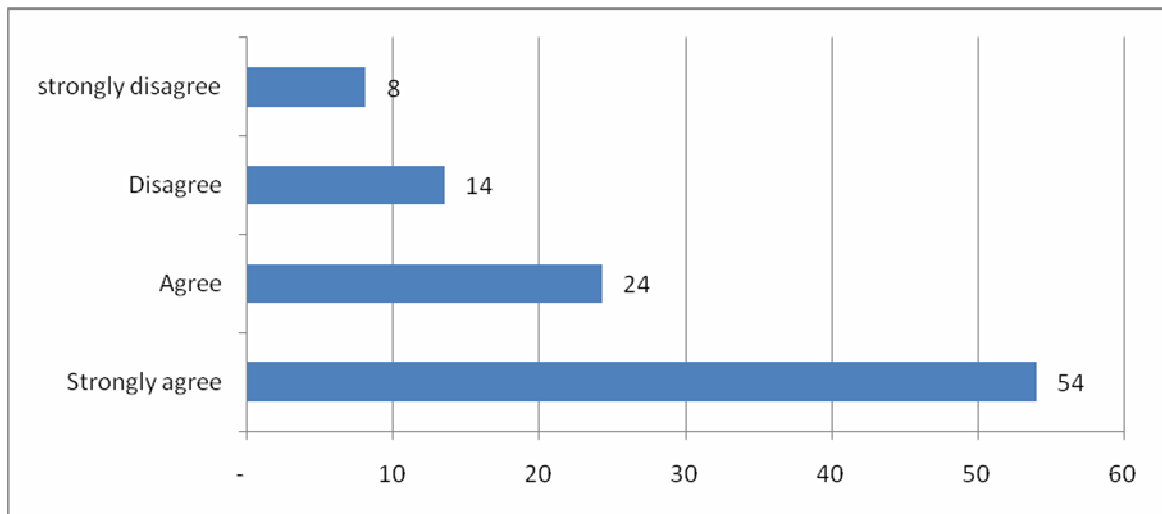
The study sought to find out the the respondents' agreement level with adoption of financial innovation being very important in the improvement of financial performance of commercial banks. According to the findings, 54% of the respondents strongly agreed that with adoption of financial innovation is very important in the improvement of financial performance of commercial banks, 24% of the respondents agreed that with adoption of financial innovation is very important in the improvement of financial performance of commercial banks, 14% of the respondents disagreed that with adoption of financial innovation is very important in the improvement of financial performance of commercial banks and 4% of the respondents strongly disagreed that with adoption of financial innovation is very important in the improvement of financial performance of commercial banks.

Table 4. 4: Importance of adoption of financial innovation in improvement of services in the bank

rating	Frequency	Percentage
Very high	13	35
High	17	46
Moderate	7	19
Total	37	100

The study sought to find out how the respondents rated the importance of adoption of financial innovation in improvement of servicesin the organization. According to the findings, 46% of the respondents rated importance of adoption of financial innovation in improvement of servicesin the organization as high, 35% of the respondents rated importance of adoption of financial innovation in improvement of servicesin the organization as very high and 19% of the respondents rated importance of adoption of financial innovation in improvement of servicesin the organization as moderate.

Figure 4. 4: Extent that financial innovations improved the products of the bank
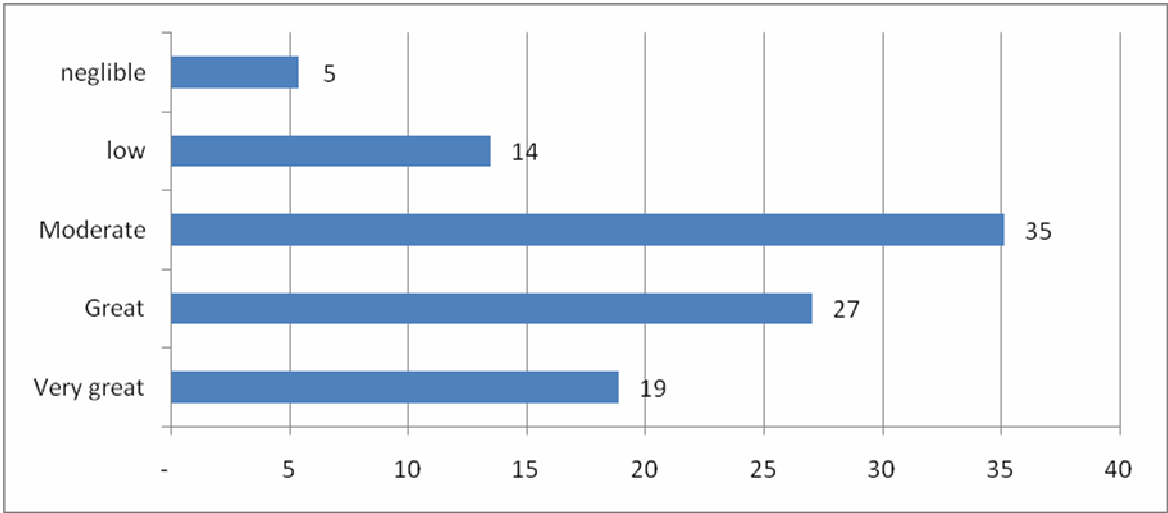
The study sought to find out extent that financial innovations improved the products of the bank. According to the findings, 35% of the respondents indicated that financial innovations improved the products of the bank moderately, 27% of the respondents indicated that financial innovations improved the products of the bank greatly, 19% of the respondents indicated that financial innovations improved the products of the bank very greatly, 14% of the respondents indicated that financial innovations improved the products of the bank to a low extent and 5% of the

respondents indicated that financial innovations improved the products of the bank was negligible.

Table 4. 5: Commercial banks were adopting financial innovations to improve their Financial performance

Agreement level	Frequency	Percentage
Strongly agree	10	27
Agree	23	62
Disagree	3	8
strongly disagree	1	3
Total	37	100

The study sought to find out the respondents' agreement level that commercial banks were adopting financial innovations to improve their financial performance. According to the findings, 62% of the respondents agreed that commercial banks were adopting financial innovations to improve their financial performance, 27% of the respondents strongly agreed that commercial banks were adopting financial innovations to improve their financial performance, 8% of the respondents disagreed that commercial banks were adopting financial innovations to improve their financial performance and 3% of the respondents strongly disagreed that commercial banks were adopting financial innovations to improve their financial performance.

Table 4. 6: Extent that the financial innovations financial performance of the bank in the following aspects?

Strategies	great extent	great extent	moderate extent	little extent	no extent	Mean	Stdev
Profitability	50	20	20	5	5	4.05	0.3
Competitive positioning	20	40	20	10	10	3.5	0.1
Service Quality	15	20	55	10	10	3.5	0.4
Efficiency	40	30	15	10	5	3.9	0.2

4.6 Correlation and the Coefficient of Determination

The table below presents the correlation (R) and the coefficient of determination between financial innovation of banks (dependent variable) and the independent variables (technological, market, process and product). From the findings, the study found that there was a positive relationship between the dependent variable and the independent variables (technological, competition, process and product).

Of all the four independent variables, technology had the highest relationship with the financial innovation of banks of 0.475 followed by product with 0.430. Market came third with a correlation value of 0.428 while process had the weakest relationship with the financial innovation of banks of 0.326.

The study sought to find out the extent that the bank focused its financial innovations strategy on the areas. According to the findings, the bank focused its financial innovations strategy on technology to a great extent as shown by a mean of 4.05, the bank focused its financial innovations strategy on marketing to a great extent as shown by a mean of 3.9, the bank focused its financial innovations strategy on customer care to a great extent as shown by a mean of 3.5 and the bank focused its financial innovations strategy on human resources to a great extent as shown by a mean of 3.5.

The institution can employ more innovations on customer care and technology. The bank can put in place measures to improve its operations and become more competitive by training its staff, investing in high technology and listening to the needs of its clients.

As aforementioned, of all four predictors to financial innovation of banks, technology had the highest coefficient of determination (strength of relationship between technology and the banks financial innovation) of 0.226 while product, market and process had the value of 0.185, 0.183 and 0.106 respectively.

Table 4. 7: Correlation and the Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Market	0.428	0.183	0.149	0.8125
Product	0.430	0.185	0.151	0.8825
Process	0.326	0.106	0.069	0.8825
Technology	0.475	0.226	0.194	0.8201

Source: Survey Data, 2011

4.7 Coefficient of Determination (R^2)

Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (bank's financial innovation) that is explained by all the four independent variables (technological, market, process and product).

The correlation and the coefficient of determination of the dependent variables when all independent variables are combined can also be measured and tested as in the table below. From the findings 46.3% of bank's financial innovation is attributed to combination of the four independent factors (technological, market, process and product) investigated in this survey. A further 53.7% of banks financial innovation is attributed to other factors not investigated in this survey.

Table 4. 8: Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig.
1	.681(a)	0.463	0.361	0.752	0.04

Source: Survey Data, 2011

4.8 Multiple Regression Analysis

The researcher conducted a multiple regression analysis so as to determine the relationship between the bank's financial innovation and the four attributes investigated in this survey. The regression equation ($Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + e$) was:

$Y = 0.853 + 0.205X_1 + 0.169X_2 + 0.156X_3 + 0.128\beta_4X_4 + 0$

Whereby Y = financial innovation of the bank

                B_0 = Regression constant

                X_1 = Technological

                X_2 = Product

                X_3 = Market

                X_4 = Process

                e = Error term

According to the regression equation established, taking all factors (technological, market, process and product) constant at zero, the financial innovation of the bank as a result of these independent factors (innovation strategies) will be 0.853. The data findings analyzed also shows that taking all other independent variables at zero, a unit increase in technological innovation will lead to a 0.205 increase in financial innovation of the bank. A unit increase in product innovation will lead to a 0.169 increase in the financial innovation of the bank; a unit increase in market innovation will lead to a 0.156 increase in financial innovation of the bank while a unit increase in process innovation will lead to a 0.128 increase in financial innovation of the bank. This therefore implies that all the four variables have a positive relationship with technological innovation contributing more to the financial innovation of the bank, while process innovation contributes the least to the financial innovation of the commercial banks of Kenya.

At 5% level of significance and 95% level of confidence, market innovation strategies had a 0.048 level of significance, product innovation had a 0.042 level of significance, process innovation showed a 0.038 level of significant, while technology showed a 0.021 level of significance hence the most significant factor in influencing financial innovation in the institution.

Table 4. 9: Multiple Regression Analysis

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	**Std. Error**	**Beta**		
(Constant)	0.853	1.068		0.799	0.043
Market	0.156	0.203	0.135	0.619	0.048
Product	0.169	0.193	-0.08	-0.358	0.042
Process	0.128	0.250	-0.242	-0.891	0.038
Technology	0.205	0.16	0.346	1.284	0.021

Source: Survey Data, 2011

Dependent Variable: financial innovation of the banks

CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter provides the summary of the findings from chapter four, and it also gives the conclusions and recommendations of the study based on the objectives of the study. The objectives of this study were to determine the relationship between financial innovations and financial performance of commercial banks in Kenya.

5.2 Summary of the Findings

The study aimed at determining the relationship between financial innovations and financial performance of commercial banks in Kenya.

The study found that 70% of the institutions had adopted process innovation,16% product innovation and 14% institutional innovation. 86% of the respondents indicated that product innovation strategies adopted by the institutions was credit cards. 73% of the respondents indicated that the institutions used mobile banking process innovation. 54% of the respondents indicated that the institutions had internet banking. The bank made use of mobile banking to a great extent as shown by a mean of 4.38, the bank made use of ATM deposits to little extent as shown by a mean of 2.4, the bank made use of internet banking to little extent as shown by a mean of 2.12 and the bank made use of RTGS to little extent as shown by a mean of 1.56. 54% of the respondents strongly agreed that with adoption of financial innovation is very important in the improvement of financial performance of commercial banks. 62% of the respondents agreed that commercial banks were adopting financial innovations to improve thei financial performance. The bank financial innovations affected financial performance on profitability to a very great extent as shown by a mean of 4.05,efficiency of the financial innovation affected financial performance to a great extent as shown by a mean of 3.9.Competitive positioning and service quality had a mean of 3.5.

5.3 Conclusions

The study concludes that there is a positive relationship between financial innovation and financial performance of commercial banks in Kenya. Competition among banks has lead to continuous innovations. Improved financial performance has been realized as result of reduced cost of financial transactions that can be attributed to financial innovation

Commercial Banks have adopted process innovation which included RTGS, mobile banking and internet banking. Product innovation strategies adopted by the commercial banks were Credit cards,business club and unsecured loans.Institutional innovations adopted were Insurance services,credit refrence bureau and Islamic banking.

Adoption of these financial innovations resulted in the increase of financial performance of commercial banks. Financial innovations also resulted in improvement of the banks products and services. The banks can employ more innovations on customer care and technology. The bank can put in place measures to improve its operations and become more competitive by training its staff, investing in high technology and listening to the needs of its clients.

5.4 Recommendations

5.4.1 Recommendations for Policy

The study recommends that the regulator (Central Bank of Kenya) should create an enabling environment that will enhance innovations in the banks so that they realize the full benefits of innovation strategies. Through compliance with the regulations and policies the banks will realise profitability as a result of process, product, market and technology innovations among others which without a proper policy the banks would not operate effectively in the market to realize profits.

5.4.2 Recommendations for Practice

From the findings and conclusions in this chapter, the study recommended that for all the commercial banks to earn more profit, increase number of customers, for their business to grow further and also for them to invest more they should embrace the adoption of market innovative

strategies. The findings in the earlier studies also recommends that customer satisfaction and retention market strategy, aggressive anti-competitors marketing campaigns, entry into new markets while consideration of availability of resources and capabilities as market innovation strategies, environmental analysis and response to changes and creation of value through pricing, is critically important if the aim is to develop the profitability of a business to the full.

The study also recommends that the banks should also strive to ensure product range extension, product replacement, product improvement, product repositioning and new product introduction to enable the banks to be more productive, to grow faster, to invest more and also to earn more profit. The product development strategies can be effectively adopted if there are quality systems in place, there is good information flow, there is specialization and also if the management fully supports the competitive strategies. The power of product innovation in helping companies retain and grow competitive position is indisputable.

The study also recommended that commercial banks should ensure new products introduction, reduction of costs, improved innovation process and conformance to regulations are used to influence profitability of the bank. This will help the tap into customers' needs so well that new products generate their own source of marketing momentum.

The study also recommends that the firms also should ensure that they adapt the new technology in order to cope with the fast changing technology. Technology innovation encourages ease of flow of information and fast delivery to the intended persons. For efficient adoption of technology innovation strategies, there should be reliable infrastructure, enough financial resources; and the staff should be equipped with adequate skills and knowledge on the new technology through regular training in order to ensure that they do dot resist the adoption of the new technology in the bank.

5.4.3 Recommendations for Extension of Theory

The study recommends that research into the innovation theories should be done with an aim of validating the theories to the current operating environment of organizations. This will pave way for new theoretical advancements to enable application of theory into practice in the organizations.

5.5 Limitation of the Study

Some of the respondents approached were reluctant in giving information fearing that it would be used to intimidate them or would portray a negative image about the bank. This was handled by carrying an introduction letter from the university and assuring them that the information collected will be treated confidentially and was for academic purpose only.

Most of the respondents were busy throughout. Due to official duties, time was a major concern. The researcher had to continuously remind them and even persuade them to provide the required information by emphasizing the importance of their participation in the study assuring them that they could be provided with a copy of the final project on request

5.6 Suggestions for Further Research

The study has explored the relationship between financial innovations and financial performance of commercial banks in Kenya, therefore the suggests that further research should be conducted in all the commercial banks to investigate into the effects of financial innovation strategies on other aspects of the bank in achieving competitive edge . The same study should also be conducted in other industries.

The study also recommends that another study be done to investigate the factors influencing financial innovations in the financial institutions in Kenya other than only commercial banks. This would include SACCOS, microfinance institutions and Mortgage companies. This would assist in determining the extent to which the financial institutions have adopted financial innovation and thus enhancing financial performance.

Another Study should be carried out to find out the challenges faced by commercial banks when implementing the financial innovation strategies.

Finally, Study should be carried out to find out other factors that influence financial performance of commercial banks. This could include organizational structure and product pricing.

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APPENDICES

Appendix I: Commercial Banks in Kenya

1. ABC Bank (Kenya)
2. Bank of Africa
3. Bank of Baroda
4. Bank of India
5. Barclays Bank
6. Chase Bank (Kenya)
7. Citibank
8. Commercial Bank of Africa
9. Consolidated Bank of Kenya
10. Cooperative Bank of Kenya
11. Credit Bank
12. Development Bank of Kenya
13. Diamond Trust Bank
14. Dubai Bank Kenya
15. Ecobank
16. Equatorial Commercial Bank
17. Equity Bank
18. Family Bank
19. Fidelity Commercial Bank Limited
20. Fina Bank
21. First Community Bank
22. Giro Commercial Bank
23. Guardian Bank
24. Gulf African Bank
25. Habib Bank
26. Habib Bank AG Zurich
27. I&M Bank
28. Imperial Bank Kenya

29. Jamii Bora Bank

30. Kenya Commercial Bank

31. K-Rep Bank

32. Middle East Bank Kenya

33. National Bank of Kenya

34. NIC Bank

35. Oriental Commercial Bank

36. Paramount Universal Bank

37. Prime Bank (Kenya)

38. CFC Stanbic Bank

39. Standard Chartered Bank

40. Trans National Bank Kenya

41. United Bank for Africa

42. Victoria Commercial Bank

43. Southern credit bank

44.   Daima Bank

MORTGAGE FINANCE COMPANIES

1. Housing Finance Ltd.

Appendix II: Introductory Letter

Dear Sir/Madam,

<u>REF: REQUEST FOR INTERVIEW APPOINTMENT ON THE RELATIONSHIP BETWEEN FINANCIAL INNOVATION AND FINANCIAL PERFOMANCE OF COMMERCIAL BANKS IN KENYA.</u>

I am a student at the University of Nairobi pursuing a Master's degree in Business Administration (MBA). As a requirement in fulfilment of this degree, I wish to carry out a study on the relationship between financial innovation and financial performance of commercial banks.

Being a chief finance officer or equivalent in your company, I have considered you knowledgeable in providing the most relevant data on the topic and an honour of an interview with you would be highly appreciated. I therefore, ask for an appointment with you so that I conduct an interview.

The information obtained through this study shall be treated as confidential and will be purely for the purpose of academic research. A final copy of the project will be availed to you at your request. Your cooperation will be highly appreciated. Thank you in anticipation.

Yours Faithfully,

Robert Muiruri

University of Nairobi

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Nairobi

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Appendix III: Questionnaire

Kindly answer the following questions by filling the spaces provided.

FINANCIAL INNOVATION AND FINANCIAL PERFORMANCE

1) What financial innovations strategies have been adopted by your institution?

Product innovation　　　**Process innovation**　　　**Institutional innovation**

　1. Credit cards　[　]　　　RTGS　　[　]　　　　　　　Insurance services [　]

　2. Business club　[　]　　　Mobile banking [　]　　　Credit rating bureau [　]

　3. Unsecured loans [　]　　　Internet banking　[　]　　　Islamic Banking [　]

2) To what extent does this bank make use of the following financial innovations in its operations? Use scale of 1 to 5 where 1 is to a very great extent and 5 is no extent.

Financial innovation	1	2	3	4	5
Mobile banking					
RTGS					
Internet banking					
Atm deposits					
Others (Specify)………………………………………………….					

3. Would you agree that the adoption of financial innovation is very important in the improvement of financial performance of commercial banks?

[   ] Strongly agree [   ] Agree [   ] Disagree [   ] strongly disagree

4. How would rate the importance of adoption of financial innovation in improvement of services in the bank?

[   ] Very high [   ] High [   ] Moderate [   ] low [   ] neglible

5. To what extent has financial innovations improved the products of the bank?

[   ] Very great [   ] Great [   ] Moderate [   ] low [   ] neglible

6. Do you agree that commercial banks are adopting financial innovations to improve their financial performance?

[   ] Strongly agree [   ] Agree [   ] Disagree [   ] strongly disagree

7. To what extent has financial innovations affect financial performance of the bank in the following aspects?

Aspects	1	2	3	4	5
Profitability					
Competitive positioning					
Service Quality					
Efficiency					
Others (Specify)…………………………………………….					

8.In your opinion, in what area (if any) do you think the institution can employ more innovations and what measures towards this can the institution put in place to improve its operations and become more competitive?

…...

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Thank you for your time.