

**Factors influencing Financial Innovation in Kenya's Securities Market:
A Study of firms listed at the Nairobi Stock Exchange.**

By

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UNIVERSITY OF NAIROBI
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DECLARATION

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

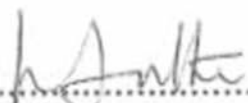
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Finally, I hereby acknowledge the contribution of everyone connected with this study and whose name I have not mentioned. To the readers of this study, education is an investment and let not stop at nothing less than the end of the knowledge.

DEDICATION

I dedicate this study to my father, Stanley Mwangi for bearing the pain of my education and especially for his guidance on the importance of pursuing an MBA course. Your words of wisdom that: "The idea that I would have ignored that, I find it incomprehensible", will be an inspiration forever.

ABSTRACT

The Kenyan security market in regard to spurring new financial innovations remains relatively poor despite being ranked the fourth best in Africa. Our domestic capital market has few financial instruments and does not have the capacity to incorporate new financial instruments in the context of the current legal, regulatory and institutional framework. This study was therefore designed to identify factors influencing financial innovation in Kenya's securities market: A study of firms listed at Nairobi stock exchange.

A population of 48 respondents was examined and descriptive study was used. The study establishes a number of factors influencing financial innovation. From the study, regulatory factors influence financial innovation. These are: NSE rules and requirements relating to the listing of quoted companies, Kenya laws protecting investors' interest at the stock market, restrictive rules and regulations of the CMA concerning licensing and control of markets, and high corporate taxes. Under market volatility, unstable foreign exchange rates and fluctuations of interest rates in Kenya all had an influence on financial innovation. All factors which fell under technology and global financial competition and integration had an influence on financial innovation. Absence of derivatives at our stock market was also an influencing factor.

The study established need to address market imperfections such as moral hazard, informational asymmetry, and transaction costs if our domestic capital market is to edge closer to that of developed capital markets and reap the accompanying benefits associated with financial innovations. There is also need to speed up regional integration. The regulatory authorities should address the current legal, regulatory, and institutional framework and explore new financial instruments to consolidate the current gains realized by the capital markets so far.

LIST OF ABBREVIATIONS

- BIS - Bank for International Settlements
- EAC - East African Community
- CDS - Central Depository Corporation
- CMA - Capital Markets Authority
- COMESA - Common Market for East and Central Africa
- FRNs - Floating Rate Notes
- IFC - International Finance Corporation
- KIPPRA - Kenya Institute of Policy and Public Research
- KMO - Kaiser Mayer Olkin
- NIFs - Note Issuance Facility
- NSE - Nairobi Stock Exchange
- OTC - Over the Counter

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

A sharp acceleration in the pace of innovation, deregulation and structural change in recent years has transformed the international financial system in many important ways (Suzuki, 1986). In many respects, innovation has improved the efficiency of international financial markets, mainly by offering a broader and more flexible range of instruments both for borrowing and hedging interest and exchange rate exposures (Tufano, 2003).

Much of the theoretical and empirical work in financial economics (Merton and Miller, 1986; Sibley, 1977; Tufano, 1986; Rohlfs, 1974; Campbell, 1988; Frame and White, 2001; Cohen, Wesley and Levine, 1989; Rohit and Rahi, 1995) considers a highly stylized world in which there are few types of securities (debt and equity) 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 UNEP FI (2002), Matsushita (1996), Greenspan (2005).

Ross (1989), Tufano (2003) and Greenspan (2005) contend that one of the features of the world economy in recent years is the further acceleration of economic globalization, particularly the strengthening of the relationship between the emerging economies and the industrialized countries. Another feature is the progress of a horizontal division of labor among various economies in the world, which is occurring with the intensified competition. Another significant development reflecting this new international division of labor is the specialization by individual countries in one area of a specific industry, perhaps in one specific intermediate good or in one specific manufacturing process.

Certainly, this rapid economic globalization is largely attributable to the fast industrialization of the emerging economies, achieved through improved industrial infrastructures and transfers of technology from the industrialized countries. Propelled by such changes in the real economy, the financial markets are also undergoing globalization, and at an even faster pace.

The major driving force has been the rapid progress in information processing and telecommunications technology.

New types of financial instruments such as derivatives and securitized products have grown rapidly in financial markets in recent years. These new instruments have been developed owing to progress in computer technology, which has facilitated statistical analysis and management of risks. (Frame and White, 2004).

Johnson (1991) defines financial innovation as the introduction of a new product to a market or the production of an existing one in a new manner. Financial innovations occur because market participants are constantly searching for new ways to make greater profits.

Suzuki (1986) contends that the process of financial innovation includes changes in financial instrument, institutions, practices and markets. In broad sense, financial innovation affects the nature and composition of monetary aggregates through new financial instruments or changes in old instruments as well as the term and conditions of debt/credit arrangements.

Akhtar (1984) argues that innovations can be grouped by a functional basis, "aggressive" or "defensive". Aggressive innovation is the introduction of a new product or process, in response to perceived demand. Defensive innovation is response to changed environment or transaction cost.

Financial innovations such as futures and options differ from bank loans, bonds, stocks, and other conventional financial instruments, in that certain elements, namely, credit risk, interest rate risk, and price risk, are separated from the underlying instruments, developed into individual financial products, and given a market life of their own.

In general, these new financial instruments are perceived as extremely complex and difficult to deal in Campbell (1988) and Siegel (1990). However, they are designed to carry one specific financial function, or a combination of functions based on different needs, making it much easier for investors and firms to select instruments that best suit their objectives, such as taking

or hedging risks. In addition, derivatives can be easily standardized and can therefore be traded in a market with diverse participants. As a result, contracts such as currency futures and options as well as interest rate swaps are now traded 24 hours a day throughout the world, across borders (Lawrence, 2000).

The expansion of these new financial instruments has contributed to improving the efficiency of the financial markets as a whole, by heightening market liquidity through an increase in market participants and by facilitating arbitrage between different financial products. Such developments have also been strengthening the linkage between financial markets around the world, accelerating the global market integration (IFC, 2000).

According to a survey by the Bank for International Settlements (BIS, 1986) the notional amount of global over-the-counter (OTC) derivatives outstanding has reached approximately \$48 trillion. The fact that it has only been a decade since the emergence of derivatives was clearly recognized shows how fast the use of these new instruments has grown. The progress of financial innovation thus promotes market efficiency.

Therefore, it is essential that an environment in which the designing and trading of such innovative instruments are unrestricted be established for the further development of financial markets.

Merton and Miller (1986) Allan and Gale (1994) Cohen et al, (1989) Tufano (1993), and Frame and White (2004) contend that the stimulus for financial innovation is strong, arising from the interaction of changing regulatory environment, expanding technology, and volatile markets and growing competition among financial institutions. Competition among financial institutions brings forth and fosters the development of new products and markets. Regulations that impede the free flow of capital and competition among financial institutions (particularly interest rate ceilings) motivate the development of financial products and trading strategies to get around these restrictions. Finally, the global pattern of financial wealth transforms financial markets from local markets into globally internationalized financial markets.

Through technological advances and the reduction in trade and capital barriers, surplus funds in one country can be shifted more easily to those who need funds in another country (Sibler, 1977). As a result, a need arises for financial products and trading strategies to more efficiently protect against the adverse movements of foreign currencies.

Many of the innovations that pass the test of time provide more efficient mechanisms for redistributing risks. Other innovations may just represent a more efficient way of doing things. However, Tufano (1989) observes that the ultimate causes of financial innovation are: Increased volatility of interest rates, inflation, equity prices, and exchange rates, advances in computer and telecommunication technologies, greater sophistication and educational training among professional market participants, financial intermediary competition, incentives to get around existing regulations and tax laws and changing global patterns of financial wealth.

With increased volatility comes the need for certain market participants to protect themselves against unfavorable consequences, which means new or more efficient ways of risk sharing in the financial market. Many of the financial products require the use of computer to create and to continually monitor them Girblatt and Longstaff (2000). To implement trading strategies using these financial products also require computers, as well as telecommunication networks. The advances in computer and telecommunication technologies make many of the innovations possible. Although financial products and trading strategies created by some market participants may be complex for other market participants to use, the level of market sophistication, particularly in terms of mathematical understanding continues to rise, permitting acceptance of some complex products and trading strategies.

Campbell (1988) and Schumpeter (1950) contend that unstable macroeconomic and microeconomic factors such as fluctuating prices, interest rates, inflation rates, create creates uncertainties and risks and thus are likely to spur more innovation, than would be a stable macro and micro economic environment.

Financial innovation has got several impacts on the financial system. Lawrence and White (2001) contend that the functions of financial innovations are: broadening, deepening, diversification, structural transformation, internalization, and sophistication of financial

system, financialization of the economy whereby financial assets to assets ratio tend to increase, exploiting profit opportunities arising from operational inefficiency, and drive for complete markets, that is, supplying securities with features desired by investors. Tufano (1989) and Duffie and Rahi (1995) observe that financial innovation has some implications on the financial markets. This includes: reduction in the cost of financial intermediation widens the choice of financial instruments in which to invest and which to issue and lowers the cost of inconvenience in some cases.

1.2 Statement of the Problem

Financial academics and practitioners have long recognized that financial innovation is influenced by several macro environment and microenvironment factors. Campbell (1974); Rohlfs (1974); Sibling (1977); Merton and Miller (1986); Tufano (1986); Wesley and Levine (1989); Cohen, Duffie, and Rohit and Rahi (1995) Frame and White (2001).

Financial innovation is a key feature of the world economy, and has important implication for management of risk, and for securities and political system yet it remains little studied outside the economics and business studies (The Economist, 2005).

Although the Kenyan security market is relatively more developed than those of many countries in Africa, it has far much fewer securities compared to many developed markets. The financial products traded at the Nairobi Stock Exchange are the variable income securities and fixed income securities. Variable income securities are the ordinary shares while the fixed income securities represent treasury and corporate bonds, preference shares and debentures stocks. The main structural challenge facing the market for shares rises from the limited supply of securities and substantial controlling interest in a number of the listed companies' shares, which are not available for trading. Institutional investors such as insurance companies and pension funds, who rarely trade them because the supply of shares is limited, also hold a significant proportion of tradable shares (KIPPRA, 2003).

As more research on Kenyan stock market continues to be done, few studies have been done focusing on financial innovation both on developed and emerging markets. Yet despite importance of financial innovation, the sources of financial innovation remain surprisingly

poorly understood. In a recent review article, Frame and White (2004) highlight the paucity of empirical research in this area. While innovation in manufacturing industries has inspired literally thousands of academic studies, only 39 empirical studies of financial innovation have been carried out. Nevertheless, this paper adds to the growing literature on the Kenyan stock market by examining the factors which influence financial innovation.

This study will attempt to provide answers to the following questions:

- (1) Which factors influence financial innovation?
- (2) To what extent do the changes in the above factors influence financial innovation?

In order to study this problem, the following hypothesis shall be tested.

$H_0: U = 0$: Macro and micro environmental factors have an influence on financial innovation.

$H_A: U \neq 0$ Macro and micro environmental factors have no influence on financial innovation.

1.3 Objectives of the Study

This study aims to establish factors influencing financial innovation in Kenyan's securities market.

1.4 Importance of the Study

Financial innovation is critical for any financial systems in an economy. Some of the outright benefits of financial innovation are broadening, deepening, diversification and financialization of markets and economy. Financial innovation also exploits profit opportunities and reduces market inefficiencies.

What is surprising is how little is known about financial innovation, if the few studies on financial innovation are anything to go by. This research has the potential for providing objective input data in exploring the factors which impact on financial innovation. It will thus

What is surprising is how little is known about financial innovation, if the few studies on financial innovation are anything to go by. This research has the potential for providing objective input data in exploring the factors which impact on financial innovation. It will thus identify those variables, which stimulate or limit financial innovation. It will also reveal the extent to which these factors impact on financial innovation.

The findings of this study will be of critical value to the widespread of stakeholders as follows:

Regulatory Authorities

The study will facilitate understanding the reason behind the slow rate of financial innovation in the securities markets and how to foster the same.

Investors

The investors would be made more aware of the recent trends in the securities markets, as far as new financial products are concerned.

Researchers

The study builds on the existing body of knowledge and points out area for further research work. Researchers who wish to study the area of financial innovation will be made aware of the determinants, impact and challenges facing innovation in Kenya and East Africa in general.

The Public

The general public may wish to read the study to further their knowledge in the area of financial innovation.

Financial academics and practitioners

Financial innovation in developed markets is different from the one in emerging markets, although the principles of how financial innovation occurs are the same in both markets. There are many factors, which hinder and stimulate financial innovation although their magnitude is not the same. Financial innovation and practitioners can as such learn invaluable information on how these factors cause financial innovation, and why fewer studies have been done on financial innovation. This can prompt them in conducting further studies on financial innovation in future, and thereby adding to their existing knowledge on financial innovation.

CHAPTER TWO

LITERATURE REVIEW

2.1 Meaning of Financial Innovation

The distinct roles of financial instruments or innovations are to segregate, disperse, and transfer financial risks so that individual units can cope well with uncertainty and attain better asset or liability management (Stulz, 1999).

Allan and Gale (1994) contend that financial innovation can be viewed as: introduction of new financial instruments or service or practice, introduction of new uses for funds, finding out new sources of funds, introduction of new processes or techniques to handle day-to-day operations, or establishing a new organization, all these changes being part of existing financial institutions, and emergence of spectacular growth of new financial institutions and markets.

Juhkam (2001) in his study of financial markets in Estonia define financial innovation as a positive change in financial intermediation, financial system, financial institutions, (commercial banks, insurance companies, investment and pension funds and investment banks) and in financial markets (debt instrument market and derivative market).

According to Lawrence and Scott (2001) financial innovation is a broad concept covering the following areas: usage of new financial intermediation methods, foundation of new financial institutions, changes in legislation or financial supervision, changes in services (new deposits and loan products, derivative instruments, insurance and investment products), and changes in business processes.

Equities have dominated the securities market and preceded the emergence of corporate debt market in Kenya. This segment of the market originally faced the constraints of no guidelines to regulate the issue of these instruments and high volatility of interest rates. The Capital Markets Authority (CMA) has since developed guidelines for bond issue. The main constraint to the development of corporate bond market is the stringent issue requirements. Examples are

the requirement the minimum paid-up capital of the issuer be Kshs. 50 million and the minimum value of the bond issue be Kshs 50 million. Rating of the debt also needs to be addressed before corporate debt can be developed as an effective market. The skillful transfer of financial innovations to emerging markets like Kenya will 'complete' markets fostered by deregulation and dis- intermediation.

According to Scott and Lawrence (2000), surprisingly few empirical studies of financial innovation has been done (39), with most (23) having been conducted since 1998. Especially striking is that only test hypothesis advanced in many descriptive articles as to the economic (environmental conditions that encourage financial innovation).

The Kenyan capital markets only trades in shares and bonds. For the domestic capital market to reach the level of developed capital markets there is need to introduce additional financial products, especially derivative instruments such as options, futures, forward contracts, swaps, and more recently the credit derivative (CMA, 2003).

Although our domestic capital market does not have the capacity to incorporate new financial instruments in the context of the current legal, regulatory and institutional framework, there is need to address market imperfections such as moral hazard, informational asymmetry, and transaction costs if our domestic capital markets is to edge closer to that of developed capital markets and reap the accompanying benefits associated with new financial instruments (KIPPRA, 2003).

In general, despite the of financial innovation importance, the sources of financial innovation remain surprisingly poorly understood. In a recent review article, Frame and White (2004) highlight the paucity of empirical research in this area. While innovation in manufacturing industries has inspired literally thousands of academic studies, the authors are only able to identify 39 empirical studies of financial innovation. Moreover, this literature is highly concentrated on the "back end" of the innovation process, focusing on the diffusion of these innovations, the characteristics of adopters, and the consequences of innovation for firm profitability and social welfare. The authors can only identify two papers on the origins of innovation as noted by Ben-Horim and Silber (1977) and Lerner (2002).

This paucity of research can be contrasted with the abundant literature on the sources of manufacturing innovation. This neglect is particularly puzzling given the special circumstances surrounding financial innovation.

2.2 Macro Environmental Factors Influencing Financial Innovation

Five broad forces seem particularly important in influencing supply of financial innovations in recent years (IBS, 2000): technology; regulatory forces; greater competition in the financial sector; financial liberalisation and the historical dynamics of the financial innovations process itself.

Technology. Technological advances in telecommunications, information processing and computing are universally agreed to be a major factor underlying the growth of financial innovations. Matsushita, (1996), Cohen, Wesley and Levine (1989) contend that technology has worked in three major ways to bring this about. Firstly, the greatly reduced costs and expanded scope of telecommunications have created a global financial market. This has allowed providers of innovations to match end-users, either directly or indirectly, who were previously in isolated markets. It has also given the greater breadth and depth trading, thereby encouraging financial institutions to make markets in new instruments. Secondly, improvements in computing and information processing have made it possible for market-makers to design and price on continuing basis new instruments with relatively complex financial structures. These improvements have also allowed market makers to monitor almost continuously the exposures they have generated from running books and new instruments and to design and carry out complex hedges for those exposures. A willingness to supply innovations has therefore not been constrained by an inability to monitor and control exposures relating from making markets, even in complex instruments. Thirdly, improved information flow has probably contributed to reduced earnings and more competitive pricing structures in traditional areas of business, thereby encouraging financial institutions to pursue more innovative lines. Widespread diffusion of Information technology has changed the management structures of financial institutions and integrated markets. Wenninger (1987), notes that innovation fosters competition in financial markets and vice versa.

Cooper (2002) observes that the single most important change, which had stimulated innovations, was improvement in technology. He contends that it had not been possible to run highly liquid and competitive global markets in the absence of fast and efficient computer and telecommunications. Technology explains the recent pace of innovation in financial instruments. It also explains the proliferation of complex securities, and the substitution of trading arrangements that generate liquidity for institutional arrangements aimed at coping with a lack of liquidity

Regulation. The relationship between regulation and innovation is the most debated in the literature. It is clear that each can cause the other, but it is not clear how significant such effects have actually been. Regulation and innovation are intricately linked since regulation is a major cause of innovation whilst innovation sometimes leads to a need for new regulations. Regulation can lead to financial innovation by creating incentive for firms and banks to evade regulations that restrict their ability to earn profits. Kane (1982) describes this process of avoiding regulations as "loophole mining". The economic analysis of innovation suggests that when regulatory constraints are so burdensome, avoiding them results to firms making large profits, and loophole mining and innovation are more likely occur. Innovation can occur when the authorities change the operational rules of the financial markets so as to permit activities previously forbidden. Strictly, this is usually re-regulation since one regulatory code replaces another even though the new regime is more liberal. Such deregulation can be either formal or informal.

In Ham-Fisted Regulation, Chew (1997) has argued that the main incentive to innovate is a desire to evade official regulation. Establishment of Eurocurrency market is the example of Ham-Fisted regulation because it was originally developed as a device to evade Regulation Q, which was a restriction on the maximum interest, paid on bank deposits. Moreover, off-balance sheet lending and offshore banking can be used to evade a wide range of controls on banks. Also, swap - an arrangement whereby each of two or more parties performs a transaction on behalf of the others- may be a device to evade regulation.

Increased financial competition. This has contributed to the willingness of financial institutions to supply new instruments. Greenspan (2005) observes that competition has come

in two forms: that between different national financial systems and that between banks and non-banks financial institutions within national financial systems. Both of these tendencies have been supported a global regulatory environment that has become increasingly sympathetic to deregulation and liberalization. Financial innovation is fundamentally market driven. Firms offer new products because it is profitable. This is because the customer will demand them or at least will pay for them. The existing structure of the financial industry, degree of concentration and competition in the banking sector, ease of entry, profitability, extent of development and of specialization among different types of financial instruments, available choice of portfolio assets, interaction of market forces with regulations effects financial innovations. Changes in the international financial environment and the increasing integration of domestic and international financial markets also lead financial innovation.

Global financial integration. Harrington (1992) contends that financial liberalisation and innovation are directly interconnected. Removing strict financial rules assist banks penetrate new markets and offer their services there; correspondingly, financial innovations force authorities to relax regulations in the financial market. For example, dismantling interest rate control has encouraged innovations such as swaps and options. Innovation and liberalisation boost the number of players and the amount of financial instruments in the marketplace.

With greater financial liberalisation, firms, investors and governments are exposed to new risks (exchange rates or political risks), and innovations help them manage these risks. In addition, financial liberalisation enables capital raisers to tap larger and more diverse populations of potential investors. A variety of innovations are attributed to attempts to meet the needs of specific investor clienteles.

Greenspan (2005) contends that despite much progress, the process of global financial integration is far from complete. Though most direct barriers to international capital flows have been eliminated, numerous indirect barriers remain in place. While a dazzling array of financial innovations has sprouted in recent decades, the inability of market participants to hedge, trade, or share certain risks, especially those related to cross-border investment, implies that financial markets still need further innovation and deepening. Such barriers to capital flows preserve home bias and impede the efficient distribution of global savings to the most productive investments.

The historical dynamics of innovation. This has been cited as one of the reason behind the supply of new financial instruments. Frank and White (2004) observe that new innovations are based on the older ones. Swaps, options, forward rate agreements, assets sales, and the like represent a new wave of financial innovations. These instruments followed earlier ones that have become more traditional such as futures, letters of credit, floating rate notes, and so on. Some element of the new wave would not have been active market makers if previous innovations had not been established Tufano (1989). The explicitly evolutionary character of the process financial innovation has been, and should continue to be, an important element in the emergence of the specific new instruments. Questions have been raised as to what extent the dramatic growth of markets in new financial instruments represent long-lasting features of the innovation process and to what extent are the factors behind the rapid change temporary and reversible. Tufano (2003) argues that the pace of change in recent years was to an important consequence of exceptional dislocations. Certainly, high volatility of asset prices and sharp changes in the creditworthiness of large economic sectors were major causes of innovation. An environment of more balanced growth with price stability would reduce many of the incentives for financial innovation observes Laschelles (2005).

2.3 Micro Environmental Factors Influencing Financial Innovation

Increased market risk. Harrington (1992) notes that financial innovations such as derivatives transfer, but do not eliminate risk, that is, the risk still exists at the macro level. New financial instruments transfer risks to those who are less averse to them or who have offsetting exposure and who are presumably better able to shoulder them.

Aladwamin (2001), notes that one of the methods utilized by financial institutions to respond to increased market risk is by introducing new financial instruments. They also use those products to hedge against interest-rate fluctuations and foreign exchange rate risks. Sophisticated technologies make new products less costly and more liquid.

Price volatility. Tufano (1995) contends that new financial instruments such as derivatives provide market participants with more efficient means for dealing with price or exchange rate

risk. The most prominent elements of the new wave of financial innovations are of price -risk-transferring nature price risk. All observers agree that the principal force behind such perceptions has been the volatility of price changes, in particular exchange rates and interest rates. The process of inflation itself, which proceeds unevenly, both overtime and among countries have also certainly played a role. Such instruments include options, forward contracts, futures and swaps.

Tufano (1995) documents the increase in the volatility of interest rates, exchange rates, and commodity prices, and draw a link between this increase in riskiness and financial innovation. Uncertainty in the global financial environment has caused many economic problems and disruptions, but it has also provided the impetus for financial innovation.

A variety of innovations spawned by increasing volatility are: foreign exchange futures, swaps and options; interest-rate futures, swaps, options, and forwards; and commodity swaps, futures, and options.

Increased demand for credit. Greenspan (2005) contends that increased demands for credit generally or for broad subclasses of credit is a driving force behind credit-generating innovations. In recent years such demands have been particularly pronounced in US markets, where financial innovations has been most advanced. A classic example is credit derivatives.

Liquidity. Increased liquidity of the market allows borrowers to draw upon new sources of funds and they allow market participants to circumvent capital constraints imposed by regulations. Laschelles (2005) notes that innovations to enhance liquidity arose from increased demand for liquidity generally. The first generation of these innovations occurred in the late 1970s and has been extensively analyzed. In general, it involved new techniques for providing transactions liquidity as high interest rates greatly increased the opportunity costs of holding transactions liquidity in transaction form. Cash management programmes, money market and mutual funds and new types of negotiable deposit accounts all played this role. The most recent liquidity enhancements are geared to improving the liquidity of capital market-type instruments.

Information disclosure. Arnoud and Thakor (2001) are of the view that mandating the disclosure of information about total firm value that would otherwise not have become available to any investor is always good for issuing firms. It increases their expected revenues and also strengthens financial innovation incentives.

Besides applying sound accounting treatments, Greenspan (2005) argues that company managers must ensure that public disclosures clearly identify all significant risk exposures--whether on or off the balance sheet--and their impact on the firm's financial condition and performance, cash flow, and earnings potential. With regard to securitizations, derivatives, and other innovative risk-transfer instruments, traditional accounting disclosures of a company's balance sheet at a point in time may not be sufficient to convey the full impact of a company's financial prospects.

Corporate governance. Bies (2002) argues that financial innovation has helped increase the importance of institutional investors, such as mutual funds and pension funds, in equity markets. Because shareholders play a key role in corporate governance, the emergence of institutional investors as major holders of corporate equity also has implications for corporate governance. A necessary response to the recent wave of financial innovation is a combination of enhanced transparency and market discipline applied by creditors, counter parties, and investors-including the institutional investors that now hold a large share of corporate equity. Together, these efforts should help lay a foundation for more effective corporate governance.

2.4 Types of Financial Innovation

Allan and Gale (1994), Lawrence and Scott (2001) contend that there are three types of financial innovations. First, there are institutional innovations. Such innovations can affect the financial sector as a whole, to the establishment of new types of financial intermediaries, or to changes in the legal and supervisory framework. Important examples include, formalizing informal finance systems, reducing barriers for rural people accessing finance, or setting up a completely new service structure.

Secondly, there are process innovations. Such innovations cover the introduction of new business processes leading to increased efficiency, market expansion, etc. Examples include office automation and use of computers.

Thirdly, there are product innovations. Such innovations include the introduction of new credit, deposit, insurance, leasing, hire purchase, and other financial products. Product innovations are introduced to respond better to changes in market demand.

2.5 Benefits and Speed of Adoption of Financial Innovation

No financial innovation can be regarded as useful, nor will it survive, unless it creates benefits to at least one of the parties involved in the contract. The benefits could be lower taxes paid, or reduction in the risk, such as the foreign exchange exposure of a corporation or government as observed by Frame and White (2004). More generally, UNEP FI African task Force (2002) notes that the contribution of any financial innovation lies in the extent to which it helps to complete the set of financial contracts available for financing or investing, positioning or hedging. They are introduced in response to some market imperfections.

Since the mid-1980s governments of various industrial countries have, to a large extent, relaxed their controls on financial institutions Tufano, (2003). Such liberalization, together with a volatility of exchange and interest rates never before experienced, generated a string of new financial instruments specially designed to handle different kinds of risks. These instruments have been widely accepted in the international financial community, and it is notable that the volume of their transactions in any period of time varies directly with the degree of turbulence in money markets. New financial instruments are issued from academic research and/or the macro finance crisis and/or the financial needs of large international companies

Financial innovation is viewed as the engine driving the financial system towards its goal of improving the economy. Merton (1986) cites the U.S national mortgage market, the development of international markets for financial derivatives and the growth of the mutual funds and investment industries as examples where financial innovation has produced enormous social welfare gains.

The aim of financial innovation is to make different services (loans, deposits, investment fund units, debt instruments, shares, derivatives for risk management, currency exchange, payments and etc.) offered by financial system cheaper and more available for clients and to increase their quality, which is an assumption for a long run sustainable growth of economy (Campbell, 1988; Tufano, 2003). As a result of financial innovation the financial system's ability to fulfill following functions will improve: to determine the market price of financial instruments, to guarantee liquidity for instruments (*financial markets*), to be a source of companies' capital (loans, new stock and debt issues), to encourage savings and investments (risk-taking) through risk sharing and diversification (investment funds, pension funds); to offer risk management products (derivatives and insurance).

Miller (1989), Harris and Raviv (1989), Allan and Gale (1994), Tufano (1997) and Lawrence and White (2001) contend that the benefits of financial innovation are: avoiding regulations and optimizing taxes, reducing transaction costs and increasing liquidity of market-based products, reducing agency costs between executive management and shareholders and between shareholders and creditors, reducing informational asymmetry between corporate insiders (majority shareholder/executive management) and outsiders (creditors, minority shareholders), increasing risk sharing opportunities (derivatives, investment funds) and making capital intermediation more efficient and cheaper for clients.

Johnson, (1991) observes that new financial instruments generate repercussions via four channels: Firstly, credit flows are stimulated. For instance, with interest rates options and forward rates agreements, customers are more likely to request and commit debts. The note issuance facilities (NIFs) and floating rate notes (FRNs), which are direct financing, help, reinforce the purchasing power of borrowers.

Secondly, financial innovations raise the extent and speed of capital mobility into and out of the country. Currency swaps, currency options, and swap options, for example, facilitate foreign borrowing. Net inflows of funds from abroad directly affect the amount of local money supply, thus the effectiveness of implemented monetary policies.

Thirdly, the popularity of the new instruments may give rise to some constraints on local banks regarding their capacity to finance fiscal deficits. Because of these constraints, fiscal policies could be hindered and inflationary sources of financing, such as central banks or external loans, may be resorted to.

Fourthly, public agencies themselves utilize new financial instruments. This enables government agencies to cover all costs of investment or maintenance projects. Hence, the direction and degree of desirable fiscal policies could vary.

There are also, benefits that accrue to borrowers and savers as they have more alternatives to choose from in attempts to find credit, avert risk, or invest, banks and other financial institutions are pressured to improve their services. Financial innovations, as such, encourage efficiency in and further development of money markets.

Financial innovations function as automatic stabilizers within the financial system. This stability is crucial; otherwise private enterprises could experience a greater frequency of business failures because of wild fluctuations of interest rates, exchange rates, and money market liquidity.

Financial innovations have improved market integration and efficiency of international markets by bringing broader and more flexible range of instruments. This has resulted in improved allocation of financial resources and better distribution of portfolio risks. Also, substitution of direct transaction in securities for bank credits and competition has reduced intermediation cost.

However, innovation and its consequences have also created new concern as observed by Simpson and Parkinson (1988), about the functioning and management of international and domestic financial systems. With new benefits new risk came into view. These risks relate to the quality of the banks' assets, the pricing of new instruments, and the aggregate liquidity of the system, the risk transfer mechanism and the effects of innovation on markets volatility. In a qualitative sense, however, financial innovation increases uncertainty about the structure of the economy and there are potential effects of financial innovation process on the supply of and the demand for money, interest rates and the transmission mechanism of the monetary policy.

Under pressures from financial innovation, the concept of money is in danger of losing its operational value. It is becoming difficult to distinguish between narrow and broad definitions of money observe Campbell (1988).

In regard to the speed of adoption of financial innovation, Juhkam (2001) in his study of financial innovation in Estonia financial market argues that the speed of financial innovation is determined by following factors: the market power, the size of a company, technological facilities, the demand for financial services and client's knowledge and ability to use innovative products, and the professionalism of financial specialists in offering and managing new products.

2.6 Functions of Financial Innovation

Innovation exists to complete inherently incomplete markets. In incomplete financial markets, not all the needs of investors are met Home (1985). Adverse selection, moral hazards, high transaction costs and information asymmetries, may prevent agents from entering into agreements to share risks. However, introduction of financial innovations shields individuals from risks associated with market imperfections.

Innovation persists to address inherent agency concerns and information asymmetries: Much of contracting theory (or the security design literature) explores how contracts can be written to better align the interests of different parties or to force the revelation of private information by managers. This extensive literature has been surveyed by Harris and Raviv (1989), and is also covered in Allen and Gale (1994). Persistent conflicts of interest between outside capital providers and self-interested managers, and asymmetric information between informed insiders and uninformed outsiders, leads to equilibrium in which firms issue a multiplicity of securities. However, Kane (1988) argue that incorporating embedded options into securities can mitigate moral hazard problems.

Innovation exists so parties can minimize transaction, marketing costs. Merton (1989) discusses how the presence of transaction costs provides a critical role for financial intermediaries. Many of the process innovations in payment systems technologies are aimed at lowering transaction costs. ATMs, smart cards, and many other new businesses are legitimate

financial innovations that seek to dramatically lower costs of processing transactions. By some estimates, these innovations have the potential to lower the cost of transaction between buyers and sellers. History shows that as marketing costs fall, financial innovations exploit the easier access to buyers and sellers of securities.

Innovation is a response to taxes and regulation: Miller (1986) Tufano (1997) Santangelo and Tufano (1997) argue that the major impulses to successful innovations have come from regulation and taxes as this spurs the need to circumvent regulations and legislation giving rise to new financial products. Tax driven innovations include Euro Bonds and are designed to be free of withholding tax, and include many features that offer tax advantage to issuers as well as investors. According to Campbell (1988), to the extent that a tax system levies differential taxes on different streams of income or on different categories of assets, the higher taxed parties will seek ways of reducing their taxes. Financial innovation will follow. Higher levels of taxation will yield a larger flow of innovation. Campbell (1988) that regulation is a two-edged sword. On one hand, some forms of regulation must inhibit innovation. For example, if a regulation prevents commercial banks from owning insurance companies (and vice-versa), then whatever innovations might arise from joint ownership and operation will not occur. If cross ownership is prevented, then banks will have the incentive to create insurance like products and services. This observation is consistent with academic debate as to whether regulation has stimulated or impeded innovation.

Bodie (1990), notes that removing regulatory barriers to the entry of foreign players boosts competition in the stock market. Increased competition between market participants also fosters discipline and financial innovation in the equity market. Competition is a means to achieve the stock market objective of instituting an alternative mode of financing that serves domestic investors' needs and allows public and private enterprises to recycle their portfolios in good market conditions because of increased trading.

Financial innovations occur because agents in market are searching for new ways to make profits, such as circumventing regulations. A change in the economic environment will stimulate a search for innovations that are likely to be profitable.

Regulation and innovation are intricately linked since regulation is a major cause of innovation whilst innovation sometimes leads to a need for new regulations. Regulation can lead to financial innovation by creating incentive for firms and banks to evade regulations that restrict their ability to earn profits. Kane (1987) describes this process of avoiding regulations as "loophole mining". The economic analysis of innovation suggests that when regulatory constraints are so burdensome, avoiding them can make large profits, and loophole mining and innovation are more likely occur.

Innovation can occur when the authorities change the operational rules of the financial markets so as to permit activities previously forbidden. Strictly, this is usually re-regulation since one regulatory code replaces another even though the new regime is more liberal.

Eurocurrency market is the example of Ham-Fisted regulation because it was originally developed as a device to evade Regulation Q, which was a restriction on the maximum interest, paid on bank deposits. Moreover, off-balance sheet lending and offshore banking can be used to evade a wide range of controls on banks. Also, swap is an arrangement whereby each of two or more parties performs a transaction on behalf of the others so it may be a device to evade regulation.

2.7 The Future of Financial Innovation

Questions have been raised as to what extent dramatic growth of markets in new financial instruments will continue, and to what extent are the factors behind the rapid change temporary. Merton and Miller (1986) argue that certainly, the exceptional economic circumstances of the early 1980s-high inflation, volatile interest and exchange rates and the sharp changes in the credit worthiness of large economic sectors-were the major spurs to innovation. Within that environment, the innovations themselves were, to some extent, an effort to the kind of world that existed before those events erupted. A more stable environment would therefore reduce many of these incentives for financial innovation, Laschelles (2005).

There are however, long lasting forces that support the growth and development of innovations even in a stable environment. Technological advance, both in its hardware aspect and soft ware

aspects—sophisticated financial models and financial product designs are certainly going to continue. Matsushita (1996) and Greenspan (2005) contend that the momentum for the global integration of financial markets and the financial liberalization will continue to act as fertile ground for financial innovation.

2.8 Dangers of Financial Innovation

Emery and Finnerty (2002) and Shiller (2002) argue that there is a close link between financial innovation and the cycle of speculative bubbles and catastrophic busts that has been the cause of much economic and social misery.

Shiller (2002) alludes briefly to the dangers of financial innovation, as exemplified by the collapse of Enron. However, he downplays the problem, focusing on the egregious examples of fraud within Enron rather than on the general decline of standards of financial probity that characterized the 1990s bubble as a whole.

Matsushita (1996) argues that some innovations may actually destroy value, because one party to the contract misunderstands them. The instrument does not behave in a way it is described as behaving or one aspect of the risk of the instrument (such as the credit aspects of swaps) is not fully appreciated by one party.

Johnson (1991) is of the view that although financial innovations can enable each separate organization to handle its position comfortably, stability of the financial system as a whole may be endangered in three aspects: Firstly, the risks, after being segregated and transferred, may be clustered among few banks, few exchange rates or interest rates, and few maturity dates. Such bunching could arise due to the availability of very few banks with enough expertise or widespread networks, turbulent fluctuations of exchange or interest rates during particular intervals of time, and under pricing of financial services.

Secondly, most financial innovations (except FRNs) are off-balance-sheet items, which may not be backed up by adequate capital funds of service suppliers.

Thirdly, caps and swaps could bring too many low-ranking debtors into credit markets, thus depressing the asset quality of the markets. Similarly, direct modes of financing such as NIF

and FRN, if popular, will not only take away high-quality borrowers from, but also weaken the deposit base of financial institutions.

Because of the possible adverse effects on overall financial stability, it is recommended that financial companies and banks be required to report these activities more often and in more detail. Customers' motives should be included in these reports and details on whether or how much offering companies or banks hedge. In addition, the Monetary Authorities should demand that risks from the financial innovations in use be backed up by sufficient capital funds despite the fact that such activities are off-balance-sheet. The volume of these activities ought to be given some weights, though less than those given to ordinary credits, reflecting the actual degree of associated risk.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

A descriptive design was used in this study. Churchill (1991) notes that descriptive study can be used to describe the characteristics of certain goods make specific predictions or estimate proportions of people who behave in a certain way. The objective of the study was to explain the macro environmental and micro environmental factors influencing financial innovation in Kenya's securities market, which fits in the descriptive framework.

3.2 Population

The population of study encompassed all the firms listed at the Nairobi Stock Exchange. The Nairobi Stock Exchange (NSE, 2005) had 48 listed companies. (See appendix C).

3.3 Data Collection

Primary data was collected using semi-structured questionnaire based on a six point likert scale. A six-point scale eliminates the clustering which is common for an odd numbered likert scale (Strauss 1990). The close-ended questions are appropriate as they provide a standard set of questions for all respondents, as they provide a standard set of questions for all respondents as the information set is quantitative in nature. The targeted respondents were chief finance officers of quoted companies and senior managers for the remaining respondents.

Drop and Pick later method was used.

3.4 Data Analysis

The data was summarized in tables, percentages frequencies, mean scores and standard deviation. The tables catered for factors influencing financial innovation, constraints facing financial innovation and possible remedies. The closed ended questions were coded and summarized. In coding, allocation of points followed to describe the degree to which a factor influences financial innovation. The coding facilitated the calculation of percentages, frequencies, mean scores and standard deviation.

CHAPTER FOUR

RESEARCH FINDINGS

4.1 Introduction

This chapter gives a summary of the data analysis and findings made by the research and also give a brief explanation of the findings and analysis.

In order to justify factors influencing financial innovation at the Kenya's security market, an exploratory survey of the organizations directly involved in the market was undertaken. This survey was conducted between September 2005 and March 2006. Out of the 48 organizations targeted, 31 responded. These were considered adequate for the study. The overall response rate was 64.6% (31/48). However the low response rate is typical to social research and is as a result of 'questionnaire fatigue' by corporate officers many of whom don't even bother to acknowledge receipt of such questionnaires.

4.2 Analysis of the Results

The summary analysis of the collected data on factors considered to be influencing financial innovation in Kenya's securities market can be seen in the table below where by 1 to 6 represent Strongly disagree, Fairly disagree, Disagree, Agree, Fairly Agree, and Strongly Agree respectively. A summary of mean score and their rankings, standard deviation, and respective frequencies are also presented.

4.2 Descriptive statistics summary

Table 4.2 Descriptive Statistics (mean score and rankings, standard deviation and frequencies)

FACTOR	MEAN SCORE	STANDARD DEVIATION	RANK based on means	FREQUENCIES %
A. REGULATION				
Kenyan laws protecting investors	4.87	0.91	2	16%
Restrictive rules by CMA	4.61	1.36	3	15%
NSE rules on listing requirements	4.9	0.83	1	16%
Restriction on foreign ownership to 49%	3.97	1.33	5	13%
Poor implementation of corporate governance	3.6	1.36	7	12%
High corporate taxes	4.2	1.45	4	14%
Amount and content disclosed by listed companies	3.97	1.54	5	13%

FACTOR	MEAN SCORE	STANDARD DEVIATION	RANK based on means	FREQUENCIES %
B. MARKET VOLATILITY				
Fluctuations of interest rates	4	1.17	2	33%
unstable inflation rates	3.63	1.61	3	31%

unstable foreign exchange rates	4.10	1.42	1	35%
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FACTOR	MEAN SCORE	STANDARD DEVIATION	RANK based on means	FREQUENCIES %
C. TECHNOLOGY				
Absence of automated trading systems	4.87	1.21	1	51%
late implementation of CDS	4.7	1.12	2	49%

FACTOR	MEAN SCORE	STANDARD DEVIATION	RANK based on means	FREQUENCIES %
D. GLOBAL FINANCIAL COMPETITION AND INTEGRATION				
Increased financial competition amongst financial institution	4.55	1.48	1	27%
Increased liquidity in the financial markets	4	1.61	4	24%
Increased demand for credit	4.29	1.65	2	25%
Integration of the country with other countries COMESA EAC	4.03	1.94	3	24%

FACTOR	MEAN SCORE	STANDARD DEVIATION	RANK based on means	FREQUENCIES %
E. OTHERS				
Historical dynamics of financial innovations	3.84	1.59	2	43%
Absence of derivatives at the stock market	5	1.22	1	57%

Source: *Research data*

From the above table, mean scores, frequencies, and standard deviation were used to gauge the overall opinions of the respondents in general. The statements in the above table are ranked based on the mean scores. A score of 1 represents strongly disagree, 2- fairly disagree, 3- disagree, 4 – agree. 5- Fairly agree and 6- strongly agree. Therefore factors with an overall mean of 4 to 6 are considered to significant influencers of financial innovation. A factor with the lowest standard deviation is considered to have scores whose value are close to the mean, and is a more reliable factor. The vice versa is true. A higher frequency explains that the respondents believe the factor to be the most important and vice versa. For example, in regulatory factors influencing financial innovation, NSE listing requirements was found to be the most important factor in influencing financial innovation. The factor had a mean score of 4.9 which is the highest in this category and a standard deviation of 0.83 which is the least in this category and frequency of 16%. The factor was closely followed by Kenya laws protecting investors interest at the stock market with a mean score, standard deviation and frequency of 4.87, 0.91 and 16% respectively. Poor implementation of corporate governance was ranked the least important factor in this category with a mean, standard deviation and frequency of 3.6, 1.36 and 12% respectively.

Under the market volatility factors, unstable foreign exchange rates were the most important factor with a mean score, standard deviation and frequency of 4.10, 0.91, and 35% respectively. Unstable of inflation rates was the least important factor with a mean score, standard deviation and frequency of 3.63, 1.61 and 31% respectively.

The factors that constituted technology almost ranked the same with a frequency of 51% for absence of automated trading systems and 49% for late implementation of CDS. Their variability was almost the same with a standard deviation of 4.87 and 4.7 respectively. They are all important factors in influencing financial innovation with absence of automated trading systems taking the lead.

Increased financial competition amongst financial institution was the most important factor amongst global financial competition and integration. The factor had the highest mean score and frequency of 4.55 and 27% the factor had also the lowest standard deviation of 1.48. The second most important factor in this category was increased demand for credit with a mean score, standard deviation and frequency of 4.29, 1.65 and 25% respectively. Increased liquidity in the financial markets was the least important factor influencing financial innovation with a mean score, standard deviation and frequency of 4.00, 1.61 and 24% respectively.

Lastly, absence of derivatives in the stock markets was more important factor in influencing financial innovation compared to historical dynamics of financial innovations. The factor had a mean score of 5 compared to 3.84, and a lower standard deviation of 1.22 compared to 1.59, underlining its importance.

4.3 Constraints identified by respondents

The table 4.3 shows the analysis of the constraints that were not listed in the Questionnaire but identified by the respondents.

CONSTRAINTS	FREQUENCY	% of Total Response	Rank based on Frequency
Market imperfections such as moral hazard, informational asymmetry, and transaction costs	6	19.3	2
Government reluctance to privatization of profitable parastatals	7	22.5	1
Poor regulatory framework for pension funds, investment funds and unit trusts	1	3.3	8
Few listed companies on stock market	5	16.1	3
Inadequate knowledge among the public of investment opportunities at the Nairobi Stock Exchange knowledge	2	6.5	7
Lack of confidence by some potential investors, both local and foreign on stability of NSE	3	9.7	6
Lack of awareness among the public members	4	12.9	4
Tax incentives and tax rebates to foreign companies wishing to list at NSE respectively.	4	12.9	4

The frequencies and percentages are based on total number of respondents (31). From analysis of the answers/ responses given, the constraint that ranked highest was government reluctance to privatize profitable parastatals with a response rate of 22.5%, and then followed by insider

trading with a response rate of 19.3%, and lastly poor regulatory framework for pension funds, investment funds and unit trusts ranked the lowest.

Table 4.4 below shows the analysis of section B of the questionnaire that was capturing information on possible remedies to the constraints.

Table 4.4

Suggestions	Frequencies	% of total respondents	Rank based on %
Public enlightenment campaigns on investments	7	22.5	2
Tax incentives/ rebates to firms seeking listing	3	9.7	4
Relax on the listing rules	1	3.3	6
Government should offload its share of government owned enterprises/ parastatals	9	29	1
Introduce a variety of Financial products	6	19.3	3
Regulatory authorities should curb incidences of insider trading and enforce code of conduct among stock brokers	5	6.1	5

Source: *Research data*

CHAPTER FIVE

SUMMARY, CONCLUSIONS, RECOMMENDATIONS, LIMITATIONS OF THE STUDY AND SUGGESTIONS FOR FURTHER RESEARCH

5.1 Introduction

This chapter presents a summary of the findings of the study. Based on the findings, recommendations are made as regards the factors influencing financial innovation at the Nairobi Stock Exchange.

5.2 Summary of Findings

The objective of the study was to establish factors influencing financial innovation in Kenya's securities market. This was achieved by collecting primary data from firms listed at the Nairobi Stock Exchange. The research question wanted to know which factors influence financial innovation and to what extent do they impact on financial innovation. The major findings were that under regulatory factors, Kenyan laws protecting investors was the major factor influencing financial innovation. Unstable foreign exchange rates were the most important factor influencing financial innovation among market volatility factors. The absence of automated trading systems as a technological factor was found to influence financial innovation negatively. Global financial competition and integration had an influence on financial innovation with increased financial competition amongst financial institutions influencing financial innovation the most. Accordingly, the other factors category had absence of derivatives influencing financial innovation.

5.3 Discussions of the Findings

Although financial innovation plays a critical role in the financial system arm of the economy, its fundamental benefits is yet to be achieved simply because the level of financial innovation in Kenya's securities market is still low. There are several factors contributing to slow rate of financial innovation. This study made an attempt of identifying these factors so as to make the necessary recommendations for rectifying this situation. A mean score of 4.0 and above falls

necessary recommendations for rectifying this situation. A mean score of 4.0 and above falls within the acceptance region of the factor influencing financial innovation. Mean score of 4.0 and below falls within rejection region of the factor not influencing financial innovation.

A number of factors influencing financial innovation were identified. From the study, the general overview is that Kenyan laws protecting investors, unstable foreign exchange rates, absence of automated trading systems, increased financial competition amongst financial institutions and absence of derivatives have significant influence on financial innovation.

Under regulation, the NSE rules and requirements relating to the listing of quoted companies are regarded as the major factor influencing financial innovation negatively. The factor had the highest mean score of 4.9 and the lowest standard deviation of 0.83. Closely following this factor was the Kenyan laws protecting investors, which had a mean score of 4.87 and a standard deviation of 0.91, which also has a negative influence on financial innovation. Other factors that were found to influence financial innovation in this category were restrictive rules and regulations relating to the CMA and high corporate taxes in Kenya in that order

Under market volatility, new financial instruments such as derivatives provide market participants with more efficient means for dealing with price or exchange rate risk. The respondents however did consider unstable foreign exchange rates to be an impetus for financial innovation under market volatility factor. The factor ranked the first with a mean score of 4.10 and the highest frequency of 35% although it had the highest standard deviation of 1.42.

Another factor that was considered important under this category was fluctuations of interest rates. The factor had a mean score 4 and the least standard deviation of 1.17 among the three factors. It also had the second highest frequency of 33%. The respondents felt that fluctuation in interest rates influence financial innovation.

The stock exchange has now gone electronic, but by the time the data was being summarized the system was operating electronically. In overall, this took position 1 with a mean score of 4.87 and a frequency of 51% when technology as a factor influencing financial innovation was

considered. A mean score of 4.0 falls within acceptance region of the factor influencing financial innovation. This is positive and new development, which is expected to greatly influence financial innovation. The late implementation of central depository system was also an important factor influencing financial innovation with a mean score of 4.7 and a frequency of 49%. Since it is still in the infancy stage, there are high expectations, including that of the researcher that it will invigorate the capital market and positively influence financial innovation.

Increased financial competition took the lead in influencing financial innovation with the highest mean score, least standard deviation and frequency of 4.55, 1.48 and 27% respectively under the category of global financial competition and integration. The factor may be an influencing factor in our securities market because there is cut throat competition among financial institutions, which have tendency to spur financial innovations. Increased demands for credit generally or for broad subclasses of credit is a driving force behind credit-generating innovations. The factor was ranked number 2 with a mean score of 4.29.

Integration of the country with other countries i.e. COMESA, EAC turned to be a factor influencing financial innovation. Financial liberalization and innovation are directly interconnected. The factor was number 3 with a mean score of 4.03. It emerged as the third most important factor influencing financial innovation. The least important factor influencing financial innovation in this category was increased liquidity in the financial markets.

Absence of derivatives in the stock markets turned to be a significant influencer of financial innovation in the study. The factor had a mean score of 5.

5.4 Conclusion

The findings of this study indicate that quite a number of macro environmental and micro environmental factors were important in influencing financial innovation. Some had more impact than others. The researcher therefore accepts the null hypothesis that macro and micro environmental factors have an impact on financial innovation and rejects the alternative hypothesis that these factors have no impact on financial innovation. Four out of the seven

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factors under regulatory factors had an influence on financial innovation while all the factors under global financial competition and integration had an impact on financial innovation. Similarly, the two factors under technology were found to influence financial innovation.

The regulatory authorities should enhance domestic capital market capacity to incorporate new financial instruments. In the context of the current legal, regulatory and institutional framework, there is need to address market imperfections such as moral hazard, informational asymmetry, and transaction costs if our domestic capital market is to edge closer to that of developed capital markets and reap the accompanying benefits associated with new financial innovations.

5.5 Limitations of the Study

- The study only covered firms listed at the Nairobi Stock Exchange. Only a sample of listed companies was studied. Conclusions could have been different if the whole population was studied.
- The analysis was done on primary data, which could be biased. Analysis of secondary data could have provided a basic comparison of the findings.
- Some corporate officers refused to participate in the study since they considered filling the questionnaire a waste of their valuable time. However there is no reason to believe that they could have responded differently.

5.6 Recommendations

The government should have proper monetary and fiscal policies in order to promote financial innovation in Kenya's securities market. Offering incentives like low tax rates and investment climate to investors. Efforts should be made to Speed up integration of east african stock markets and increase the listing of securities in this market. Regulatory authorities should critically address the question of small, illiquid, in- effective, expensive and bothersome stock

market and relax excessive barriers to entry to foreign investors and promote public knowledge of securities market.

Every company should follow down accounting procedure and auditing standards, in order to narrow the areas of differences and minimize the dangers of bias, misinterpretation, inexactness and ambiguity which can mislead an investor thus making bad investment decisions. Efforts should also be made to enhancing information and disclosure requirements about securities for pricing efficiency and market confidence.

Unique financial products suited to the Kenyan stock markets should be developed. Possibilities of introducing derivatives such as options and futures should be explored. Securities markets participants such as stockbrokers, fund managers, and other market participants should adhere to ethics and should have basic qualifications in investment as a qualification.

5.7 Suggestions for Further Research

The data collected indicates that the pace of financial innovation is still low in Kenya securities market. As such, the researcher feels more research is needed because of its role in the economy. The researcher then recommends further research on the following areas, which have significant bearing on financial innovation in Kenya.

- Stock market in- efficiency
- Role of pension and investment funds in influencing financial innovation
- Conduct research to establish the perceptions held by non- listed companies, which qualify for listing at the stock market about the Kenyan securities market.

REFERENCES

- Aladwani, A.M., (2001): "Online Banking. A Field Study of Drives, Development, Challenges and Expectations", *International Journal of Information and Management*, 21, 213-225.
- Allen, F., and Gale, D., (1994): *Financial Innovation and Risk-sharing*. MIT Press.
- Arnoud, W., and Thakor, A., (2001): "The Many Faces of Financial Disclosure": *Review of Financial Studies*, 14 (4), 1021-57.
- Bank for International Settlements (1986): *Recent innovations in international banking*.
- Basweti, K.A., (2002): *Factors Limiting The Development of Emerging Stock Markets: The case of Nairobi Stock Exchange*. Unpublished MBA Project, University of Nairobi.
- Blake, D., and Timmerman, A., (2000): "Determinants of International Portfolios". *Working Papers*, Birkbeck College.
- Bodie Z., (1990): "Pension Funds and Financial Innovation: Financial Management": pp 11-22.
- Bryant, H., and Yarnold J., (1995): "Principal components analysis and exploratory and confirmatory factor analysis. In Grimm and Yarnold, *Reading and understanding multivariate analysis*." American Psychological Association Books'
- Capital market Authority (2000): *Annual Report*, Nairobi.
- Capital Market Authority (2001): *Annual Report*, Nairobi.
- Capital Market Authority (2002): *Annual Report*, Nairobi.
- Campbell, T., (1988): "Money and Capital Markets". *General Review*, IL: Scott, Foresam.
- Chew, D.H., (1997): *Introduction: Financial Innovation in The 1980's and 1990's. The New Corporate Finance*, McGraw-Hill Irwin.
- Churchill, G.A., (1987): "Marketing Research: Methodological Foundation": Dryden Press, New York.
- Cohen, Wesley and Levin, R. (1989): "Empirical Studies of Innovation and Market Structure".
- Cooper, I (1992): "Financial innovations: New Market Instruments": *Oxford Review of Economic Policy* (November 1986).

- Duffie, D., and Rahi R., (1995): "Financial market innovation and security design: An introduction", *Journal of Economic Theory* 65:1-42.
- Emery, D., and Finnerty J., (2002): "Corporate Securities Innovation: An Update", *Journal of Applied Finance*, 12 (Spring/Summer), 21-47.
- Finnerty, J. (1992): "An Overview of Corporate Securities Innovation", *Journal of Applied Corporate Finance*, 4 (Winter), 23-39.
- Frame, W., Scott, L: (1995): "Empirical Studies of Financial Innovation: Lots of Talk, Little Action?" 2001. *Journal of Financial Economics*, 25, 213-240.
- Frame, W., and Lawrence J., (2001): *The Diffusion of Financial Innovation: An Examination of the Adoption of Small Business Credit Scoring by Large Banking*, 1187-1240.
- Garbade, K., and Silber W., (1978): "Technology, Communication, and the Performance of Financial Market", *Journal of Finance*, 33 (June), 819-832.
- Grinblatt, M., and Longstaff, F.A., (2000): "Financial Innovation and the Role of Derivative Securities: An Empirical Analysis of the Treasury STRIPS Program", *Journal of Finance*, 40 (June), 605-631.
- Harrington, R., (1992): *Financial Innovation and International Banking in H.Cavana (ed), Financial Innovation*, London: Routledge, 111-13.
- Harris, M., and Raviv, A., (1989): "The design of securities", *Journal of Financial Economics*, 24, 255-287.
- Horne, V.J., (1985): "Financial Innovations and Excesses", *Journal of Finance*, 40, (July) 621-636.
- Juhkam, A., (2001): *Financial Innovation in Estonia: Praxis Center for Policy Studies, University of Tartu*.
- Johnson, L., (1991): "The Theory of Financial Innovations: A new Approach": *Research Working Papers in Banking and Finance*.
- Kane, F., (1987): "The Theory of Financial Innovations: A New Approach": *Research Papers In Banking and Finance*, 88/11.
- Karing, S., Ndung'u S., et al., (2003): "Exchange Rate Movement in a Liberalised Environment: An Empirical Analysis": *KIPPRA Discussion Paper No: 10: Nairobi*.
- Laschelles, P., (2005): *Must The Beast Be Tamed: Center for Corporate Governance, United States*.

- Llewellyn, D., (1992): *Financial Innovation: A Basic Analysis in H. Cavana*, Routledge, London, United Kingdom.
- Merton, R. C., (1992): "Financial Innovation and Economic Performance", *Journal of Applied Corporate Finance*, 4 (Winter), 12-22.
- Miller, M., and Merton C., (1992): "Financial Innovation: Achievements and Prospects", *Journal of Applied Corporate Finance*, 4, (Winter), 4-12.
- Ndinya R. K., (2000): *An empirical evaluation of Factors Influencing Investment in Kenya: The case of EPZS*. Unpublished MBA Project, University of Nairobi.
- Rohlf, J., (1974): *Empirical Studies On Financial Innovations: Lots of Talk Little of Studies*.
- Ross A.S., (1989): "Institutional Markets, Financial Marketing, and Financial innovation", *Journal of Finance*, 541-549.
- Ross, A.S., (1989): "Financial innovation: New Market Instruments", *Oxford review of Economic Policy*, (November), 1986.
- Schumpeter, J., (1934): "The Theory of Economic Development". Translated by Redvers Opie Cambridge, Mass: Harvard University Press.
- Shiller, R.J., (2004): "Radical Financial Innovation": *Discussion Paper No. 1461*, Cowles Foundation.
- Siegel, D., (1990): *Innovations and Technology in the Markets: A Reordering of the World capital Market System*. Chicago: Probus.
- Silber, W., (1975): *Financial Innovation* (Lexington Books, Lexington, MA), 7(4): 90-113.
- Simpson. T., (1984): "Financial Innovations in the US": *Bank for International Settlement Economic Working Papers*, 1984, 232-258.
- Strauss, A., and Carl J., (1990): *Basis of Qualitative Research*, Sage Publishers, New York.
- Stulz, R., (1999): *Globalization of equity Markets and Cost of Capital: A paper presented at the SBF and NYSE conference on Global Equity Markets in Paris*.
- Suzuki, A., (1987): "A Comparative Study of Financial Innovations, deregulation Reform in Japan and US:" *Bank of Japan, Economic Series 4(10)*

Tufano, P., (1995): "Securities Innovations: A Historical and Functional Perspective", *Journal of Applied Corporate Finance*, 4 (Winter), 90-104.

Wenninger, J. A., (1987): "Financial Innovations In The US ": *BIS Economic Papers*

Electronic References

The Economist (2005). WWW.economist.com

Unep Africa fi (2002). WWW.unepfi.org/africa

Appendix-A

Questionnaire

Section I

Please fill the blank space.

Name of the firm.....

Date of incorporation (year).....

Date licensed to operate at NSE (year).....

Date of listing at NSE (quoted companies).....

Nature of business (please tick as appropriate).....

Commercial and services []

Financial and investment []

Industrial and Allied []

Agricultural []

1. What is the current market capitalization of your company in Kshs.....
2. What is the percentage of foreign ownership on your company.....%
3. What is the percentage of government ownership in your company%

Listed below are statements dealing with factors considered to be influencing financial innovation in Kenya's securities market. Please rate the factors by ticking appropriate box in the next page

Key

1. Strongly disagree
2. Fairly disagree
3. Disagree

4. Agree
5. Fairly agree
6. Strongly agree

Appendix-A

Questionnaire

Section 1

Please fill the blank space.

Name of the firm.....

Date of incorporation (year).....

Date licensed to operate at NSE (year).....

Date of listing at NSE (quoted companies).....

Nature of business (please tick as appropriate).....

Commercial and services []

Financial and investment []

Industrial and Allied []

Agricultural []

1. What is the current market capitalization of your company in Kshs.....
2. What is the percentage of foreign ownership on your company.....%
3. What is the percentage of government ownership in your company%

Listed below are statements dealing with factors considered to be influencing financial innovation in Kenya's securities market. Please rate the factors by ticking appropriate box in the next page

Key

1. Strongly disagree
2. Fairly disagree
3. Disagree

4. Agree
5. Fairly agree
6. Strongly agree

A. Regulation	Strongly disagree	Fairly disagree	Disagree	Agree	Fairly agree	Strongly agree
The Kenyan laws protecting investors interest at the stock market.						
Restrictive rules and regulations of the Capital Markets Authority (CMA) concerning licensing and control of stock markets.						
The NSE rules and requirements relating to the listing of quoted companies						
The restriction of foreign ownership in a quoted company to 49% of authorized and issued share capital of a quoted company						
Poor implementation of corporate governance principles in the capital markets.						
High corporate taxes in Kenya.						
Amount and content of information disclosed by listed companies in the financial statements.,						

B Market Volatility	Strongly disagree	Fairly disagree	Disagree	Agree	Fairly agree	Strongly agree
Fluctuations of interest rates in Kenya						
Unstable inflation rates in Kenya						
Unstable foreign exchange rates in Kenya						

C. Technology	Strongly disagree	Fairly disagree	Disagree	Agree	Fairly agree	Strongly agree
The absence of Automated Trading System						
Late implementation of central clearing and deposition systems (CDS).						

D. Global financial competition and Integration.	Strongly disagree	Fairly disagree	Disagree	Agree	Fairly agree	Strongly agree
Increased competition among financial institutions						
Increased liquidity in the financial markets						
Increased demand for credit						
Integration of Kenya with other countries, i.e. EAC, COMESA						

Appendix- B

List of all Companies Quoted at the NSE as at December 31st 2005 ✓

	<u>NAME OF COMPANY</u>
	Agricultural
1.	Unilever Tea Kenya Ltd. Ord. 10.00
2.	Kakuzi Ltd. Ord. 5.00
3.	Rea Vipingo Plantations Ltd. Ord. 5.00
4.	Sasini Tea & Coffee Ltd. Ord. 5.00
	Commercial and Services
5.	Car & General (K) Ord. 5.00
6.	CMC Holdings Ltd. Ord. 5.00
7.	Hutchings Biemer Ltd. Ord. 5.00
8.	Kenya Airways Ord. 5.00
9.	Marshalls (E.A) Ord. 5.00
10.	Nation Media Group Ord. 5.00
11.	Tourism Promotion Services Ltd. Ord. 5.00
12.	Uchumi Supermarket Ltd. Ord. 5.00
	Finance and Investment
13.	Barclays Bank Ltd. Ord. 10.00 ✓
14.	CFC Bank Ltd. Ord. 5.00 ✓
15.	Diamond Trust Of Kenya Ord. 5.00 ✓
16.	Housing Finance CO. Ltd.
17.	ICDC Investment CO. Ltd Ord. 5.00
18.	Jubilee Insurance CO. Ltd. Ord. 5.00
19.	Kenya Commercial Bank Ord. 10.00 ✓
20.	National Bank Of Kenya Ltd. Ord. 5.00 ✓
21.	NIC Bank Ltd. Ord. 5.00 ✓
22.	Pan Africa Insurance CO. Ltd. Ord. 5.00
23.	Standard Chartered Bank Ord. 5.00 ✓
	Industrial and Allied
24.	Athi River Mining Ord. 5.00
25.	BOC Kenya Ltd.
26.	Bamburi Cement Ltd. Ord. 5.00
27.	British American Tobacco Kenya Ord. 5.00
28.	Carbacid Investments Ltd. Ord. 5.00
29.	Crown Berger Ord. 5.00
30.	Olympia Capital Holdings Ltd. Ord. 5.00
31.	E.A cables Ord. 5.00
32.	E.A Portland Cement Ord. 5.00
33.	East African Breweries Ltd. Ord. 10.00
34.	Firestone E.A Ord. 5.00

35.	Kenya Oil CO. Ltd. Ord. 5.00
36.	Mumias Sugar CO. Ltd. Ord. 2.00
37.	Kenya Power & Lighting CO. Ltd Ord. 20.00
38.	Total Kenya Ltd. Ord. 5.00
39.	Unga Group Ltd. Ord. 5.00
	Alternative Market Segment
40.	A Baumann & CO. Ord. 5.00
41.	City Trust Ltd. Ord. 5.00
42.	Eaagads Ord. 1.25
43.	Express Kenya Ord. 5.00
44.	Williamson Tea Kenya Ltd. Ord. 5.00
45.	Kapchorua Tea CO. Ltd. Ord. 5.00
46.	Kenya Orchards Ltd. Ord. 5.00
47.	Limuru Tea Ord. 20.00
48.	Standard Newspapers Group Ord. 5.00

Appendix-C

Letter of Introduction

Mwangi K. Moses
Department of accounting
University of Nairobi
Nairobi

The Chief Executive Officer / Chief Finance Officer / Head of Research

Dear Sir / Madam

RE: RESEARCH PROJECT

I am a postgraduate 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 project is "Factors influencing financial Innovation in Kenya's Securities Market: A study of Firms' listed at Nairobi stock exchange."

Your firm has been selected to form part of the study. I kindly request you to fill the attached questionnaire. Any information provided will be treated in strict confidence and used solely for academic purposes. Any information provided will be treated in strict confidence and used solely for academic purposes. Neither your name nor that of the firm will be mentioned in the final report.

A copy of the research project will be made available to you upon request. Your co-operation will be greatly appreciated. Thanking you in advance.

Sincerely,

Mwangi Moses Kamunyu
MBA Student
E-mail- jmokamw@yahoo.com
Address box 70316-00400 Nairobi
Tel. 0722-619340