A SURVEY OF THE FACTORS HINDERING THE TRADING OF FINANCIAL DERIVATIVES IN THE NAIROBI STOCK EXCHANGE (NSE)

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DECLARATION

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

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DEDICATION

This research project report is dedicated to my wife Lydiah for her great assistance and support throughout my study. I also dedicate this work to my son Eric and also hope that this will encourage him to like school so that he can achieve his dream of becoming a pilot when he grows up.

ACKNOWLEDGEMENT

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ABBREVIATIONS

CSI	-Canada Stock Index
FX	-Foreign Exchange
GIC	-Guaranteed investment contract
IMF	-International Monetary Fund
NDSE	-New Delhi Stock exchange
NSE	-Nairobi Stock exchange
NZ	-New Zealand
OECD	-Organisation for Economic Cooperation and Development
OTC	-Over the counter
UK	-United Kingdom
US	-United States of America
XML	-Extensible markup language

ABSTRACT

This study sought to establish the factors hindering the trading of financial derivatives in the NSE. To achieve this primary data was collected through a questionnaire. The questionnaire was administered to 19 brokerage member firms as per appendix two. Data was collected from 16 firms. From the study it was evident that the main factors hindering the trading of financial derivatives in the NSE are the infancy of the NSE market, lack of awareness about financial derivative products and the notion that it is an expensive risk management technique. The regulation and accounting complexities associated with financial derivatives, less developed political structures and government policies to ensure stability of financial systems and complexities in valuing financial derivatives were also cited to be some of the factors hindering the trading of the financial derivatives in the NSE.

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CHAPTER ONE
INTRODUCTION

1.1 BACKGROUND OF THE STUDY

It is hypothesized that financial derivative products can help investors to manage risk and can also help to complete the market by increasing investment opportunities. Many studies have been conducted to explain the contribution of financial derivative products in developed stock exchanges. However, very few studies have been conducted to establish why these products are not traded in many emerging markets begging the need for further research in this area.

According to Brigham and Houston (2008), a financial derivative is any security whose value is derived from the price of some other underlying asset. The commonly traded financial derivatives include options, swaps and forward and futures contracts. Saracco (2007), on the other hand defined a derivative as a financial instrument based upon (or derived from) some asset, such as a stock or stock index (in the case of an equity derivative). Two parties agree to exchange cash or something of value based upon conditions affecting the underlying asset. Typically, one party uses the trade as a way to mitigate (or hedge against) risk; the other party uses the trade as a way to gain immediate income (through fees or premiums) and/or to speculate that future market conditions will provide profits.

According to Kobayashi (2008), derivatives products are contracts whose value depends on other 'securities' and depends on future events not yet known with certainty. A derivative transaction hence is a contract whose value depends on (or derives from) the value of an underlying asset, reference rate or index. The study stated that the main types of derivatives are options, swaps and forwards and that all the other derivatives are variations, hybrids or mutations of the above instruments.

Blommestein and Antolin (2007) stated that there has been a sharp growth in derivatives in both mature and emerging markets. Public debt managers in most mature markets already use derivatives to some extent, and many emerging market debt managers have begun to use them as well. They use primarily interest rate and currency swaps, futures, and forward transactions to achieve strategic objectives. The use of credit derivatives, in particular, is increasing rapidly. This is leading to a transformation of debt markets in the same way that the use of derivatives transformed interest rate markets in the 1980s. The availability of credit derivatives is facilitating the broadening of the investor base for public debt managers, especially in emerging market countries. Growth has been

robust in both exchange-traded and over-the-counter (OTC) derivatives. The two markets have their respective benefits. Exchange-traded derivatives reduce counterparty and operational risk through centralized clearing mechanisms, and are considered more transparent, liquid, and accessible to a broader range of market participants. OTC derivatives, which are easier to develop, grow organically, do not require underlying cash markets, and are more customized.

Lorne (2006) examined the extent to which exchange-traded derivative market growth has been hindered by regulations that constrain investment funds and advisors from using derivatives in Canada. The study focused on both the effects of the knowledge base of investment professionals, transactions costs, and product range as potentially constraining or facilitating factors for market participants. The knowledge base included proficiency, educational background, work experience, and supplementary training as potentially constraining or facilitating factors for market participants to use exchange traded Canadian options and futures. The additional training components included completion of additional courses/continuing education in options or risk management through the Montreal exchange or the CSI. The transactions costs examined included the costs of compliance, spreads, and potentially high liquidity premia. In addition, the study examined whether the product range of exchange traded derivatives is a limiting factor, as well as whether or not they perceive that using such products is too time consuming (in setting up the necessary additional accounts, and to educate clients) to merit their consideration. The latter is related to whether the compensation of participants is fee based or commission based. The study hypothesized that when the compensation structures are fee based, since client approval is required on transactions, more effort will be required on the part of the investment advisors to educate their clients, which would serve as a deterrent to derivatives use. The study concluded that Canada’s differential licensing requirements is the main factor underpinning the underdevelopment of its exchange traded derivatives markets. Other possible factors include restrictions imposed on investment advisors, as well as the substantial OTC market.

Mazin and Akhawayn (2006) cited the following obstacles to the trading of derivative products in emerging markets; Firstly, the market structure of banking and financial activities is concentrated in just a few major institutions, on which the stability of the whole macro-economy depends. Local financial markets are often characterized as thin, illiquid, lacking information technology infrastructures, and severely volatile, making them even more difficult for local institutions to manage their risks effectively. In some countries, banks and other financial intermediary's functions

are conducted and interlined with other corporate entity shareholders, creating severe moral hazard problems.

Secondly, the political structure and government policies of ensuring stability of the financial system are weak and less developed. These markets are characterized with frequent government interventions to stabilize the short-term impact of current events. Banks and other financial institutions may have a high degree of political influence in their countries, but only a limited understanding and acceptance of the needs for independent regulations and supervisions.

Thirdly, the financial sophistication for the valuations of complex instruments and reporting of exposure are weak and less stringent than advanced economies. Additionally, accounting standards vary widely from market to market. Financial entity management and regulatory body supervisors are less trained in advanced methods for the identification, measurement, management and control of financial risks.

Lastly, there is lack of adequate historical and current databases for most of these counties. Little real progress can be made without good databases and it will take considerable efforts to assemble them. Risk management systems are expensive to create and to run without adequate current and historical databases of most of the markets' main indicators.

1.2 STATEMENT OF THE PROBLEM

According to McAllister and Mansfield (1998), financial derivatives have the potential to overcome many of the portfolio investment management problems associated with direct property investment. The potential to be able "synthetically" to sell or buy property in relatively short time periods can enable managers to engage in more active management of their portfolio. The study however further argued that the use of derivatives in property portfolio management is at an early stage.

The use of derivative instruments (derivatives) has become common practice in the risk management activities of non financial firms around the world (Bartram et al., 2003). In particular, derivatives are widely used to manage foreign exchange rate and interest rate risks, while the use of commodity price derivatives is more concentrated in particular industries. While these instruments are only one tool of risk management, the use of derivatives can be interpreted as a proxy for corporate risk management, and various theories have established a case for hedging at the firm level of non financial firms, based on capital market imperfections such as underinvestment problems (Myers, 1977), taxes (Smith and Stulz, 1985), financial distress (Stulz, 1996) or management incentives (Stulz, 1984). Indeed, there is

some empirical support for these theories (e.g. Ge´czy et al., 1997). In contrast, while it can be observed that non financial firms use a variety of instruments to manage financial risks, it is not clear whether the full potential of these instruments is being realized (since not all firms use derivatives and not all of them use all types) and, more importantly, whether they are used appropriately.

According to Lorne (2006), measuring and managing financial market risk have become vitally important tasks for financial institutions, institutional investors and individual investors. The increased awareness of financial market risk has been accompanied by the development of a variety of risk measurement and management tools. These tools are available to investors and portfolio managers, and provide for cost-effective risk reduction and hedging as well as for implementation of a wide range of portfolio diversification strategies, and revenue enhancement strategies. Exchange traded derivatives stand out among these risk management tools for their advantages vis-à-vis other instruments with respect to transparency, cost-effectiveness and low credit and default risk. They are also convenient vehicles for arbitrage and completion of markets, and hence contribute to market efficiency. The study further argues that emerging market countries may benefit from the strengthening of over the counter (OTC) markets. Providing the enabling environment, including an adequate legal and regulatory framework, helps protect against counterparty risk in OTC trades and improves transparency and disclosure. Such efforts could enable emerging market countries to introduce derivatives at an earlier stage in their development, as they would not have to wait until cash markets are liquid enough to support financial derivatives market.

According to Gross (2007), derivatives can also reduce borrower's costs. Those with relatively low borrowing costs in one market can swap their payment streams with those having relatively low costs in another market. Each can borrow at a lower overall cost by trading their comparative advantage. This concept has led to the creation of currency and interest swaps. According to (Brown and Toft, 2002) the use of a variety of derivatives appears consistent with the objective of value maximization when the firm faces financial distress costs.

The above studies clearly show that financial derivatives can help reduce borrowers costs (Gross 2007), can help manage risk (Lorne 2006), can help maximize value (Brown and Toft, 2002) and can help complete the market by increasing trading and asset management opportunities (Lorne, 2006).The Kenyan case has however not been studied leading to lack of information as to why financial derivatives are not traded in the Nairobi stock exchange. It is on the basis of this lack of

understanding of the factors hindering the trading financial derivatives in the local stock exchange that I carried this study.

1.3 OBJECTIVE OF THE STUDY

To determine the factors hindering the trading of financial derivatives in the Nairobi Stock Exchange (NSE)

1.4 SIGNIFICANCE OF THE STUDY

This study is of beneficial in a number of ways to different interest groups;

The government will find this research valuable for policy, legal and stock market development. The study will also educate the public about financial derivatives and how they can be used in hedging and risk management. This will enlighten them on the usefulness of financial derivative products and may help them increase their investment opportunities in the stock exchange.

1.5 SCOPE OF THE STUDY

The study used a questionnaire to gather information from stock brokers participating in the NSE to establish why in their opinion financial derivatives are not traded in the NSE. The target group was the nineteen member brokerage firms (see appendix 2).

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter will present a review of existing literature on the financial and commodity derivative market so as to give an insight on the previous findings about why the derivative market is not fully developed in a number of countries and to establish what needs to be done to develop the market locally.

2.2 THEORETICAL LITERATURE

This chapter explains the motivation behind the introduction of financial derivatives product as is manifested in various theories. It gives a theoretical justification for local stock exchanges to engage in the trading of financial derivatives.

2.2.1 PRODUCT LIFE CYCLE THEORY

The product life-cycle theory is an economic theory that was developed by Raymond Vernon (1966) in response to the failure of the Heckscher-Ohlin model to explain the observed pattern of international trade. The theory suggests that early in a product's life-cycle all the parts and labor associated with that product come from the area in which it was invented. After the product becomes adopted and used in the world markets, production gradually moves away from the point of origin. In some situations, the product becomes an item that is imported by its original country of invention. The model applies to labor-saving and capital using products that (at least at first) cater to high-income groups. The model demonstrates dynamic comparative advantage. According to Vernon most products pass through three stages. The first is known as the "innovation stage". In order to compete with other firms and to make a lead in the market a firm innovates a product through research and development.

The second stage is known as the "maturing stage". At this stage demand for the new product in other developed countries grows substantially and becomes price elastic. At the final stage the products are standardized and production techniques are no longer the exclusive possession for the innovating firm. Financial derivatives can be expected to also pass through these stages since a local stock exchange must first innovate the product. Then it will be expected to grow and mature and finally the

product will be standardized and customized to meet the needs of the stock exchange that invented it. This explains why some financial derivative products may be popular in certain stock exchanges and not in others.

2.2.2 INVESTMENT THEORY

Schroy (2004) explained the investment theory arguing that according to experts, banks trading derivatives had sound risk management systems. These experts proclaimed that the banks and the other intermediaries involved in derivatives trading had sound risk management systems and that although lesser mortals might not understand these instruments, the people that counted did. This statement was signed by thirty-three well-known academic experts in derivatives. The signatories among others included Nobel laureates Myron Scholes, William F. Sharpe, Robert C. Merton, Merton Miller, and Franco Modigliani. The experts further advised against increasing government oversight of the market or placing controls on bank derivative trading. The theory also stated that free markets would keep unfettered capitalists out of trouble.

2.2.3 ECONOMIC THEORY

This theory of the firm championed by Friedman (1970) holds that a society determines and meets its needs and wants through the market place where the self-interest pursuit by business results in society getting what it wants. This is the concept of the invisible hand. Friedman says that it is the responsibility of business to increase its profits in a free enterprise system where there is no coercion and deception whilst conforming to the basic rules of the society embodied either in the law or ethical customs. If according to the economic theory the main goal of the firm is to increase shareholders wealth then this can be achieved through minimizing firms risk since doing this result to maximization of shareholders wealth. According to Brown and Toft (2002), the use of a variety of derivatives appears consistent with the objective of value maximization when the firm faces financial distress costs. The optimal hedge is dependent on the correlation between price and quantity risk, price and quantity volatilities, and the profit margin.

2.3 EMPIRICAL LITERATURE

Cummins et al. (2001) carried out a statistical analysis of insurers' use of derivatives and found that those that were well capitalized were less likely to use them since their probability of incurring distress costs was relatively low. This suggests that some insurers view derivatives and capital as being substitutes for each other. The authors also found evidence that insurance companies used

derivatives to hedge asset volatility, liquidity and exchange rate risks. Life insurers were found to use derivatives to manage interest rate risk and the risks arising from embedded options in individual life insurance and guaranteed investment contract (GIC) liabilities. Finally, the authors found that there were significant economies of scale to be exploited by using derivatives. Only large firms with higher than average risk exposure found it worthwhile to invest in setting up and managing derivatives operations. Although the Cummins et al. study provides a thorough analysis of insurers' use of derivatives, it used 1994 data. The number of insurers using derivatives has in all likelihood changed significantly in the meantime.

Recent research directly models the choice of a value-maximizing firm to use linear (forwards) and nonlinear (options and custom/exotic) derivative contracts in the presence of price and quantity risk (Brown and Toft, 2002). The use of a variety of derivatives appears consistent with the objective of value maximization when the firm faces financial distress costs. The optimal hedge is dependent on the correlation between price and quantity risk, price and quantity volatilities, and the profit margin.

When examining the optimal mix of linear and nonlinear hedging instruments, the optimal hedge portfolio consists largely of linear instruments for firms with little or no quantity risk (Gay et al., 2001). In contrast, higher levels of quantity and price risks give rise to using fewer linear contracts and more nonlinear instruments (long put options) in order to avoid over hedging. This substitution effect between linear and nonlinear instruments is a function of the price-quantity correlation. If the correlation is negative, there is a natural hedging effect reducing the overall demand for hedging instruments and leading to more substitution into nonlinear contracts as the over hedging problem is aggravated. In contrast, in the case of positive price-quantity correlation, higher demand for derivatives results, as they can reduce some of the quantity risk as well, and more (less) linear (nonlinear) derivatives are used. Besides rationales for the use of options in corporate financial management based on risk management considerations, the accounting treatment of derivatives may have an impact on the choice of instrument as well.

According to (Bodnar et al., 1998) the accounting treatment is one of the issues of highest concern regarding the use of derivatives. When a company uses derivatives with linear payoff profile such as forwards, futures and swaps to hedge an underlying position, the derivatives' position can result in an accounting loss (hedge accounting would solve this problem, but may be difficult to apply for anticipated exposures). To illustrate, when a firm uses a forward contract to hedge a receivable in

foreign currency, the forward contract will show a loss if the domestic currency depreciates. At the same time, the value of the underlying asset (the receivable) increases in value in return, so that the combined position of the underlying asset and the derivative remains constant and independent of exchange rate movements. The elimination of the upside potential on the underlying asset is the price for the protection the derivative offers for situations where the underlying asset looses value.

According to Blommestein and Antolin, (2007), most developed market debt managers use derivative instruments for debt management purposes, while this is the case for only a handful of emerging markets. Several emerging markets, though, are taking steps towards developing the legal environment necessary to support derivative markets, and are addressing the challenges posed by illiquidity of the underlying cash market, deficiencies in prudential regulation, and restrictions on market participation.

Saracco (2007) explored the unique business characteristics of derivatives trading applications, explained their impact on traditional information management systems, and described how pure XML™ database management technology available in IBM's DB2 addresses the challenging XML data processing and performance requirements associated with trading derivatives. The study concluded that the derivatives trading offers financial institutions significant opportunities to increase revenue, attract new clients, and improve their competitive position. The complex nature of derivatives, coupled with the rapid increase in traded volumes according to the study, has led to lengthy confirmation cycles and greater risk, which regulatory bodies are pressuring firms to resolve. Hence, many forward-thinking firms are turning to sophisticated software technologies to help them address these challenges. Frequently, firms use the extensible Markup Language (XML) to represent and exchange derivatives data electronically.

Asani (2006), studying the Indian derivative market concluded that in terms of the growth of derivatives markets, and the variety of derivatives users, the Indian market has equaled or exceeded many other regional markets. While the growth is being spearheaded mainly by retail investors, private sector institutions and large corporations, smaller companies and state-owned institutions are gradually getting into the act. Foreign brokers such as JP Morgan Chase are boosting their presence in India in reaction to the growth in derivatives. The variety of derivatives instruments available for trading is also expanding. Large gaps however exist in the range of derivatives products that are traded actively. In equity derivatives, New Delhi stock exchange (NDSE) figures show that almost

90% of activity is due to stock futures or index futures, whereas trading in options is limited to a few stocks, partly because they are settled in cash and not the underlying stocks. Exchange-traded derivatives based on interest rates and currencies are virtually absent.

According to the CME group (2008), uncertainty in major currency markets has only increased interest in emerging markets currencies creating one of the fastest growing trading opportunities of any asset class. Foreign exchange (FX) futures and options are a smart and efficient way to manage global currency risk and investors need to take advantage of the profit opportunities they present.

2.3.1 PRE-REQUISITES FOR SOUND DERIVATIVE TRADING

According to Saracco (2007), financial institutions seeking to serve as effective buyers, sellers, or custodians of derivatives need to address several business challenges, including the need to manage risk associated with various market and business conditions, Comply with industry regulations, Reduce or eliminate manual processing at various stages of the trade, Cope with rapidly growing trade volumes and accommodate the diverse and changing nature of derivatives. Failure to adequately address these requirements can lead to greater operational risk, legal penalties, and unnecessary expenses.

According to Mazin and Akhawayn (2006) any emerging-market country in the process of planning access into the derivative business should at least consider establishing liquid cash markets for equity (common stocks) trading, Foreign exchange (FX) transactions and debt trading (bonds and short term interest rate instruments). This may also include constituting an OTC market for the trading of derivative products of relevant local market underlying assets, such as stock market indices, FX contracts and interest rates (debt instruments). Also it should conduct professional educational and training process for local and foreign investors on the trade-off between risk and expected return of local financial and non-financial underlying (such as stock, bonds and commodities). Investors who do not understand the risk/return profile of "plain-vanilla" cash instruments would be less likely to appreciate the usefulness of derivative products, for both speculation and hedging purposes. The study further recommends that specific attention should be devoted to the peculiarities of the trading of options contracts in emerging markets. These contracts according to the study have embedded effects and factors (that in many cases are not detectable by many novice traders) such as non-linear payoffs and the dependence of full option's valuations on several Greeks factors, of the first and second mathematical derivative order (that are known in the financial markets as delta, gamma, theta, etc.). Because of their non-linear payoffs, special emphasis should be given to the valuation and

pricing of options (for both simple and complex options), on the different hedging methods and techniques and the usefulness of portfolio theory for daily positioning management.

2.3.2 IMPORTANCE OF USING FINANCIAL DERIVATIVES

According to Gross (2007), the use of derivatives detaches particular financial risks from the funding or investment function of financial instruments. For example, a company that has used floating rate debt to fund its business in a period of declining interest rates may grow anxious that the bottom of the interest rate cycle has been reached. It can avoid any risk of rising debt servicing cost, without renegotiating its credit instruments, by simply entering into an interest rate swap in which it pays a fixed interest rate and receives a floating rate. This swap can also be viewed as two transactions, short (selling) fixed rate bond and long (buying) floating rate bond. Also, derivatives reallocate risk by redistributing it more efficiently, thus making risk less costly to society as a whole. Thirdly, derivatives offer a cheaper way to implement investment strategies than do cash markets. This is especially true for equity index and interest rate futures contracts. If a speculator is bullish on a stock market and would like to participate in the upside trend, he can buy a future contract on an equity market index instead of a large number of individual stocks. This allows the investor to invest much less capital and incur much lower trading costs and eventually gain benefits if his bullish expectations come true. Fourthly, derivatives can also reduce borrower's costs. Those with relatively low borrowing costs in one market can swap their payment streams with those having relatively low costs in another market. Each can borrow at a lower overall cost by trading their comparative advantage. This concept has led to the creation of currency swaps. Finally, derivatives can be used to hedge foreign exchange (FX) transactional exposure (due to import/export confirmed trades) or to hedge a particular debt issue. Also it can be used for strategic hedging (also known as operating or economic exposure), where the entity is attempting to protect expected cash flows or the value of the firm from movements in financial and commodities prices.

2.3.3 USE OF DERIVATIVES BY NON FINANCIAL FIRMS

Bodnar et al. (1998) surveyed 530 US non financial firms about the use of financial derivatives. They found that large firms tend to use OTC products, while small firms tend to use a mixture of OTC and exchange-traded products. They also found that 80 per cent of firms use derivatives to hedge firm commitments, and 44 per cent of firms use derivatives to hedge the balance sheet. Their results indicate that 67 per cent of firms expressed high concern of accounting treatment of derivatives. The most important goal of hedge with derivatives is to minimise fluctuations in cash flows. They found that 76 per cent of users have a documented policy with respect to the use of derivatives.

Alkeba¨ck and Hagelin (1999) provided survey evidence on the use of derivatives among Swedish non financial firms in October 1996. By comparing firms in Sweden with firms in New Zealand and the US, the results show that 52 per cent of the nonfinancial firms in Sweden use derivatives compared with 53 per cent in New Zealand (Berkman et al., 1997) and 39 per cent in the USA (Bodnar et al., 1995). The study also indicates that usage of derivatives is more common among larger than smaller firms and that the principal use of derivatives is for hedging purposes.

2.3.4 USE OF DERIVATIVES IN RISK MANAGEMENT

Phillips (1995) surveyed 415 US firms to know the extent to which organisations use derivatives for managing risk, obtaining funding, or investing. The study found that 63.2 per cent of the respondents use derivative contracts, derivative securities or both; 78 per cent of the users report that their firms use derivatives for financial risk management; 66.7 per cent of the users report that their firms use derivatives in conjunction with obtaining funding; and 21.4 per cent of the users report that their firms use derivatives for investment purposes. In addition, the study found that 90.4 per cent of the users are exposed to interest rate risk, 75.4 per cent face FX risk, 36.6 per cent are exposed to commodity price risk, and 3.1 per cent face no risk exposure. However, there are 30.8 per cent of the users exposed to all three types of risk.

Berkman et al. (1997) compared the use of derivatives between non financial firms in New Zealand and the United States. They found that, across all firm sizes, relatively more NZ firms use derivatives. This greater use of derivatives, despite higher transaction costs, reflects the relatively high-risk exposure of NZ firms. They also find that NZ firms report more frequently on their derivative positions to their boards of directors than do US firms.

Khim and Liang (1997) claimed that the usage and effect of financial derivative instruments on company risk management are different for Singaporean firms in different industries, with different turnover, ownership, international business involvement and listing status. The study also found that the volatility and uncertainty in the worlds financial markets have affected companies in Singapore differently.

Grant and Marshall (1997) surveyed the largest UK companies (FTSE 250) between 1994 and 1995. The results show that derivatives are rarely used to speculate on market movements. Indeed, the study

indicates that derivatives are most commonly used to reduce the volatility of firm's cash flows. The results also indicate that swaps, forwards and options are commonly used to manage foreign exchange and interest rate risks.

According Blommestein and Antolin (2007), in a report documenting the key conclusions from the Ninth Annual OECD/World Bank/IMF Bond Market Forum which took place in Paris on 22–23 May 2007 on the Use of Derivatives for Debt Management and Domestic Debt Market Development, there has been a sharp growth in derivatives in both mature and emerging markets. This includes transaction volumes, types, and users. Public debt managers in most mature markets already use derivatives to some extent, and many emerging market debt managers have begun to use them as well. They use primarily interest rate and currency swaps, futures, and forward transactions to achieve strategic objectives.

The use of credit derivatives, in particular, is increasing rapidly. This is leading to a transformation of debt markets in the same way that the use of derivatives transformed interest rate markets in the 1980s. The availability of credit derivatives is facilitating the broadening of the investor base for public debt managers, especially in emerging market countries. Growth has been robust in both exchange-traded and over-the-counter (OTC) derivatives. The two markets have their respective benefits. Exchange-traded derivatives reduce counterparty and operational risk through centralized clearing mechanisms, and are considered more transparent, liquid, and accessible to a broader range of market participants. OTC derivatives, which are easier to develop, grow organically, do not require underlying cash markets, and are more customized. The report concluded that emerging market countries may benefit from the strengthening of OTC markets. Providing the enabling environment, including an adequate legal and regulatory framework, helps protect against counterparty risk in OTC trades and improves transparency and disclosure. Such efforts could enable emerging market countries to introduce derivatives at an earlier stage in their development, as they would not have to wait until cash markets are liquid enough to support an exchange-traded derivatives market.

According to Karpinsky (1998), although many firms and individuals use derivatives as part of an overall strategy to manage the various financial risks they face (e.g. interest rate risk, foreign currency risk, commodity price risk and equity price risk), misuse of these derivative instruments results in huge losses of several companies. Their studies discussed the various financial disasters relating to the use of derivative instruments. Karpinsky (1998) gave examples of some derivatives losers. For instance, Sumitomo Corporation lost $3,500 million in 1996 because of Copper Futures;

Metallgeselschaft lost $1,800 million from oil Futures in 1993; Kashima Oil lost $1,500 million from FX Derivatives in 1994; Orange County lost $1,700 million from Interest Rate Derivatives in 1994; Barings Bank lost $1,400 million from Stock index and Bond futures and Options in 1995; and Daiwa Bank lost $1,100 million from Bonds in 1996. They further argued that In the cases cited above where companies have made huge losses through the trading of derivatives, the problems are not so much with the derivatives themselves but rather than with the way that are used or misused. Some of these disasters have involved unauthorized trading (e.g. the Barings bank), raising the possibility that a significant number of companies may not have in place with appropriate controls or monitoring procedures to regulate their derivative positions. Thus, it is very important for companies that they cannot ignore the need for well defined risk management policies. It is also sensible for companies to outlaw the use of derivatives for speculative purposes.

2.3.5 EMERGENCE OF WEATHER DERIVATIVES AS AN ALTERNATIVE RISK HEDGING TOOL

A financial weather derivative contract may be termed as a weather contingent contract whose payoff will be in an amount of cash determined by future weather events. The settlement value of these weather events is determined from a weather index, expressed as values of a weather variable measured at a stated location (Dischel and Barrieu, 2002).

O'Hearne (2004) argued that unlike the crop insurance products, weather derivative contracts require no demonstration of loss. According to the study derivatives do not fall in the category of insurance products. In the case of insurance, besides other conditions, the insured must have an interest in the subject of the contract of insurance. And also, the insured must suffer a loss of pecuniary nature in relation to his insurable interest. These two conditions do not necessarily hold in the case of derivatives.

According to Narender (2006), organized commodity derivatives in India started as early as 1875, barely about a decade after they started in Chicago. However, many feared that derivatives fuelled unnecessary speculation and were detrimental to the healthy functioning of the markets for the underlying commodities. As a result, after independence, commodity options trading and cash settlement of commodity futures were banned in 1952. A further blow came in 1960s when, following several years of severe draughts that forced many farmers to default on forward contracts (and even caused some suicides), forward trading was banned in many commodities considered primary or essential. Consequently, the commodities derivative markets was dismantled and remained dormant for about four decades until the new millennium when the Government, in a

complete change in policy, started actively encouraging the commodity derivatives market. Since 2002, the commodities futures market in India has experienced an unprecedented boom in terms of the number of modern exchanges, number of commodities allowed for derivatives trading as well as the value of futures trading in commodities. However, there were several impediments to be overcome and issues to be decided for sustainable development of the market. The study sought to answer questions such as: how did India pull it off in such a short time since 2002? Is this progress sustainable and what are the obstacles that need urgent attention if the market is to realize its full potential? Why are commodity derivatives important and what could other emerging economies learn from the Indian mistakes and experience? The study concluded that India has made enormous progress in terms of technology, transparency and the trading activity. Interestingly, this has happened only after the Government protection was removed from a number of commodities, and market forces were allowed to play their role. This should act as a major lesson for the policy makers in developing countries, that pricing and price risk management should be left to the market forces rather than trying to achieve these through administered price mechanisms.

2.3.6 CREDIT DERIVATIVES

Freeman et al (2006) sought to explore the possible use of credit derivatives by corporate treasurers. According to the study Corporations have, in recent years, grown comfortable with the idea of using traditional derivative products to hedge their exposure to, for example, interest rate and foreign exchange risk. Credit risk, on the other hand, has proven a more difficult animal to tame. Whilst avenues for the management of credit risk do exist, for example, by the use of traditional insurance products and letters of credit, such means are not always convenient. The study found that the credit derivatives market is, at present, dominated by large banks and insurance companies who trade credit exposure among themselves. As the credit derivatives market becomes more liquid and transparent corporate treasurers consider using credit derivatives to manage their credit risk exposure.

According to Effenberger, (2004), Credit derivatives are becoming increasingly popular, so the obvious question is whether, and how, they affect the stability of financial markets. Generally, credit derivatives improve the overall allocation of risks within financial systems. They do so in two ways: Firstly, credit derivatives make risk management more efficient and flexible especially at banks. Secondly, credit derivatives allow a more efficient distribution of individual risks and a related reduction of aggregate risk within an economy.

2.4 SUMMARY OF THE FINDINGS OF EMPIRICAL STUDIES

The studies analyzed above do not give a clear position regarding the factors hindering the trading of financial derivatives in emerging markets such as stock exchanges in Africa. Mazin and Akhawayn (2006) studied the obstacles to derivative products trading in emerging markets using the Moroccan stock exchange which can not be generalized to all the countries in Africa. The study cited the following obstacles to the trading of derivative products in emerging markets; Firstly, the market structure of banking and financial activities is concentrated in just few major institutions, on which the stability of the whole macro-economy depends.

Secondly, the political structure and government policies of ensuring stability of the financial system are weak and less developed. These markets are characterized with frequent government interventions to stabilize the short-term impact of current events. Banks and other financial institutions may have a high degree of political influence in their countries, but only a limited understanding and acceptance of the needs for independent regulations and supervisions.

Thirdly, the financial sophistication for the valuations of complex instruments and reporting of exposure are weak and less stringent than advanced economies. Additionally, accounting standards vary widely from market to market. Financial entity management and regulatory body supervisors are less trained in advanced methods for the identification, measurement, management and control of financial risks.

Lastly, there is lack of adequate historical and current databases for most of these counties. Little real progress can be made without good databases and it will take considerable efforts to assemble them. Risk management systems are expensive to create and to run without adequate current and historical databases of most of the markets' main indicators.

Another study conducted by Lorne (2006) examined the factors hindering exchange traded derivatives in Canada which of course is not an emerging market. The study examined the extent to which exchange-traded derivative market growth has been hindered by regulations that constrain investment funds and advisors from using derivatives in Canada. Since the findings of the empirical studies do not clearly state the factors hindering the trading of financial derivatives in the larger Africa, it is necessary to conduct a study that will establish the factors hindering the trading of financial derivatives in our local stock exchange (Nairobi stock exchange).

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 INTRODUCTION

This section highlights the type of research design that was used in the study, the population, sample size, sampling procedure, the data collection procedure and data analysis and presentation.

3.2 RESEARCH DESIGN

A descriptive study was conducted using a questionnaire to establish the possible reasons why financial derivatives are not traded in the NSE. The study sought to establish whether the stock brokers and financial advisors who actively trade in the NSE are aware of what financial derivatives are and if yes, probe why in their opinion they are not traded in the NSE.

3.3 POPULATION AND SAMPLE

The population of the study comprised of the nineteen member brokerage firms at the NSE. A census survey was carried out to establish the factors hindering the trading of financial derivatives in the NSE.

3.4 DATA COLLECTION

Primary data was collected using a questionnaire designed to gather the relevant information from stock exchange brokerage firms (see appendix one). The questions in the questionnaire were designed to survey a number of factors that have been reported in developed stock exchanges as hindering the trading of financial derivatives to establish if the same factors hinder the trading of financial derivatives in the Nairobi stock exchange. The questionnaires were delivered personally to the specific respondent's physical locations.

3.5 RELIABILITY AND VALIDITY OF DATA

3.5.1 VALIDITY

According to Nachmias & Nachmias (1996), validity of an instrument is the degree to which an instrument measures what it is supposed to measure and consequently permits appropriate interpretation of scores. Before the research instrument is administered to the sample members, there will be a need to validate it. To ensure validity of the questionnaire, the questionnaire was pre tested on five brokerage firms one week before the date of administering the questionnaire. The results were then compared and consistency observed hence testing for validity of the instrument.

3.5.2 RELIABILITY

According to Mugenda and Mugenda (2003), reliability is a measure of the degree to which a research instrument yields consistent result or data after repeated trials. The result of the pre test showed validity which then showed that the questionnaire was reliable.

3.6 DATA ANALYSIS

Data analysis involved data preparation where data is checked for accuracy, entered into a computer, examined critically and making inferences (Kombo and Tromp, 2006). Immediately the questionnaires were received, they were checked for accuracy. This was done by checking whether the responses were legible, whether all important questions had been answered and whether the responses were complete.

A coding system was used to find a quick and easy way to organize the data so that it could be analysed. Codes are symbols which are used to identify particular responses, Robson (1993). Factor analysis was then used, using a standard statistical package for social sciences (SPSS) to establish the factors hindering the trading of financial derivatives in the Nairobi stock exchange.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 INTRODUCTION

The findings of the research were analysed in accordance with the objective of the study set out in section 1.3. A total of 19 questionnaires were delivered to the physical locations of the respondents. 16 responses were received an 84% response rate. This was considered adequate for data analysis. The analysis was divided into two sections namely frequency analysis and factor analysis. Frequency analysis was used to establish the frequencies of the variables and factor analysis used to establish the level of correlation between the factors surveyed.

4.2 FREQUENCY ANALYSIS

This was to verify the frequency of the respondent as per the obtained data from the questionnaire. All the 13 factors surveyed and the response rates obtained are shown below.

4.2.1 Lack of Government Support

Table 4.1 Lack of Government Support

Lack of Government Support

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	6.2	6.2	6.2
	Disagree	4	25.0	25.0	31.2
	Neither Agree nor Disagree	4	25.0	25.0	56.2
	Agree	4	25.0	25.0	81.2
	Strongly Agree	3	18.8	18.8	100.0
	Total	16	100.0	100.0	

The response from the questionnaire regarding lack of government support as a factor hindering the trading of financial derivatives in the NSE was supported by 44% of the respondents. However, 31% of the respondents disagreed and 25% were indifferent.

4.2.2 Infancy of the Market

Table 4.2 Infancy of the Market

Infancy of the Market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neither Agree or Disagree	2	12.5	12.5	12.5
	Agree	5	31.2	31.2	43.8
	Strongly Agree	9	56.2	56.2	100.0
	Total	16	100.0	100.0	

The study findings revealed that most respondents about (87%) agreed that infancy of the market was a major factor hindering the trading of the financial derivatives in the NSE. However 13% of the respondents neither agreed nor disagreed. There was no respondent who disagreed that infancy of the market was a factor hindering the trading of financial derivatives in the NSE.

4.2.3 Complexity of valuing the derivatives

Table 4.3 Complexity of valuing the derivatives

Complexity of valuing the derivatives

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	6.2	6.2	6.2
	Disagree	3	18.8	18.8	25.0
	Neither Agree nor Disagree	3	18.8	18.8	43.8
	Agree	6	37.5	37.5	81.2
	Strongly Agree	3	18.8	18.8	100.0
	Total	16	100.0	100.0	

From the table above, 56% of the respondents agreed that complexity in valuing derivatives hinders the trading of financial derivatives in the NSE. However, 25% disagreed and 19% neither agreed nor disagreed.

4.2.4 Lack of simplified curriculum teaching about financial derivatives in colleges and universities

Table 4.4 Lack of simplified curriculum teaching about financial derivatives

Lack of simplified curriculum

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	6.2	6.2	6.2
	Disagree	3	18.8	18.8	25.0
	Neither Agree nor Disagree	4	25.0	25.0	50.0
	Agree	4	25.0	25.0	75.0
	Strongly Agree	4	25.0	25.0	100.0
	Total	16	100.0	100.0	

50% of respondents stated that lack of a simplified curriculum teaching about financial derivatives is a factor hindering the trading of financial derivatives in the NSE. However, 25% of the respondents were indifferent and 25% disagreed.

4.2.5 Lack of Awareness about financial derivatives

Table 4.5 Lack of Awareness about financial derivatives

Lack of Awareness about financial derivatives

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	6.2	6.2	6.2
	Disagree	2	12.5	12.5	18.8
	Neither Agree nor Disagree	1	6.2	6.2	25.0
	Agree	1	6.2	6.2	31.2
	Strongly Agree	11	68.8	68.8	100.0
	Total	16	100.0	100.0	

From the data above, 75% of the respondents supported lack of awareness as a factor hindering the trading of financial derivatives in the NSE. However 19% disagreed and only 6% neither agreed nor disagreed.

4.2.6 Weak and Less Developed Political Structures

Table 4.6 Weak and Less Developed Political Structures

Weak and Less Developed Political Structures

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	6.2	6.2	6.2
	Disagree	2	12.5	12.5	18.8
	Neither Agree nor Disagree	4	25.0	25.0	43.8
	Agree	5	31.2	31.2	75.0
	Strongly Agree	4	25.0	25.0	100.0
	Total	16	100.0	100.0	

The data above shows that weak and less developed political structures and government policies to ensure stability of financial systems is a factor hindering the trading of financial derivatives in the NSE. This is supported by 56% of the respondents. However 19% of the respondents disagreed on this factor and 25% were indifferent.

4.2.7 Lack of Adequate Historical and Current databases

Table 4.7 Lack of Adequate Historical and Current databases

Lack of Adequate Historical and Current databases

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	18.8	18.8	18.8
	Disagree	4	25.0	25.0	43.8
	Neither Agree nor Disagree	6	37.5	37.5	81.2
	Agree	3	18.8	18.8	100.0
	Total	16	100.0	100.0	

From the data above, 44% of the respondents disagreed that lack of adequate historical and current databases is a factor hindering the trading the trading of financial derivatives in the NSE. However, 37% neither agreed nor disagreed and only 18% agreed.

4.2.8 Financial derivatives are an expensive risk Management system

Table 4.8 Financial derivatives are an expensive risk Management system

Financial derivatives are an expensive risk Management system

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	6.2	6.2	6.2
	Disagree	2	12.5	12.5	18.8
	Neither Agree nor Disagree	3	18.8	18.8	37.5
	Agree	6	37.5	37.5	75.0
	Strongly Agree	4	25.0	25.0	100.0
	Total	16	100.0	100.0	

63% of the respondents agreed that trading of financial derivatives is an expensive risk management system while 19% disagreed and 19% neither agreed nor disagreed that this factor is hindering the trading of financial derivatives in the NSE.

4.2.9 Too Complicated Licensing requirements

Table 4.9 Too Complicated Licensing requirements

Too Complicated Licensing requirements

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	18.8	18.8	18.8
	Disagree	4	25.0	25.0	43.8
	Neither Agree nor Disagree	3	18.8	18.8	62.5
	Agree	5	31.2	31.2	93.8
	Strongly Agree	1	6..2	6..2	100.0
	Total	16	100.0	100.0	

From the above table it is clear that 44% do not support the fact that complicated licensing requirements is a factor hindering the trading of financial derivatives in the NSE. However,19% were neutral and 38% agreed that this factor is hindering the trading of financial derivatives in the NSE.

4.2.10 Restrictions Imposed on Investment Advisors

Table 4.10 Restrictions Imposed on Investment Advisors

Restrictions Imposed on Investment Advisors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	31.2	31.2	31.2
	Disagree	5	31.2	31.2	62.5
	Agree	6	37.5	37.5	100.0
	Total	16	100.0	100.0	

From the data above most respondents disagreed that restrictions imposed on investment advisors is a factor hindering the trading of financial derivatives in the NSE. This is represented by 62% of the respondents. However about 38% of the respondents agreed that this factor is hindering the trading of financial derivatives at the NSE.

4.2.11 Distrust in Derivatives due to derivatives related scandals

Table 4.11 Distrust in Derivatives

Distrust in Derivatives

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	18.8	18.8	18.8
	Disagree	3	18.8	18.8	37.5
	Neither Agree nor Disagree	4	25.0	25.0	62.5
	Agree	3	18.8	18.8	81.2
	Strongly Agree	3	18.8	18.8	100.0
	Total	16	100.0	100.0	

From the table above about 37.5% of the respondents agreed that distrust in derivatives due to derivative related scandals was a factor hindering the trading of financial derivatives at the NSE with

an equal percentage refuting the claim. However, 25% of the respondents neither agreed nor disagreed with this as a factor hindering the trading of financial derivatives at the NSE.

4.2.12 High Infrastructural Costs

Table 4.12 High Infrastructural Costs

High Infrastructural Costs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	18.8	18.8	18.8
	Disagree	2	12.5	12.5	31.2
	Neither Agree nor Disagree	5	31.2	31.2	62.5
	Agree	4	25.0	25.0	87.5
	Strongly Agree	2	12.5	12.5	100.0
	Total	16	100.0	100.0	

38% of the respondents agreed that high infrastructural costs necessary in order to avoid operational risk associated with derivative usage is a factor hindering the trading of financial derivatives at the NSE. However, 31% of the respondents disagreed and the remaining 31% neither agreed nor disagreed.

4.2.13 Regulations and Accounting Complexity

Table 4.13 Regulations and Accounting Complexity

Regulations and Accounting Complexity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	6.2	6.2	6.2
	Disagree	2	12.5	12.5	18.8
	Neither Agree nor Disagree	4	25.0	25.0	43.8
	Agree	6	37.5	37.5	81.2
	Strongly Agree	3	18.8	18.8	100.0
	Total	16	100.0	100.0	

From the above table 56% of the respondents agreed that the regulation and accounting complexities associated with financial derivatives was a factor hindering the trading of financial derivatives at the NSE. However, 19% disagreed and 25% neither agreed nor disagreed.

4.3 FACTOR ANALYSIS

The study used confirmatory factor analysis to confirm the degree and extent to which the tested variable correlate with each other.

4.3.1 Correlation Matrix

Table 4.14 Correlation Matrix

Correlation Matrix

		Infancy Market	Gov Support	Complexity valuing	Lack curriculum	Lack of Awareness	Weak Political Structures	Lack of databases	Expensive risk Mnagnt	Compli Licing	Restrictions on Advisors	Distrust in Derivatives	High Infrust Costs	Acco Complexity
Correlation	Infan	1.000	.833	.905	.866	.844	.914	.895	.885	.884	.762	.842	.835	.894
	Gov	.833	1.000	.946	.948	.792	.924	.927	.917	.917	.911	.952	.941	.915
	Cval	.905	.946	1.000	.957	.868	.960	.966	.944	.920	.836	.936	.921	.923
	Curri	.866	.948	.957	1.000	.831	.963	.925	.948	.923	.880	.933	.922	.937
	Awar	.844	.792	.868	.831	1.000	.853	.813	.890	.780	.688	.787	.846	.811
	Politi	.914	.924	.960	.963	.853	1.000	.959	.979	.937	.841	.936	.921	.951
	Data bases	.895	.927	.966	.925	.813	.959	1.000	.933	.947	.839	.960	.933	.922
	Magn	.885	.917	.944	.948	.890	.979	.933	1.000	.905	.826	.940	.925	.969
	Comt	.884	.917	.920	.923	.780	.937	.947	.905	1.000	.926	.960	.952	.901
	Restr	.762	.911	.836	.880	.688	.841	.839	.826	.926	1.000	.932	.924	.849
	Distr	.842	.952	.936	.933	.787	.936	.960	.940	.960	.932	1.000	.967	.943
	Infru Costs	.835	.941	.921	.922	.846	.921	.933	.925	.952	.924	.967	1.000	.911
	AccC	.894	.915	.923	.937	.811	.951	.922	.969	.901	.849	.943	.911	1.000

a. Determinant = 5.85E-017

The data in the above correlation matrix table indicates that almost all the factors under study have a strong positive correlation with each other. Hence the factors hindering the trading on financial derivatives in the NSE are strongly positively correlated.

4.3.2 Rotated Factor Analysis Component Matrix

Table 4.15 Rotated Factor Analysis Component Matrix

Rotated Factor Analysis Component Matrix

	Component												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Gov Support	.661	.380	.363	.286	.277	.140	.329	.014	.004	.013	.001	.002	.000
Comty valing	.498	.483	.353	.395	.392	.194	.171	-.005	-.003	-.008	.130	.000	-5.498E-5
Lack curric	.574	.430	.431	.331	.240	.344	.121	.013	.018	.011	.000	.002	.001
Lack Awarenes	.330	.834	.251	.307	.169	.074	.062	.003	.013	.005	.001	-.001	-.004
Weak Pcal Stru	.495	.447	.468	.419	.312	.174	.072	.160	.047	.012	-.003	-.004	.000
Lack databases	.533	.388	.364	.412	.497	.085	.083	.015	.012	.023	-.028	-.009	.000
Risk Magnt	.479	.527	.546	.326	.251	.093	.073	.071	.052	-.003	.004	.038	.037
Complited Licg	.696	.343	.279	.430	.305	.103	.006	.039	.171	.025	-.002	.002	.001
Restricts Inv Adv	.874	.270	.248	.269	.111	.098	.058	.029	-.029	-.034	.023	-.014	.002
Distrust in Deri	.698	.358	.411	.296	.344	.042	.061	-.030	.012	-.009	-.002	.066	.002
High Infra Costs	.703	.480	.311	.261	.278	.045	.061	.010	.028	.164	-.005	-.001	.000
Acco Comp	.522	.385	.603	.400	.196	.067	.082	-.053	-.005	.034	.017	-.027	-.023
Infancy Market	.390	.455	.302	.707	.192	.078	.078	.005	.002	.013	.005	.007	.003

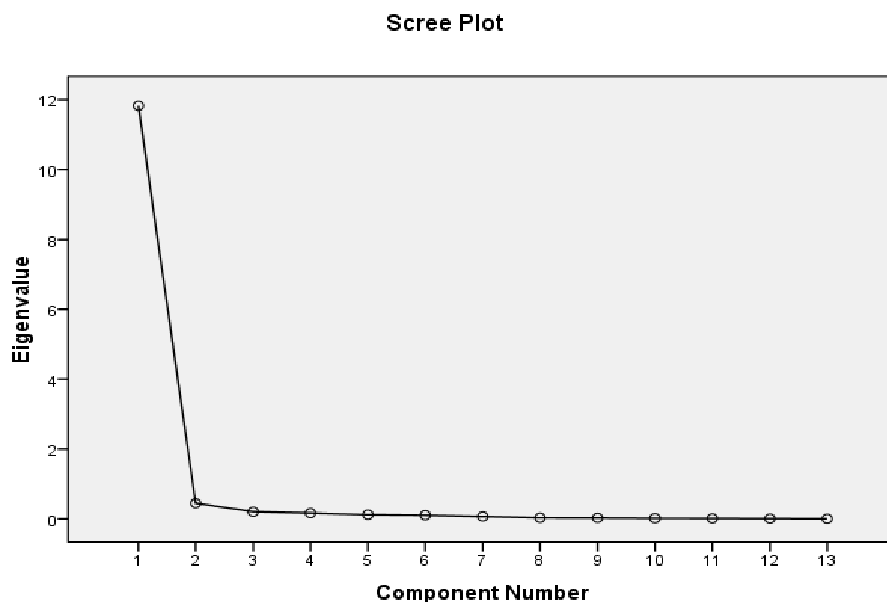
Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 10 iterations.

This is the rotated version of correlation matrix that has just confirmed that there still exist very strong positive correlation between the observed variable and that the effect on one variable strongly affects the behavior of the other variables.

4.3.3 Scree Plot of Eigenvalue

Table 4.16 Scree Plot of Eigenvalue



4.3.4 Extracting Principal Components though Variance test

Table 4.15 Principal Components Extracting

Component Matrix

	Component							
	1	2	3	4	5	6	7	8
Infancy of the Market	.639	.693	.233	.201	.090	-.077	.048	.001
Lack of Government Support *	.830	-.413	.269	.161	.101	.119	-.115	.064
Complexity of valueing the derivatives *	.876	-.194	-.264	.333	-.054	.030	.096	.020
Lack of simplified curriculum teaching about financial *	.971	-.010	-.014	-.054	.102	.119	-.051	-.139
Lack of Awareness about financial derivatives *	.859	.394	-.054	-.042	-.228	.216	-.035	.041
Weak and Less Developed Political Structures *	.979	.084	-.100	-.003	.096	-.014	-.038	-.063
Lack of Adequate Historical and Current databases	.966	-.005	-.132	.026	-.035	-.156	-.134	.015
Its an Expensive risk Management *	.969	.154	-.081	-.118	.089	.023	.002	.055
Too Complicated Licencing requirements	.971	-.119	.024	.063	-.090	-.102	.001	-.066
Restrictions Imposed on Investment Advisors	.915	-.273	.201	-.072	-.097	.010	.166	-.033
Distrust in Derivatives	.976	-.094	.032	-.106	-.024	-.120	-.009	.071
High Infrustructure Costs *	.966	-.014	.090	-.127	-.161	-.060	-.014	-.002
Regulations and Accounting Complexity *	.948	-.016	-.108	-.149	.224	.031	.100	.053

Extraction Method: Principal Component Analysis.
8 components extracted.

Even though it has been viewed that infancy of the market hinders the trading of financial derivatives, the study established that the effect is so minimal that could not be quantified. Therefore it has been observed that there are only eight (8) principal factors that hinder the trading of financial derivatives at NSE. These include lack of Government support, Complexity of valuing the derivatives, Lack of simplified curriculum teaching about financial derivatives, Lack of awareness about financial derivatives, Weak and less developed political structures, being an expensive risk management exercise, High infrastructural costs and regulations and accounting complexity related with financial derivative trading.

CHAPTER FIVE

5.1 SUMMARY OF FINDINGS AND CONCLUSIONS

From the study it was evident that the main factors hindering the trading of financial derivatives in the NSE include, infancy of the market, lack of awareness about financial derivative products, the notion that it is an expensive risk management technique, the regulation and accounting complexities associated with financial derivatives, less developed political structures and government policies to ensure stability of financial systems and complexities in valuing financial derivatives. The study however showed that infancy of the market had the strongest support of 87% of the respondents followed by lack of awareness which was supported by 75% of the respondents. The concern that it is an expensive risk management system came in third supported by 63% of the respondents. The regulation and accounting complexities associated with financial derivatives was quoted as a factor hindering the trading of financial derivatives by 56% of the respondents. A similar percentage quoted less developed political structures and government policies to ensure stability of financial systems, complexities in valuing financial derivatives and regulation and accounting complexities associated with financial derivative trading as also factors hindering the trading of financial derivatives in the NSE. The results extracted through component analysis show that in addition to the above named factors the following factors also hinder the trading of financial derivatives at the NSE; lack of a simplified curriculum teaching about financial derivatives, lack of government support and high infrastructural costs associated with the trading of financial derivatives.

5.2 RECOMMENDATIONS

1. Infancy of NSE was quoted as the main factor hindering the trading of financial derivatives in the NSE. In order develop the market there is need to address several business challenges, including the need to manage risk associated with various market and business conditions, comply with industry regulations, reduce or eliminate manual processing at various stages of the trade, cope with rapidly growing trade volumes and accommodate the diverse and changing nature of derivatives.
2. Lack of awareness was also quoted as a factor hindering the trading of financial derivatives in the NSE by a large number of respondents. My recommendation will be that the government should conduct professional educational and training to investment advisors and ask them to enlighten the public about financial derivative products. This will enlighten local and foreign investors

about the usefulness of financial derivatives and create public awareness about financial derivatives so that once they are introduced in the NSE they will be well received.

3. The notion that financial derivatives are an expensive risk management tool also received a large support from the study as a factor hindering the trading of financial derivatives in the NSE. In order to overcome this fear there is need to regulate the market when dealing with financial derivative products and to put in place measures that will reduce transaction costs when trading these instruments in the NSE.
4. Less developed political structures and government policies to ensure stability of financial systems, lack of government support, high infrastructural costs, complexities in valuing financial derivatives and regulation and accounting complexities associated with financial derivative trading were also quoted as factors hindering the trading of financial derivatives in the NSE. In order to address this concern I recommend that the government refrain from interfering with the local stock exchange. This lesson can learnt from India where after government protection was removed from a number of commodity derivatives and market forces let to play their role, the Indian stock exchange made enormous progress in terms of technology transparency and trading activity. This will give the NSE the power to operate efficiently and let the forces of supply and demand dictate the market.

5.3 LIMITATIONS OF THE STUDY

1. Some members seemed not aware of what financial derivatives are. This raises the question whether the information they provided in the questionnaire was accurate.
2. Some members did not bother to fill the questionnaires (three member firms) despite several attempts to get them to fill the questionnaire.
3. The research relied on primary data through the administration of the questionnaire. This may have led to the questionnaire bias problem. It is likely that some respondents misunderstood some questions or gave biased opinions.

5.4 SUGGESTIONS FOR FURTHER STUDY

1. A study could be conducted to identify the level of public awareness about financial derivative products without necessarily focusing on brokerage firms.

2. It is argued that a case study approach is vastly superior to the general questionnaire based study. A case study can be undertaken by picking a few large brokerage firms and carrying out a comprehensive in depth study on the factors hindering the trading of financial derivatives in the NSE.

APPENDIX 1: QUESTIONNAIRE

Strongly Disagree=1, Disagree=2, Neither Agree nor Disagree=3, Agree=4, Strongly Agree=5

	How would you rate the following factors hindering the trading of financial derivatives at the NSE	1	2	3	4	5
1.	Infancy of the market	◯	◯	◯	◯	◯
2.	Lack of government support	◯	◯	◯	◯	◯
3.	Complexity of valuing the derivatives	◯	◯	◯	◯	◯
4.	Lack of simplified curriculum teaching about financial derivatives in colleges and universities	◯	◯	◯	◯	◯
5.	Lack of awareness about financial derivatives	◯	◯	◯	◯	◯
6.	Weak and less developed political structures and government policies to ensure stability of financial systems	◯	◯	◯	◯	◯
7.	Lack of adequate historical and current databases	◯	◯	◯	◯	◯
8.	Its an expensive risk management system	◯	◯	◯	◯	◯
9.	The licensing requirements is too complicated	◯	◯	◯	◯	◯
10.	Restriction imposed on investment advisors	◯	◯	◯	◯	◯
11.	Distrust in derivatives due to derivative related scandals.	◯	◯	◯	◯	◯
12.	High infrastructure costs necessary in order to avoid operational risk associated with derivative usage	◯	◯	◯	◯	◯

13.	Regulation and accounting complexities.	○	○	○	○	○

APPENDIX 2: NSE MEMBER FIRMS

The NSE member firms and their physical locations as at 31st December 2008 were as follows;

1. Drummond investment Bank limited, Hughes building 2nd floor
2. Dyer and Blair investment Bank limited, Loita House 10th floor
3. Ngenye Kariuki and company limited ,Corner House 8th floor
4. Suntra investment Bank limited ,Nation center 10th floor
5. Reliable securities limited, IPS building 6th floor
6. CFC Financial services CFC Center, Chiromo road
7. Bob Mathews stock brokers limited, Nginyo Towers 3rd floor
8. Afrika investment bank limited, Finance house 9th floor
9. Crossfield securities limited, IPS Building 5th floor
10. Sterling investment Bank limited ,Finance house 11th floor
11. ApexAfrica investment Bank limited Rehani, House 4th floor
12. Faida investment Bank limited, Windsor House 1st floor
13. NIC Capital securities limited, Kimathi House 1st floor
14. Standard investment Bank limited, ICEA Building 16th floor
15. Kestrel Capital (EA) limited, ICEA Building 5th floor
16. Discount securities limited, international House 4th floor
17. African Alliance Kenya Securities, Ground floor, Kenya Re Towers, upper hill
18. Renaissance Capital (Kenya) limited ,Suite 810, 7th floor Purshottam palace westlands road
19. Genghis Capital limited, prudential building 5th floor.

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