ADOPTION OF EQUITY DERIVATIVE MARKETS IN KENYA

BY

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A project Report submitted to the Chandaria School of Business in Partial Fulfilment of the Requirement for the Degree of Masters in Business Administration (MBA)

UNITED STATES INTERNATIONAL UNIVERSITY

SUMMER 2014
STUDENT'S DECLARATION

I the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the United States International University in Nairobi for academic credit.

Signed: ___________________________ Date: _________________________

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This Research proposal has been presented for examination with my approval as the appointed Supervisors.

Signed ___________________________ Date: _________________________

Dr. Amos Njuguna

Signed: ___________________________ Date: _________________________

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ABSTRACT

The purpose of the study was to establish the perceived benefits derived from the equity derivative market, the critical success factors that might affect the adoption of efficient and successful equity derivative markets and the measures that could be adopted for a successful equity derivative market in Kenya.

The descriptive and inferential study design was applied to a target population of 19 NSE member firms as well as CMA staff. Data was collected by use of questionnaires in May and June 2014. The data was analysed by use of descriptive statistics and inferences drawn by use of correlation analysis. Data was presented by use of tables and graphs.

The findings indicate that equity derivatives would create efficiency in the capital markets especially due to the increased market scrutiny, price discovery mechanisms for the underlying equity instruments as well as boost fund performance. Additionally the financial instruments would increase investment opportunities both in the local domain and the international financial market. Consequently the instruments would reduce market transaction costs and investor risks as well as market volatility. Equity derivatives would offer employment opportunities, increase scrutiny in the capital markets thus fostering fair transactions, offer a variety of investment opportunities to investors as well as increase stability and liquidity in the capital markets.

The most prominent challenge posed by the introduction of equity derivatives would be market capitalization, market turnover especially on the levels of liquidity. In addition the complex nature of the instruments would require skilled personnel in the sector, unfortunately a deficiency in skilled personnel was a challenge foreseen. The monetary and fiscal policy in their current state would not be efficient in the handling of the market. Additionally, the lack of good political resolve would’ve impeded the development of the equity derivative market coupled with single ownership and dispute resolution mechanism; unless these were resolved the equity derivative market would not thrive.

The measures that needed to be set up prior introduction of Equity derivatives were; training of derivatives handlers and the sensitization of the investors. There was a crucial need to enact specific laws in a bid to foster investor trust. Full demutualization of the market as well as formation of joint ventures was crucial in that it was bound to promote investor trust and benefit from information and physical hardware respectively. Full information disclosure was vital for the market growth. In addition there was a need to
cultivate good political will to foster investments as well as creating autonomy in the supervisory body mandated with policing this specific market.

The recommendations from the study were; a need for government intervention to create awareness to investors and foster the training of investment advisors, the government also needed to set up sound financial infrastructure especially in the monetary and policy frameworks in a bid to influence the macro-economic policies and consequently have an increase in local investments as well as foreign investments, the need for enactment of laws specifically targeting equity derivative markets as well was a major factor that needed to be addressed before the establishment of the equity derivative market.
ACKNOWLEDGEMENT

I wish to express my sincere appreciation to my supervisor Dr. Amos Njuguna for his support and guidance throughout the research. In addition the moral and financial support are owed to my dad, mum, brother and sister during the course of the research, for encouragement I would like to thank my friends.
DEDICATION

I dedicate this work to my loving family in their unrelenting dedication to the completion of my academic pursuits.
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CBK – CENTRAL BANK OF KENYA

NSE – NAIROBI SECURITIES EXCHANGE

CBR – CENTRAL BANK RATE

IOSCO – INTERNATIONAL ORGANIZATION OF SECURITIES COMMISSION

SAFEX – SOUTH AFRICA FUTURES EXCHANGE

CEA – COMMODITY EXCHANGE ACT

DJIA – DOW JONES INDUSTRIAL AVERAGE

OTC – OVER THE COUNTER DERIVATIVES

ETD – EXCHANGE TRADED DERIVATIVES
CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Problem

Dodd (2002) presented capital markets as an essential make-up of four principle components, these being, the insurance and pension funds, the banking industry, the securities markets, and the derivatives markets. The four work in tandem in a bid to provide financing solutions to individuals and corporate clientele. The equity derivative market, in which this study is based, is concerned with investments made towards the purchase and sale of equity derivative instruments, with a main aim of managing risks. The risks in this case may include (but not limited to) exchange rate risk, transaction risk, translation risk, economic risk and interest rate risk.

Finance theory in the 1970s was greatly advanced with Fischer Black and Myron Scholes 1973 paper; “The Pricing of Options and Corporate Liabilities”, derivatives then gained credibility and acceptance in the international market according to Chance (1995). On April 26, 1973, the Chicago board of trade (CBOT) opened the Chicago Board Options Exchange (CBOE), this is considered the proponent of the OTC market as far as trade in derivatives is concerned. In consequent years trade would be advanced onto other commodities such as sugar and gold (Sill, 1997).

The advent of the new decade would bring forth providence in terms of trade on options basically on share indices, currencies, bonds, futures and interests swaps (Flavell 2010). Giddy (1994) noted that, the close of the 20th century would prove vital, in that, one could trade on derivatives on previously unsought of items such as weather derivatives. This period would later on bring about stiff competition and trading was phenomenal, granted the technology advancement (Molyneux and Goacher, 2005). The logic of derivative trading has transformed significantly deviating from the norm of hedging against price to volatility associated with financial instruments such as shares, bonds and also currency fluctuations.

Sundaram and Das (2011) explain a derivative security as a financial security whose payoff depends on (or derives from) other, more fundamental, volatile instruments such as stock price, currency exchange rate, a commodity price, an interest rate, or even the price of another derivative instrument. Molyneux and Goacher (2005) further stated that
derivatives are tradable either on organized exchanges or over the counter (OTC), the former relating to derivative contracts being traded on official exchanges whereas the latter has dealers at different locations who have an inventory of securities and are willing to buy and sell ‘over the counter’ to potential clients (Ithai, 2013). Financial derivatives, however, have been a preserve of developed economies; this has been a precursor and an ‘incubator’ to the rapid growth of derivatives in the global arena (Hull, 2008).

Sundaram and Das (2011) document four major types of derivatives traded namely, forwards, futures, options and swaps; there has been a substantial growth of derivatives markets in the world according to the triennial central bank survey on foreign exchange and derivative market activity, with transactions in the credit derivative instruments and currency products. Despite the acclaim of the instruments, researchers such as Bezzina (2011), and Sharma (2008), have termed derivatives as objects of a “destructive nature”, this is a result of the spill over effect on the economy, this has propagated a lot of deliberation on their unpredictable nature in finance, principally as a result of unpredictability, this is evident in that, whenever there appears to be a global economic calamity, the first perpetrators people would turn to are hedge funds and derivative traders, this was evident in the 2007-2009 global credit crunch, whereby a major blame was apportioned to the hedge funds and derivative traders who took the opportunity to have a rapid sale of stock derivatives and thus caused the markets globally to implode (Sundaram and Das, 2011).

Molyneux and Goacher (2005) asserted that in the past, the derivative market used to be a preserve of the “who’s who” in the global economy, basically asserting that individuals who had the liquid reserve capital to invest, and granted their access to sophisticated investment vehicles such as hedge funds contribute to the big chunk of derivative participants. Recently, however, many investors have been drawn to the substantially good returns that some hedge funds have been able to deliver. This is partly because, hedge funds are generally not subject to the same restrictions and reporting requirements applicable to normal investment vehicles, with this said, hedge-fund investors are considered more sophisticated and market-savvy, this is possible because of the financial literacy programs available, thus bringing about the proliferation of such trades (Ithai, 2013).
Tsetsekos and Varangis (1997) stated that derivatives markets could facilitate the management of financial risk exposure, since they allow investors to unbundle and transfer financial risk. Principally, these markets are considered as contributors to more efficient capital allocation and cross-border capital flow thus creating more opportunities for diversification of portfolios; facilitate risk transfer, price discovery, and avail more public information (Ngugi, Njagi and Kimani, 2013). In this regard, derivative exchanges could contribute significantly to financial developments thus providing a link for the three investor categories, these being, hedgers, speculators and the arbitrageurs.

Since derivatives are related to prices of underlying spot market goods, they are used to mitigate against risks of owning spot items (Chance and Brooks 2007). In this regard the risk tolerance of investors is quite different, speculators will seek to increase their risk tolerance, in that; the higher the risk, the higher the return, however hedgers will seek to have the most minimal risk while earning a decent return on their earnings, therefore unless a hedger can find another hedger with opposite needs, the hedgers risk must be assumed by the speculator, thus derivatives are a means of risk management as they provide both parties with a means to express their interests in terms of purchase of a security that offers both parties with a common ground, this is according to Chance and Brooks (2007).

According to Dodd (2002) economic functions of derivatives are adjacent counterparts to international capital flows. As a result, derivatives markets emerged along with these forms of capital flows as part of an effort to better manage the risks of global investing. Derivatives markets are also linked to operational gains, this is such because they are in essence a form of insurance or rather risk management in its least form, the cost of trading in these derivatives has to be insignificant or investors would not find it parsimoniously sound to purchase such insurance for their investment interests (CFA, 2012). Siopis and Lyroudi (2007) established that the process of futures markets and the introduction of futures contracts trading in stock markets have led to a decrease in the volatility of the underlying index resulting from an increase in market liquidity. The increased market liquidity enables investors to hedge their positions more effectively and thus, reduce their risk.

Derivative instruments are alleged to bring progresses in (mostly) market efficiency in the underlying market by tolerating free trade of risk components thus leading to improved
market efficiency and liquidity (Ngugi et al, 2013). As mentioned earlier, derivatives bridge the gap between, bearers of risk to those not willing to bear the risk. Derivatives markets would also provide a mechanism by which diverse and scattered opinions are collected into one freely discernible number which would provide a harmony in terms of price discovery. Derivatives in this respect are used to lower the fluctuations on price leading to price stabilization effect in the cash market for underlying asset. As noted by Olatandun (2009), derivatives markets are sort for the provision of a good course for amplified reach to financial risk management, in a bid to meet the impending future trials of globalization. In the emerging markets, financial globalization has been taunted to bring greater investment and risk diversification in the national financial systems, this has been a regard of derivatives, this resultants in the emerging economies have greatly facilitated efficiency and availability of derivatives has increased market capitalization and market liquidity (Jobst, 2008).

In Africa, the Alexandria’s futures market located in Egypt was (perhaps) one of the oldest in the world with the first recorded cotton transaction in 1865 in Alexandria’s Café de l'Europe (MFA (2008). This location was where cotton merchants met and cut deals based on supply and demand. This was believed to be the first commodity exchange market in Africa as far as the futures are concerned (Mbungu, 2009). It is paramount to note that South Africa is the only country with an organized futures exchange in Africa, which dates back to the late 1980's; other countries in the continent are still debating whether it is of essence to have the market, this is in account of the considerable costs involved in providing the necessary infrastructure and the regulatory framework into place. MFA (2008) noted that, the South African Futures Exchange (SAFEX) was informally launched in 1987 and has over the years evolved as a leading emerging market. It started trading on financial futures including options on gold futures, later on the creation of the Agricultural Markets Division in 1995 led to the introduction of a range of agricultural futures contracts for commodities such as maize, wheat and sunflower seeds (Mbungu, 2009). In 1998, options on agricultural foodstuffs were launched and in 2001, JSE (Johannesburg Securities Exchange) absorbed SAFEX to become Africa’s most active and important commodity exchange.

The Kenyan government is planning to put together a derivatives exchange under the capital markets authority of Kenya, the process of establishing the exchange and establishing a department to cater for this and the request of proposals has already been
done with submission of the financial proposals. In April 2013 under the stewardship of the Vision 2030 team, the policy framework and international practises’ for establishment and operation of a futures/derivative market was published. At present, however, there are no exchange traded derivatives in the country.

1.2 Problem Statement

As stated priory, derivatives markets enable increased access to finance by allocating finances to the most suitable investments; enable financial risk management by providing businesses with an alternative to curbing price fluctuations and enhance financial market structures in a bid to address the economic problems brought about by globalization. According to Olatundun (2009), emerging economies are pigeonholed by very thin financial markets and inadequacy of finances posing a challenge to development; this could be resolved by derivatives access to the market. The NSE lacks this; there is an absence of trading in derivatives even though derivatives are known to supplement other sources of financing and insurance in investments. Addressing the problem, the researcher is bound to address advantages of hedging using derivatives in a bid to aid management in minimizing of costs and mitigation against financial risks. Equity derivatives are meant to bring about benefits similar to other derivatives, but they also entail sizable amount of risks to be managed. The derivatives based on single stocks or equity indices are meant to decrease uncertainty on expected corporate performance, in addition they strengthen liquidity positions and price discovery in the underlying-equity markets, and finally they lower the cost of equity listings for firms (Jobst, 2008).

The absence of derivatives investors leaves prospective investors with limited options. In Kenya, investment activities are financed in primary markets by initial public offers (IPOs) and secondary markets at the securities exchange thus the need for this research to bring out benefits of equity derivatives. As far as policy goes, the researcher will review the policy framework as suggested under the vision 2030, and make recommendations on to what extent the adoption is viable in comparison to international best practices as suggested by the international organization of securities commissions (IOSCO). To date, research conducted on derivatives has been based on general derivatives, this for instance is a research by Mbungu, (2009), she dealt into factors influencing development of derivatives while Ithai, (2013) dealt with credit derivatives in the banking sector, the
current research however, is purely bent on discussing equity derivative adoption in the NSE, where scanty research is available, yet in most developed economies, equity derivatives are the most popular sources of hedging in financial markets, and thus this is the Knowledge gap the researcher seeks to address.

1.3 Purpose of Study

The purpose of the study was to establish the possibility of adoption of equity derivatives in Kenya.

1.4 Research Questions

1.4.1 What are the perceived benefits of equity derivatives in Kenya?

1.4.2 What factors will affect adoption of equity derivatives in Kenya?

1.4.3 What measures need to be put in place to ensure successful implementation of the equity derivatives market in Kenya?

1.5 Importance of Study

1.5.1 Policy Makers

Policy Makers need to ascertain levels to which the economy will be cautioned from financial risks with the development of the Equity derivatives market. In this respect the research was intended to shed more light on the benefits of the equity derivatives market and more specifically provide policy frameworks adopted in other countries in a bid to assist the current policy framers to adopt and refine the policies to suit the Kenyan equity derivative Market.

1.5.2 Listed Companies

The research on Equity derivatives was carried out to provide information to the listed firms on the impact the instruments would have on warding off risks associated with cross border transactions as well as mitigation of transaction, translation and foreign currency exchange risks. In the same breadth, companies were bound to ascertain prices of
commodities purchased thus greatly reducing operational costs. Companies in the financial industry would also gain insight on credit risk mitigation strategies, liquidity management as well as benefits of diversified portfolios using Equity derivatives

1.5.3 Potential Investors and Hedge Funds

The research was bound to shed light on available investment opportunities for the hedgers, arbitrageurs as well as the speculators on options available in trading with equity derivatives. The equity derivatives would offer investors in the current financial structure, whom are constrained in terms of options available to them, an opportunity to make investments of a varied form other than the norm thus stabilising their portfolio base, in addition it would provide arbitrage based on underlying assets thus proving vital to the passive investors, in addition to the rule differentials involved in the market.

1.5.4 Scholars

The research study was intended to generate insight on the fundamentals of derivatives and how they can be used to mitigate financial risks, the merits and demerits of investing in the instruments and provide an outline of how the market was performing in the globe. With the literature on derivatives in Kenya being scanty, the research was an attempt to shed more light on the perceived benefits, challenges and framework of derivatives in Kenya.

1.6 Scope of Study

The research was carried out in the Nairobi region, where the researcher focused on the investment banks and brokerage institution located in the country’s capital. The population of the study included the 19 (since 2 are under statutory management) member firms listed under the capital market authority (CMA) in the NSE as well as the regulatory body, the CMA. The research was carried out in May and June 2014.

1.7 Definition of Terms

1.7.1 Arbitrage

Arbitrage is a transaction based on the observation of the same asset or derivatives selling at two different prices, the transaction involves buying the asset or derivative at the
cheaper market and selling it for a gain in a secondary market (Chance and Brooks, 2007).

1.7.2 Derivative Security

A derivative security as a financial security whose payoff depends on (or derives from) other, more fundamental variables such as stock price, an exchange rate, a commodity price, an interest rate – or even the price of another derivative security (the underlying variable commonly referred to as simply the underlying (Sundaram and Das, 2011).

1.7.3 Market Efficiency

Market efficiency is a term used to describe a market’s reflectance of all fundamentals as either fair or true; these fundamentals reflect the price and information content (Molyneux and Goacher, 2005).

1.8 Chapter Summary

This chapter introduces the topic, “A feasibility study on adoption of equity derivatives in Kenya. The main objectives of the study are introduced as, the perceived benefits of equity derivatives, the factors that might affect the development of the equity derivatives market and the measures that need to be enforced for a successful equity derivatives market. In addition the researcher gives an outline of the benefits of the research to government, investors, listed companies on the NSE and scholars. The geographical scope is provided as Nairobi with the population being investment banks and brokers listed by the NSE; the research was carried out in May and June 2014.

In chapter two the researcher introduced the literature reviewed where an analysis on literature available on the subject issue was made while trying to draw out differences between earlier studies and the current research embarked upon. Chapter three of the project focuses on the research methodology used while the results and findings were presented in chapter four in tables and figures. In closure the fifth chapter provides a discussion on the findings obtained and presented in chapter four as well as the conclusion and recommendations made in relation to the research questions provided.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter examines the feasible benefits of equity derivatives, the factors that would hamper successful introduction of the derivative market and the measures that need to be enforced before the setting up of the equity derivatives markets in Kenya using empirical information available by different researchers.

2.2 Benefits of Equity Derivatives

2.2.1 Risk Management

Since the inception of the derivative markets, researchers and academicians world over have tried to contemplate the importance of this instruments and their corresponding effects in a world plagued by financial risks, earlier research findings by Cox (1976), Ross (1976, 1989) and Merton (1995) argued that derivatives are vital tools for ensuring information efficiency, price discovery and most importantly hedging against risk.

Equity derivatives allow risk management by shifting of risk from a person who does not want to bear the risk to a person who wants to bear the risk. The derivatives provide financial market deepening thus tackling the challenges of globalization (Olatandun, 2009). Derivatives on single stocks or equity indices are paramount in reducing uncertainties occasioned by expected corporate performance, these could be expectations on mergers and acquisitions, corporate executive reshuffle, new product developments among other more established actions by corporate bodies, thus, it is quite safe to state that equity derivatives would help mitigate against such sudden actions.

It is essential to note that equity derivatives not only relay sizeable benefits but they curtail emergence of massive risks, Jobst (2008) notes that equity indices derivatives reduce risks on liquidity concerns, corporate performance, lower costs in listing and finally price discovery. He further notes that, investor expectations are kept in check, since small price differentials can have a huge impact on financial positions of corporate entities as they delude to substantial leverage, efficiency on such markets is therefore
reliant on pricing mechanisms, trading turnovers in the underlying cash instruments and finally the liquidity in the markets.

2.2.2 Creating Market Efficiency

Derivative markets provide the financial vehicles incorporating an efficient transactional framework, high level volatility products, and these results in higher levels of trading volumes for stocks with higher levels of volatility. Therefore, this route leads to risk aversion, thus leading to an interest in highly volatile stocks, where the basis risk would be eliminated more effectively (Mbungu, 2009). Similarly, the speculators preference to options on underlying assets, which would essentially be high volatile shares, as they are attracted to the arbitrage on occurring short run imbalances. In all cases the level of stocks’ volatility should be a determinative factor for derivatives listing strategy.

On the other hand the regulatory authorities of the derivatives exchanges would be concerned with the long run stability of the financial system (Olatandun, 2009). This could be achieved by both credit risk considerations and managerial characteristic issues, such as corporate governance provisions. In addition, Bartram et al. (2009) found that derivative usage is associated with higher firm value; particularly this was for firms utilizing interest rate derivatives. Derivatives are believed to bring improvements in market efficiency in the underlying market by allowing for free trading of risk components and that leads to improving market efficiency and liquidity.

2.2.3 Price Discovery and Fund Performance

The two most important benefits associated with derivatives are risk management and price discovery (CFA, 2012). The Equity derivatives markets provide a mechanism by which diverse and scattered opinions of future are collected into one readily discernible number which provides a consensus of knowledgeable thinking and thus aid in price discovery (Mbungu, 2009). They also contribute to the development of stock market which is highly significant in forecasting future growth of per capita GDP by facilitating cross border flows and allocation of capital more efficiently. Derivatives also reduce both peaks and drops occasioned by price fluctuations and thus lead to price stabilization effect in the cash market for underlying asset.
The use of equity derivatives especially in hedge funds has brought about a sense of price discovery as well as reduced taxation costs as witnessed in hedge funds (HFs) and funds of hedge funds (FOFs) because of the loosely regulated investments. Chen (2011) found out that seventy-one percent of HFs use equity derivatives, this is a relatively high ratio compared with conventional mutual funds. Peltomaki (2013) states that it is reasonable to expect that the relationship between equity derivatives use and fund performance changes constantly because of changes in the investment environment such as new regulations. For instance, possible transaction taxes and short selling restrictions may be reasons for investors to use equity derivatives for different and new purposes.

In other research Aragon and Martin (2007, 2010) reports that evidence of equity derivatives usage by HFs would complement the research by Chen (2007) and Chen and Liang (2007) who however suggested that the market effectiveness features of HFs are not altered by the use of options. The use of equity derivatives in hedge funds however has brought about renewed resolve in market efficiency and price discovery, this has been compounded nowadays in the stellar returns brought about by the utility of the equity derivatives in these hedge funds, from this researches it is evident that equity derivatives are vital for any hedge fund that would want to earn good returns for their clients.

2.2.4 Reducing Volatility in the Stock Market

There are two opposing schools of thought on the impact of future trading on the volatility of stock market, according to Gahlot and Datta (2012), there is a school of thought that argues for arbitrage, in that, the future market add more informed traders to the stock market thus improving market efficiency thus reducing volatility and thereby causing stabilization in the market. On the contrary opinion, the entry of the derivatives add more irrational traders in the markets in search of short-term gain thus seek the grounds on increase in volatility and destabilization in the market.

Futures markets play a significant part in price discovery, and have a positive influence on the underlying cash markets. Futures markets for instance, increase the overall market depth and aid in information flow. Stoll and Whaley (1987) stated that futures markets enhance market efficiency; in addition to this the model proposed by Danthine (1978) implies that futures trading increases market depth and reduces spot market volatility, in support of this Sabri (2008) utilized fifteen Arab stock markets included in the Arab Monetary Fund, he found an increase in volatility of the cash market after introduction of
stock index futures. Robbani and Bhuyan (2005) using DJIA (Dow Jones Industrial Average) also found out very similar findings in his research. In this respect, the debate on whether or not derivatives increases volatility in the market thus proves all the more positive, therefore an important and vital aspect in the nations arsenal for financial freedom.

2.2.5 Reducing Transaction Costs

Mugo (2009) noted that an introduction of derivatives exchange based on Asia’s emerging markets, led to immense trade benefits, thus, pointing on the prominence of emerging markets, further it is critical to note that equity derivatives help maintain a stabilizing effect on spot prices, this is in reducing the interim fluctuations, equity derivatives markets specifically, are aids to reduced market transaction costs, in that, since they are a form of insurance or rather risk management, the cost of trading has to be low or investors will not find it parsimoniously sound to purchase the instruments for solidifying their positions this is according to the CFA (2012). Siopis and Lyroudi (2007) found out that, despite the criticism, introducing futures contracts led to decreased volatility of underlying indices, in this case stock market indices, thus an increase in market liquidity, the improved market liquidity will thus qualify investors to hedge their positions thus reducing the inherent risks.

The research hereby is poised to relate perceptually on the impact that the derivative market could bring in the Kenyan economy especially in a case where the instruments of trade in the NSE don’t offer much variety, this is so because the commodities traded are either shares or fixed income instruments, in this respect, Mazin (2006) proposed that equity derivatives will bring forth cheaper ways to cater to investment needs. In the research on equity derivatives such as the equity indices and interest rate futures contracts, for instance if a speculator wanted maximum gains in the stock market, he would only have to purchase a great number of stocks, this is extremely costly if in volumes, however with derivatives, he can purchase a futures contact saving on the massive transaction costs this reduces the capital outflow, thus the opportunities are immense in the Kenyan scenario, where many investors seek investments with low capital expenditures.
2.2.6 Attracting Foreign and Local Investment

Mugo (2009) noted that, derivatives markets have supplemented development of stock markets in many developed countries, thus, a major need for developing countries to embrace equity derivative trade, however there’s a caveat, this being that derivative market establishment needs are to be done after a careful scrutiny into prevailing conditions in a particular economy. With all that said, the clarity on the manner derivatives markets provide efficiency in trading by providing additional economic benefits, by helping complete, otherwise, imperfect commodity or securities markets and the arbitrage aid between markets so that prices can more efficiently reflect all the relevant information in the market, which cannot be ignored, this is in the argument of Vashishtha and Kumar (2010).

Dodd (2002a, b), would in contrast term the role of derivatives and the purpose of their existence as being inherently “bad” financial instruments and hence a complete waste of time and money. Tremblay (2009), in a rejoinder, recalls that the financial crisis was mainly supported by politicians with the increased deregulation in the derivatives markets in order to create a booming economy. They did not take into consideration that the increased boom was on an overly reliance on increased lending and this thus precipitated to an upsurge of bad debts, the items were then peddled via utility of short selling of any derivative, forming an artificial pyramid of debt, the value hereby was unknown, (Tremblay, 2009). Thus, the research is bound to seek a better understanding on how the derivatives are viewed in the Kenyan context.

Ngugi, et al (2009) stated that capital market development makes the financial market move towards a level of complete market, by this he meant, the financial deepening, when the capital markets develop, they offer opportunities for investors to diversify their financial asset basket and the firms’ opportunity to diversify the sourcing of finance. Jobst (2008) noted that the equity derivatives market has emerged as a corner stone for more institutional funds management by a global mandate; he further noted that more and more capital is redirected to local capital markets. This has in essence led to domestic capital market development local policy makers in these emerging markets to undergo structural reforms addressing the existing gaps in the infrastructure, organization and regulation of derivative trading.
2.3 Challenges Affecting Equity Derivatives Adoption in Kenya

2.3.1 Monetary Policy

The monetary policy is a process by which a country’s central bank influences level of money supply credit in an economy, this is in a bid to hinder an upsurge on price fluctuations, thus stabilizing and promoting a country’s economic position (Senn, 1999). The monetary policy in effect is meant to guard against inflation thus ensure price stability, it is also mandated with a task of controlling two key macro-economic factors, these are; exchange rates and interest rates (El-Masry, 2006). In effect, in the Kenyan market, the monetary policy is set by a monetary policy committee of the central bank, the main aim as mentioned above is to cushion the consumers, promote savings investments and economic growth.

The CBK, sets the reserve requirements (CBR) for the commercial banks, this according to the CBK (2014) lies at an average of six percent of their deposits, this is meant to influence amount of loans banks can advance to the public, thus affecting the supply of money, an increase of the CBR signifies an the increase in the amount available for loans, the reverse is true (Jobst, 2008). In regards to the equity derivatives the Kenyan investor with an increased mop up would not have sufficient funds for investment, other factors that may come into play when it comes to the effect monetary policy has on equity derivatives, these could be, the effect central bank has on open market operations, the government affects the supply of money when it sells and buys government securities, the overnight lending to banks also has an effect on supply, and also the government is engaged in moral suasion directly when it puts measures in place to limit credit levels to specific economic sectors, thus there’s a direct effect of the implications the monetary policy effect on the successful adoption of equity derivative adoption in the country (Jobst, 2008).

Finally, the monetary policy influences the exchange rate, it is vital to note that the foreign investment will be keen on the exchange rate policy as this provides an analytical review on whether or not there exists an arbitrage or there is none (El-Masry, 2006). Therefore the monetary policy will play a critical role in the successful adoption of equity derivatives in Kenya.
2.3.2 The Fiscal Policy

Long term economic growth, according to advocates of the external influence is spurred by the monetary policy. The government’s role in ensuring economic stabilization, conflict resolution, market regulation and efficiency in resource allocation, are some of the ways governments can facilitate growth of the economy, this can be done via, promotion of human capital development, increased public investment, research and development, maintenance of law and order and mostly provision of infrastructural capacity, this can only be facilitated by the tax generation in any economy, this was all supported by; Chrystal and Price (1995) and; Folster and Henrekson (2001). However antagonists would propose that most government operations are inherently bureaucratic (this is bordering on rigidity) and inefficient thus stifling growth (M’Amanja and Morrisse, 2006).

There’s a strong empirical review on fiscal policy as a tool of achieving economic goals, in this case successful equity derivative markets, policy influences economic real value in the long run, as it can impact on inflation (Molyneux and Goacher, 2005). There is however a growing demand in the current private firms or companies for fiscal decentralisation poised to produce results, this essentially contains four pillars, this include, the constant need for money transfer to a local unit in relation to currency, the power of a local unit to raise tax considerations, the power of a local unit to borrow and the power of a local unit to make decisions and implement them. (M’Amanja and Morrisse, 2006), Practices worldwide, provide for existence of the four considerations presented above in a bid to provide for a macroeconomic stability framework, minimal cost of administration, equality achievement and most responsibility in utilization of scarce resources. It is thus vital for governments to obtain a good and sufficient tax policy in order not to deter the equity derivative markets.

An insight into macroeconomic factors, can’t escape the idea of the fiscal policy, Chen and Huang, (2009), analysed economic freedom in essence prying into the idea of government intervention in the equity market. There’s a belief that it engenders prosperity, they cited that there is some correlation among the capital market returns with the country’s economic freedom, Stocker (2006) highlighted this relationship with a basis on the economic freedom of the world (EFW) survey, he emphasized that an increase in economic freedom was linked to improved socio-economic benefits, this left investors a
happier lot, fiscal freedom according to the two researchers was thus a burden measure of government from the revenue side. As it included the individual and corporate tax in comparison to the total GDP tax revenue (Chen and Huang, 2009), the reason for analysing economic freedom is that, the market of equity derivatives is strongly reliant on the first three years, failure in this period would mean that it couldn’t progress, thus the government needs to think about revising its engagement as far as taxation of the equity earnings is concerned, the public need some incentive to endear their savings on this market, these are vital for the growth of the market during the initial stages.

2.3.3 Liquidity

According to the IOSCO report (2010) the numbers of futures exchanges in a country is an issue needing proper insight and reflection on the countries market needs and cash-flow, this is so because, the two metrics that measure any successful future exchange derives its basis on two major variables; first is the trading volumes; and the second is the open interest, this referring to the total number of derivative contracts not settled, in the immediate time frame, thus an open interest that’s large is most appropriate as it indicates for liquidity and increased activity in the contractual agreement. In the last decade, 1990’s it was noted that many commodity markets had sprout up especially in Asia (hit by the financial crisis) and south America however trade hasn’t been as phenomenal simply because the reasons were misplaced, the expectations were based on two premises, these being ; provision of a price discovery mechanism and management of price volatility.

A contrast to the above argument sates that the countries engaged in setting up the exchange later realised the misplaced priorities in essence since setting up the futures exchange did not automatically mean established business would sprout, this is because of ignorance to basic pre-requisites as far as the modalities are concerned. Liquidity management is essential in this economic age; the financial crisis was a revelation on banks’ deficiency funding strategies in addition to their asset management (Giustiniani and Thornton, 2011).

In the period, there was an excessive dependence on short-term wholesale markets on the financial intermediaries, in a bid to finance greater leverage aggravated banks’ maturity disparity and this exaggerated vulnerability to malicious liquidity-solvency feedbacks: the rationale of discussing this aspect of macro economy is that there’s an adequacy level and minimum set-up of liquidity for the equity derivative market. Brunnermeier et al., (2009)
would state that, systemic risk has a lot to do with maturity transformation in the financial intermediaries; there’s a huge debate on adequacy of liquidity, Goodhart (2010, p. 175) for instance stated that “a liquidity requirement is an oxymoron. If you have to continue to hold an asset to meet a requirement, it is not liquid.” Thus there’s a need for professionals who will deal with the equity derivative market to set adequacy levels in a bid to overcome shortfalls that would lead to a financial crises.

2.3.4 Market Capitalization

Market capitalization is the total value of issued shares of a publicly traded company, in Kenya and the NSE in specific the aggregation is done at the end of each trading day and the results published in their website, the market capitalization is extremely vital in that, the size of the futures market is often considered ten times in relation to the underlying cash market. In actual sense, it is often estimated that over ninety percent of all volumes in a foreign exchange market is attributable to speculators who will take positions with their own resources and as a result provide the market with the financial depth and liquidity, this is vital since the remnant ten percent can’t fuel the futures exchange on their own, speculators will thus provide much needed revenues for the futures exchange. In retrospect, a market of pure speculators wouldn’t provide direct benefits to economies, this is the reason why prudential regulators must regulate the need of balance between the two parties and thus provide avenues and frameworks allowing for a proper balance between the two parties (IOSCO Report, 2013).

The IOSCO report of 1996 December discussed minimum capital requirements for exchanges and clearing corporations however it doesn’t seek provisions on specification based recommended guidelines on the appropriate levels, they simply stated that the jurisdictions in want must set up their own minimum capital requirements for market intermediaries. In terms of capital adequacy, the primary goal accorded to capital regulation bodies, is to maintain capital capacity build up deterring uncertainties in terms of losses on going concern basis (Giustiniani and Thornton, 2011). In regards to Monetary policy, the central bank being a monopoly supplier of the monetary base, can (in the long run) change general price levels, but with no immediate permanent influence on the real variables, as this is determined by real factors such as population growth, preferences of economic agents among other vitals (Molyneux and Goacher, 2005).
The capital adequacy is based on risk profiling thus revealing major flaws in the perceptions of both capital and adequacy. Specifically, these instruments of hedging are to act as cushions to endure losses on a going concern basis which are proving illusory, (Gupta and Reid, 2013). Dudley (2010), in addition, commented that common equity ratios are bound to be on the minimal begging the question on the viability of the capital adequacy principle. it is imperative to note at this point that a futures exchange would take a minimum period of two years to ascertain its continued survival thus, it is vital to have an initial sufficient paid up capital as well as a sufficient net worth, for survival in the initial stages, this is done in order to avoid further capital injections which may be two thronged, i.e. may or may not materialise (Gupta and Reid, 2013).

2.3.5 Market Turnover

The number of shares traded for a period as a percentage of total shares in a portfolio or exchange is regarded as its market turnover ratio, the market turnover as stated above initially needs to be high in order to warrant additional interest in the new derivatives exchange which will derive its value on the underlying asset, in this case it is the equity market turnover, IOSCO doesn’t specify the exact market turnover threshold needed for setting up the venture, however going by the rule of thumb, the market turnover necessary in this case would determine the survival of the company in essence, it is in turn advisable that the size, this being the capitalization and trading volume, of the spot market is vital for maximizing contributors’ profitability (Karathanasis, Sogiakas and Toudas, 2012). Spot market trading activity is positively influenced by the capitalization of the corresponding derivative market via arbitrage or otherwise hedging opportunities. Moreover, the highly capitalized stocks with large trading volume are more attractive to investors because these stocks are more liquid and provide lower transaction costs. Hence, large firms are better candidates for listing in the equity derivatives exchange (Karathanasis et al, 2012).

2.3.6 Expertise

The level of knowledge on the derivative market is lacking, this is among the reasons why the derivative trades are considered disastrous, or as Das (2006) pointed out that the derivative world was a world of beautiful lies, some great investors such as Warren Buffet in Buffet (2003 p.15) also term derivatives as “financial weapons of mass
destruction carrying dangers that, while now latent, are potentially lethal”; however the positive impact can’t be ignored, the reason the derivatives are not embraced is that the number of people who understand and use the instruments in the right manner are limited, the expertise especially here in Kenya is not sufficient and the numbers aware of the same instruments are limited in their knowledge and exposure to the commodities, thus there is an urgent need for people to get to know the instruments more intimately and strive to understand the manner they work prior introduction.

The significant use of complex derivatives without relevant expertise increases inherent risk and hence relevant expertise should reside with all personnel involved with the derivative activities. In addition to these a survey conducted by KPMG among financial managers and investors revealed a lack of in-depth knowledge about derivatives and risk management this was according to Pengelly (2008). According to Ameer, Mohd and Abdulla (2011) and Cummins, Phillips and smith, (2001), there is a lack of expertise in handling derivatives, this is one of the main reasons for not using derivatives and this has been attributed to the difficulty in understanding complex derivative products, since it acts as an intimidating factor, thus training on the use and not misuse of the said derivatives is vital for any country that want the same to succeed.

2.4 Prudential Measure that Need to be adopted for a Successful Derivatives Market

2.4.1 Formation of Joint Ventures

Mugo (2009) gave vital recommendations on how emerging markets should go about the establishment of equity derivatives exchanges. The first suggestion advanced was on emerging markets introduction, this being, the markets being independent exchanges or as departments or division of the existing stock market, in the second proposition by Mugo (2009), the emerging markets can form joint ventures (JVs) with already successful derivative exchanges by which they will benefit from the technology and knowhow of existing exchanges for instance a joint venture with the Korean exchange (KRX) which has one of the fastest transaction software, would be a big plus as Kenya would benefit immensely from the expertise and physical hardware, this is similar to benchmarking, the third proposition was that the emerging markets could priory design and list their products in the already established derivatives exchanges such as the SAFEX in South Africa to gain popularity and in conclusion she suggested that markets in the same geographical region such as Uganda, Rwanda and Tanzania could form a regional front
for derivative exchange, this is in a bid to combine resources thus have a substantial base as well as benefit from economies of scale.

It is vital to note that the derivative markets are generally distinguished by the degree of contract flexibility and the organization of trading activity (Jobst, 2008), while exchange-traded derivatives (ETD) are standardized products traded on the floor of organized exchanges, over-the-counter (OTC)-traded derivatives are privately negotiated, bilateral agreements transacted off organized exchanges. ETDs have rigid structures compared to OTC derivatives, which are subject to a lengthy and costly process of rigorous regulatory evaluation and approval. Conversely, OTC derivatives are customized to other financial transactions and can involve any underlying asset, index, and payoff structure.

All exchange-based trading of derivatives is governed by rules designed to ensure market stability and financial integrity for the purpose of safeguarding the collective interest of market participants. While orderly market rules and prudential measures govern conduct, mutualize risk, and impose limits on leverage and margining, formalized risk management regulations on the soundness, disclosure, and transparency of individual positions, limits and transactions promote investor protection and ensure market integrity against the threat of manipulation when supplies of underlying assets are limited (MFA, 2008). These are among the reasons why there’s a need to form a joint venture or rather a strategic partnership with the so called “big boys” in the business, this will offer the Kenyan market a chance to form a learning curve on the best practices to adopt.

2.4.2 Information Disclosure (Transparency)

Researchers are in agreement that the ideology of information symmetry is vital for the functional aspects in the market interaction, for results to be realised information is key thus a good analysis set for the current research, the vital requirements under which such analysis is to be done would incorporate the preliminary regulatory requirements, trading and risk management systems the microstructures, in this case should include oversight, clearing and settlement procedures, instruments to be traded, memberships and ownership structure of the clearing-house, (Mazin, 2006). Lipsey and Chrystal (2007) would then proceed to argue that markets only perform the finest in cases where investors are well informed. They argued that individuals couldn’t capitalize on decisions when poorly informed about the items on sale, the inadequacy of germane information is a
major factor in failure of an uptake in markets especially like the current research market on equity derivatives.

Heumesser and Staritz (2013), state that there is quite a significant literature base related to behavioural finance on the microstructure of financial markets and its impact on prices and the functioning of these markets. The research on market microstructure study in essence looks at three focal aspects; these are; price formation, price discovery and information flow embodied in the transparency as well as the symmetry level. In an earlier study, Madhavan (2002) stated that price discovery, is an in-depth analysis, in what he termed as the “black box”, this was in reference to, both the demand and supply, reflectant to the financial market pricing and the market structure, the design would refer to what he termed as the various rule framework affecting the “black box”; whereas information symmetry and market transparency would refer to the rationale behind the working of this “black box” as far as its effect on traders’ behaviour.

The second proposition is on the noise trader hypothesis, also termed as the bull-and-bear hypothesis advanced by Schulmeister (2009, 2012); it presents speculators as generally de-stabilised. The significance between the two hypothesis points on the importance of the flow of information and also the effect of both the fundamental factors and the macroeconomic construct on derivative pricing, the only difference is visible in the view of potent marginal increments on the speculators and their strategies in trade as far as acceleration of volatility and price movements is concerned, (Schulmeister, 2009, 2012). In this respect, more recent research by Heumesser and Staritz (2013), note that, current prices would reflect all information availed at a certain point in time. This hypothesis would later bring an implication that prices follow a random walk in respect to information flow which is termed as unpredictable and random in simple terms.

In respect to the herd mentality, traders wanting to utilise the trend analysed priory by other investors gave rise to the herd mentality, (Heumesser and Staritz, 2013), where, many traders will consequently act in such a manner reflectant on the larger grouping, this collective generation of thought was termed by the UNCTAD (2009b: 61) “the trends that they individually identify and follow”. With that said, acting against the grain by ignoring market fundamentals can be detrimental in earnings and thus earn the label of irrationality, thus a need by the informed traders to follow the noise and uninformed
investor, all these was in agreement to Keynes (1936) and UNCTAD (2009). Schulmeister (2009, 2012), would therefore claim that, a careful blend of uninformed trading, and herd behaviour, coupled with information expenditure can lead to an surge of interim price volatility resultant to a deceptive price mechanism, this would consequently cause a price shift sequentially leading to a long-term upward trend commonly dubbed the bull markets and subsequent downward trend also known as a bearish run.

2.4.3 Legal Framework: Enactment of Laws

It is imperative to note that there are global bodies tasked with the responsibility of maintaining rules and regulations in the derivative market, such groups include the international organisation of securities commissions (IOSCO) who have published various reports discussed in this chapter providing international best practices and perspectives on derivative markets, in addition, the Deutsche Boerse group provides a report dubbed “A Blueprint for Market Safety and Integrity”, in addition, the government of Kenya under the vision 2030 stewardship set out a committee to assess the principle frameworks for the establishment of a derivatives market in April 2013, the report published was dubbed “policy framework and ‘international best practices’ for establishment and operations of a futures/derivatives market”.

In any institution, a regulatory, prudential and legal framework is vital and needs to be put up in a bid to provide for careful supervision and governance of the market (Mazin, 2006). IOSCO have been providing international best practices and perspectives of derivatives trade In their report published in May 2013, they set out thirty plus principles of securities regulation with a basis on three main objectives, namely; reduction of systemic risk, protection of investors and ensuring markets are fair, efficient and transparent, after several studies the lack of a common worldwide disclosure regime as a result of information deficiency has consequently led to a reduction of investors’ confidence, and therefore to increased costs of raising capital (Opromolla, 2011). These are among the reasons why the supervisory authorities of the major European countries launched projects with aims of revising their legislation on major shareholdings disclosure (Opromolla, 2011).

IOSCO (2013) would state that in respect to a need of change of the laws on derivatives exchange, May 2009 saw the Obama Administration outlining the basis on its expectations on OTC derivatives. Treasury Secretary Timothy Geithner laid out several
principles. First, was a decree on the Commodity Exchange Act (CEA) amendment “to require clearing of all standardized OTC derivatives through regulated central counterparties”. Second, was a recommendation that all dealers with large exposures to counterparties be subjected to “a robust regime of prudential supervision and regulation”. Third, Secretary Geithner suggested amendment of CEA laws for record keeping and reporting thus allowing Securities and Exchange Commission (SEC) to have “clear and unimpeded authority” with respect to policing market abuses and the authority to set position limits. In conclusion, he noted that SEC need to review the restrictions on participants in OTC derivatives markets thus endorse revisions to the securities laws to tighten those limits or impose additional disclosure, (Telpner and Piracci, 2009).

2.4.4 Supervisory and Ownership Structure

A vital factor in the derivative market would reflect on the regulatory framework is the ownership structure of such an institution, according to the IOSCO (2013), it is recommended for a demutualized structure set-up; this is in a bid to separate ownership from the right to trade. The proposed ownership of each shareholder is expected not to exceed 25%, with at least 15% of this in the local domicile country, in this case Kenya. Technical Committee of the International Organization of Securities Commissions (April 2012), in addition, there is a need for the futures exchange to have a single dominant shareholder, the basic ideal in this is meant to be a national organ with proper knowledge of the industry, this is in a bid to take a longer horizon view on the sustainability of trades recurring in the exchange thus limiting and also providing an avenue for technology investors and pure investors, this is in a bid to create competition thus attracting many market participants on all spheres. IOSCO (2013) also incorporated for a minimum in terms of capital requirements for such trades as discussed previously, it doesn’t give a specific amount however this is vital because from the time of listing the period it takes to evaluate for a purposed frame of considerable wellbeing of a contract is two years, therefore taking a rough estimate based on the rule of thumb, a timeline not exceeding three years with additional paid up capital, in this respect, the purpose is to avoid any additional capital injections in operations deemed non–materialized.

Rice (2007) commented that one of the weaknesses of the financial derivatives market regulatory structure is that it is deeply fragmented at the product level as well as at the
level of service provision. Supervisory “turf” skirmishes carry on, this imposes particularly weighty burdens on the introduction of new exchange traded derivatives. At the level of financial institutions, fragmentation of financial derivatives market regulation. In addition to oversight by the central bank, a single financial holding company could potentially be subject to oversight. Vashishtha and Kumar (2010) argued that innovations of derivatives have redefined and revolutionized the landscape of financial industry across the world and derivatives have earned a well-deserved and extremely significant place among all the financial products.

Mazin (2006) stated that financial engineers of this day and age are armed with sophisticated financial tools to price complex financial instruments, this he says, create innovative hybrid instruments, he stated that convincing investors on the attractive characteristics of this new instruments, in addition to their legality, marketing and expense foundations, then variety of the items would be deemed as intrinsically good. This is because investors have different perceptions, investment amounts, and trade-offs between risk and return among other variables. However, Over-the-counter (OTC) derivatives have drawn a heavy dose of politicians’ indignation over the years, this has been after the financial downturn between 2007-2009, some legislators are doubtful on the legitimacy of the OTC derivatives market stating that they are operating under the guise of “legitimate” financial markets. Others in the United States believe that increased oversight and better informed investors could avert the crisis on the financial markets, (Telpner and Piracci, 2009).

2.4.5 Trading and Clearance Structure

It is vital to note that market settings for trading of financial instruments are at the core of financial regulation, and can be classified in two broad categories: bilateral and multilateral market settings, (Valiante, 2013). As far as the trading and clearance infrastructure is concerned, two approaches are to be considered, these being: the vertical approach, also christened the silo approach whereby, the transaction are carried by the futures exchange either directly or there’s a separation of clearing from the settlement activities, in this case they are undertaken by a fully owned legal entity, (Capital Markets Authority, Kenya Vision 2030, April 2013) in the second approach “the horizontal approach”, the trade activities i.e. the trade and settlements are fully outsourced to a third party, the resultant effect of the 2007 global financial crisis two vital exchanges for
derivatives i.e. the Euronext and Intercontinental exchange drifted completely away from the horizontal approach of outsourcing to a set-up of wholly owned clearing houses in fear of contagion. In this regards it is vital to point out that legal issues need to be addressed in the development of derivatives markets (IOSCO, 2013).

It is paramount to note that centralized trading, clearing and settlement in exchange-based derivative markets increases efficiency and mitigates counterparty risk. As the central clearing counterparties confirm every transaction with a matched market position, they absorb all credit risk and create a high standard for credit rating on exposure in the market for trading and holding positions. They also reduce operational risk from incomplete or disputed trade through trade confirmation services and arbitration of contested settlement issues. Clearinghouses also fulfill an important fiduciary function for burden and loss sharing by imposing prudential capital rules and collateral requirements on dealers and transactions, respectively, (Jobst, 2008).

In terms of operations trading, clearing and settlement is decentralized and credit risk management is located within individual institutions, counterparties will only prefer to deal only with highly rated and well-capitalized intermediaries this is bound to minimize counterparty risk. The concentration of OTC derivatives in major financial institutions entails lower transaction cost and information asymmetries than ETD. Although OTC instruments are essentially unregulated; they are affected indirectly by national legal systems, regulations, banking supervision and market surveillance. There’s an absence of formal requirements of disclosure and limits on positions and trades does not appear well for the protection of collective attention in distress times, (CFA. 2012).

It is paramount for the Kenyan policy makers on derivatives to look into the volatility witnessed in the US stock markets the peak being in September-November 2008, saw Bernard Madoff (former chairman of NASDAQ) was accused of fraudulently losing $65 billion in a Ponzi scheme, more than one hundred and twenty five US commercial banks, savings banks and thrift institutions with cumulative assets of approximately half a trillion crashed, (Mazumder and Ahmad, 2010). Crotty, (2009); Reinhart and Rogoff, (2008), stated that the US financial market experienced widespread liberalization, long regime of cheap credit, innovation of complex derivatives securities and also massive changes in regulations. Mian and Sufi (2009) in their research for instance show the latest mortgage defaults are predominantly found in subprime zip or zip codes with significantly larger
share of subprime borrowers, therefore it is vital for the Kenyan market to learn from the setbacks from the developed economies and thus need to review legal frameworks to meet international standards.

2.4.6 Training of Investment Advisors

The need of training of staff as well as the investment advisors of individuals who will be in charge of the derivatives market is extremely vital, the number of trained derivative dealers is among the items to be investigated in the study, thus it will emerge on whether or not there is a need for the same. For investor trust the study by Bezzina and Grima (2012), researched the awareness levels for investors, Cowan (1994) stated that although education helps to break down the barriers and makes the fearful known, it takes some time to change the perspective of derivatives from one of wild speculation into one of prudent risk management. Nevertheless, what is needed is an informed, knowledgeable and experienced investor who best understands how and when to use derivatives, is capable of dealing with derivatives in complex situations, is aware of the firm’s exposure to risks and tolerance for loss and uses derivatives as a means of shifting risk and not as a means of trading in risk, Bezzina and Grima (2012) reported that a significant use of complex derivatives without relevant expertise increases inherent risk and hence relevant expertise should reside with all personnel involved with the derivative activities, therefore there is an urgent need for thorough training on the use of the derivatives in question.

2.5 Chapter Summary

The chapter analysed the topic’s objectives using refereed journals and tried to ascertain whether the past research on the objectives was vital for the current study. The first objective was to seek an understanding on whether or not there’s a perceptual impact of equity derivatives based on recent research, this was to ascertain whether or not it was an important research to pursue, the researcher found that the instruments are vital to the economy and they would go a long way in diversifying investor profiles and portfolios in the Kenyan market. The second objective was to reflect on the factors that might hamper successful adoption of equity derivative instruments. In the last objective, the researcher sort to make an analysis on the pre-requisite measure needing enforcement before the equity derivative market is introduced in the Kenya

In the next chapter the researcher will introduce the research methodology by which he seeks to utilise in carrying out the research, he will state the research design, desired
population and sampling design, the data collection method he intends to utilise, and he will also present the procedure and finally the data analysis method he will seek to use in his study.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction
This chapter seeks to present the detailed techniques utilised in the research on the feasible impact of equity derivative adoption in Kenya. The chapter explicitly focuses on the research design, the population and sampling design, the data collection methods, research procedures and the data analysis methods applied.

3.2 Research Design
Research design is the strategy and structure of conceived in a bid to acquire solutions to research problems; it is also defined as a blueprint for collection, measurement and data analysis (Cooper and Schindler, 2008). The research design employed in this study was the descriptive research design which according to Saunders, Lewis and Thornhill, (2003), is a design meant to demonstrate a preference for commencement with and utility of theory in qualitative research. According to Mugenda and Mugenda, (2003) descriptive design in addition sanctions researchers to gather, present and interpret information for purposes of clarification.

Descriptive study is meant to aid in the explanation of phenomena or characteristics associated with a subject population, it seeks to answer questions such as who, what, when, where and how of any provided topic in its wake, (Cooper and Schindler, 2008). The research design was best suited for the study as it sought to investigate the impact of equity derivatives in Kenya, thus answering the question, what was the impact? Under the descriptive research design, a survey was conducted to identify the various impacts of equity derivatives; the study sought to understand the prerequisite regulatory frameworks needed; the macroeconomic factors that would affect as well as the main impact of equity derivative market in Kenya.
3.3 Population and Sampling Design

3.3.1 Population
Population is the complete set of cases or group members (Saunders et al, 2003); Coopers and Schindler (2008) would additionally term population as total collection of elements about which one would intend to make certain inferences. The population in this case were the twenty one member firms as listed by the NSE through their website; however two being under statutory management only nineteen made the target population cut. After prodding for information via the human resource departments of the investment institutions, it was approximated that the number of people who had some background (education or practical knowledge) on derivatives amounted to approximately three per member firm, therefore, the target population for the study would be calculated by multiplying three by nineteen firms thus fifty seven respondents In the same line, the researcher included CMA equity regulation staff, the rationale behind their inclusion was that the capital markets was the regulatory body which would foresee the rule framework of the equity derivatives once they come into play, three respondents were targeted, thus in total, the population of the study was sixty respondents. The target population proposed was selected as such for convenience in data collection.

3.3.2.1 Sampling Frame
The sampling frame, according to Cooper and Schindler, (2008), represents a list of elements from which a sample is actually drawn. In addition, they would clearly state that the basic idea behind sampling, is primarily to draw out certain characteristics representative of the entire population, therefore the choice of the sample is extremely vital. With the given population, the number would not warrant a sampling technique that excluded any informant thus all the investment advisors/brokers and the CMA in the population were chosen for the study, the sample frame was the member firms of the NSE, this sampling frame was drawn from the brokerage firms licensed by the CMA and listed by the NSE website, (list attached in appendix 1), in addition the CMA staff was part of the respondents for the study for their critical role in regulation of the equity derivatives in the market.
3.3.2.2 Sampling Technique

Sampling technique, according to both Cooper and Schindler, (2008) and Saunders et al, (2003) is a scientific or rather statistical method of selecting the sampling units that would offer the requisite estimates with their related margins of uncertainty; this would emerge from the probe of only part (sample) and not the whole population. In the researcher’s case, Stratified Random Sampling was used as the researcher stratified the respondents into two, this being the CMA staff and the NSE member firms, later on Simple random sampling was used to pick the respondents in individual categories and firms, simple random sampling is a technique under the probability sampling design which describes the whole population, it was highly representative as all subjects within the frame participated, thus it was most ideal for the study since all NSE listed brokerage firms were chosen except for the two firms under statutory management as noted. Since the selected population is rather homogeneous except for the rule enforcers, the strata was in two, i.e. the CMA and the NSE listed firms.

3.3.2.3 Sample Size

The sample size, according to Cooper and Schindler, (2008) and Saunders et al, (2003), is the actual number of respondents that would be representative of the population under study, they proceed to state that the size must be large and should bear some proportional relationship to the size of population from which it is draw. The sample size is determined by a three based criterion, this being level of precision, the level of confidence, and finally the degree of variability in the attributes being measured. The sample size formula is given by Yamane’s formula (Israel, 2002) as follows;

The sample would thus be; \[ n = \frac{N}{1 + N(e)^2} \]

\[ n = \frac{60}{1 + 60 (10\%)^2} \]

\[ n = 38 \text{ respondents} = \text{rounded off to 40 respondents} \]

3.4 Data Collection Methods

Denscombe (2011) is noted in defining that there are a number of data collection tools available to researchers, this depends on the type of data that would be collected namely primary or secondary data. This research used primary data; the sources of primary data
are interviews, questionnaires, case studies, observation, ethnography or a mix of them. Primary data was chosen to answer the objective questions; the data was collected using semi-structured questionnaires containing both open and close ended questions which were developed from the objectives of the study and consequently from the literature reviewed. The use of a semi structured questionnaire was best suited to collect the primary data as this provided some lee-way for the respondents to give additional information where required in a bid to complement their preferences. The developed questionnaire was sent via email to each of the selected nineteen member firms of the NSE, and to the CMA staff attached with a letter of introduction. The questionnaires were distributed to all the respondents to fill in their responses, after they filled them the information was sent via email.

For attaining the relevant information for the different elements from the respondents of this research project the survey schedule (Appendix I) was structured as below in relation to the research questions: Question 1-7: Section A General Information, Section B, Question 8; Feasible benefits of Equity derivatives, Section C, Question 9; factors that might hamper derivative trades and the final part, Section D Question 10 Measures that need to be enforced for a successful derivative market.

3.5 Research Procedure

The research procedure adopted by the researcher involved conducting a pilot study or a pre-test, this according to Cooper and Schindler, (2008) would best be suited in order to analyse the questions and determine the questions are well framed and they are not ambiguous, a pre-test is important as it evaluates the respondents interest, Saunders et al, 2003 further stated that pilot studies are vital for analysing the time it takes to answer the questions as well as assessing validity of the questions. The pilot study was tested on five (5) peers and two (2) investment advisors. Having administered the pilot study, the questionnaire was amended as advised.

The questionnaires were then amended for inclusivity of the respondents’ opinions other than the researched factors. The questionnaires were then administered via email to the identified respondents, the researcher then conducted a follow-up via telephone calls and emails as reminders for the filling as per the schedule attached in the appendices section,
the questionnaire were accompanied with a cover letter serving as an introduction and an incentive on a summary of the findings of the research to be emailed to the respondents if they wished so.

3.6 Data Analysis Methods

The type of data collected was both qualitative and quantitative data. The qualitative data was coded using a code book and analysed using content analysis. According to Hsieh and Shannon, (2005) content analysis is used to interpret meaning from the context of the text data and thus adhere to naturalist paradigm. The quantitative data collected was validated, edited and coded and then analysed using descriptive statistics in percentages form. The data presentation methods used was either of a tabular or figural nature. Quantitative data was bound to help the researcher obtain detailed information which consequently enabled in establishing substantive conclusions and recommendations on the factors that are hindering the development of equity derivatives market in Kenya. The data was then analysed using the statistical product and service solutions (SPSS) software. The analysis also include the use of inferential statistics which according to Cooper and Schindler (2008) are statistics which test for the null hypothesis hence one must either disprove that a relationship between the variables does or does not exist. The study carries out two types of the analysis, this being, correlations and one sample T-tests.

3.7 Chapter Summary

The chapter analysed the research methodology used in the study, it introduced the research design used in the study stating a descriptive study was used in the research study. The population was introduced, sixty (60) in number, comprising of the entire investment firm base as listed by NSE as well as the CMA staff with their relevance being the rule framers of the Capital markets in Kenya, in addition, the sampling design was introduced as probability sampling technique with the frame sort from the NSE listing of member firms. For the sample size, the formula for determining the sample was shown and used to give forty (40) as the most suitable, the data collection methods were also introduced, with an email method of data collection most preferred as it gave respondents enough time to go through the questions.
The questionnaire structure was also presented with a detailed questionnaire with four category data which contained the two question types on quantitative and qualitative, these being both open ended and closed questions. A pilot study to determine whether or not the questionnaires were sufficient and lacked errors was done, the method of data analysis was also presented as using of the SPSS program for statistical analysis where the results are presented in the next chapter on the results and findings as either tables or figures.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction
This chapter presents data analysis of the study on the feasibility of equity derivatives introduction in Kenya. The analysis is based on the research questions as identified in the study; the analysis was carried out using SPSS version 21.0. The results are presented in form of tables and figures.

4.1.1 Response Rate
This study had targeted forty (40) respondents which were from the NSE broker firms and CMA. Questionnaires were sent to two (2) respondents in each of the nineteen listed (19) broker firms that participate in the NSE and two (2) to the Capital Markets Authority CMA. However, due to the study limitation, thirty six (36) responses were achieved representing a ninety percent (90%) response rate. This formed the basis for the analysis presented in this chapter.

4.1.1.1 Education Level of the Respondents
The respondents in the feasibility study consisted of sixteen (16) respondents with a bachelor’s degree mainly based in the company’s research departments and twenty (20) postgraduate respondents mainly in the executive positions running the day to day operations of the respective companies, the two respondents from the CMA were in the equity regulation sector, these results are tabulated in table 4.1 below.

<table>
<thead>
<tr>
<th>Highest education level</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's degree</td>
<td>16</td>
<td>44.4</td>
<td>44.4</td>
<td>44.4</td>
</tr>
<tr>
<td>post graduate degree</td>
<td>20</td>
<td>55.6</td>
<td>55.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

4.1.1.2 Attendance to Financial Derivatives Course
The study yielded that 91.7 % of the respondents were aware of what the derivative market was from formal education, the other 8.3 % had not had any formal education but
had the informal training from the online information available. Therefore all the questionnaires received were vital for the research and none was discarded, the results are as presented in table 4.2 below.

**Table 4.2 Attendance to Financial Derivatives Course**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>33</td>
<td>91.7</td>
<td>91.7</td>
<td>91.7</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>8.3</td>
<td>8.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

4.1.1.3 Period Respondent has worked for their Organization

From information obtained and presented in table 4.3 below, 47.2 % of the respondents had worked for the current organization under the study for a period not exceeding 3 years, 25 % of the respondents had been with their current organizations for a period between 4 and 7 years, 27.8% of the respondents had been with their organizations for a period between 8 and 11 years, none had worked in their current organization for more than 11 years.

**Table 4.3 Length at current organization**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3 years</td>
<td>17</td>
<td>47.2</td>
<td>47.2</td>
<td>47.2</td>
</tr>
<tr>
<td>4-7 years</td>
<td>9</td>
<td>25.0</td>
<td>25.0</td>
<td>72.2</td>
</tr>
<tr>
<td>8-11 years</td>
<td>10</td>
<td>27.8</td>
<td>27.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

4.1.1.4 Activities the Respondent’s Organization Deals In

According to the information collected, 2.8% of the respondents dealt with corporate finance, 5.6% of the respondents dealt with Regulation, 72.2 % representing the largest population were in share transfer, stock brokerage services, portfolio management and corporate finance, 8.3% were in share transfer, stock brokerage and portfolio management, 5.6% were in stock brokerage and portfolio management and the remaining 5.6% were in stock brokerage and share transfers, a graphical representation of the data is presented in figure 4.1 below.
4.1.1.5 Central Government’s Commitment to the Development of Equity Derivatives Market

The data yielded a 2.8% response in strong disagreement that the central government was committed to development of an equity derivatives market, 61.1% were in disagreement that the central government was committed, this represented the largest portion, 30.6% were neutral of the statement and only 5.6% agreed with the statement, none strongly agreed to the statement as presented in figure 4.2 below.

Figure 4.2 Central Government Commitments to Develop Equity Derivatives

4.1.1.6 Trading participants on the Equity Derivative Market

On analysis, 75% of the respondents thought that local corporate investors would be the greatest participants in equity derivatives market, 16.7% of the respondents thought that foreign corporate investors would participate in the market while 8.3% of the respondents...
felt that local individual investors would be the greatest participants, these results are presented in figure 4.3 below.

**Figure 4.3 Pre-empted equity derivatives Participants**

**4.1.1.7 Most Anticipated Dominant Equity Derivative Contract**

At 86.1% the respondents strongly felt that options would be the most dominant equity derivative contracts, 13.9% of the respondents felt that futures would be more anticipated. This information is represented in figure 4.4 below.

**Figure 4.4 Equity Derivative Contracts Most preferred**
4.2 Benefits of Equity Derivatives in Kenya

4.2.1 Reduction of Investor Risks
From the analysis conducted 5.6%, of the respondents disagree with the statement that equity derivatives reduce investor risks, 8.3% of the respondents were Neutral to the same, 50% who were the most agreed and 36.1% of the respondents were strongly agreeing to the statement this data is presented in figure 4.5 below.

![Figure 4.5 Equity Derivatives and Investor risk](image)

4.2.2 Creation of Efficiency in the Capital Markets
On The effect of Equity Derivatives on creating efficiency, 8.3% of the respondents were neutral to the statement, 16.7% of the respondents strongly agreed to the statement and the greatest percentage at 75% agreed to the statement as presented in figure 4.6 below.

![Figure 4.6 Equity Derivatives and Efficiency in Capital Markets](image)
From the correlation results between reduction of investor risks and creation of efficiency in the capital markets, there was no statistical significance between the two as the significance was 0.539, therefore investor risks and efficiency in capital markets at 95% confidence level are not related in terms of benefits provided by equity derivatives as presented in table 4.4 below;

Table 4.4 Correlation between Equity Derivatives reducing investor risks and creating efficiency in the Capital market

<table>
<thead>
<tr>
<th></th>
<th>Equity derivatives will help reduce investor risk Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
<th>Equity Derivatives will create Efficiency in the capital markets Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity derivatives will help reduce investor risk</td>
<td>1</td>
<td>36</td>
<td>.106</td>
<td>.539</td>
<td>36</td>
<td>.106</td>
</tr>
<tr>
<td>Equity Derivatives will create Efficiency in the capital markets</td>
<td>.106</td>
<td>36</td>
<td>.539</td>
<td>1</td>
<td>36</td>
<td>.539</td>
</tr>
</tbody>
</table>

4.2.3 Equity Derivatives will Aid in Price Discovery and Increase Fund performance

The information collected from the respondents had 13.9% of the respondents being neutral to the statement that Equity derivatives will help in price discovery, 69.4% of the respondents agree to the statement and 16.7% strongly agreed to the statement concerning equity derivatives and their effect on price discovery and increased fund performance, this is presented in figure 4.7 below.
A one sample T-test carried on creation of efficiency in the capital markets and the helping in price discovery as well as increasing fund performance resulted to an absence of any statistical significance between the two variables as far as equity derivatives benefits are concerned. Therefore, there is no relationship between Equity derivatives creating efficiency in capital markets with helping in price discovery and increasing fund performance. Therefore the mean difference of a population mean of 4 between the two variables will be between -0.9 and 0.25, 95% of the times for efficiency creation and -0.16 and 0.22 for price discovery and fund performance 95% of the times. The results are tabulated in table 4.5 below,

Table 4.5 One-Sample Test between Equity derivatives creation of efficiency in capital markets and helping in price discovery and fund performance.

<table>
<thead>
<tr>
<th></th>
<th>Test Value = 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Equity Derivatives will create Efficiency in the capital markets</td>
<td>1.000</td>
</tr>
<tr>
<td>Equity Derivatives will help in price discovery and increase fund performance</td>
<td>.298</td>
</tr>
</tbody>
</table>

4.2.4 Equity Derivatives will Decrease the Market Volatility in the NSE

The statement on equity derivatives decreasing market volatility had 50% respondents agreeing to the statement while there was a 13.9% both within the neutral and disagreement option to the statement. In addition, 22.2 % of the respondents strongly agreed that the Equity derivatives would decrease market volatility in the Stock exchange. The information is illustrated in figure 4.8 below.
4.2.5 Equity Derivatives will Reduce Market Transaction Costs

On the issue of equity derivatives effect on reducing market transaction costs, 11.1% of the respondents disagreed with the statement, 19.5% were neutral to the opinion, the greatest percentage at 47.2% agreed the respondents and the rest 22.2% of the respondents strongly agreed with the statement as presented in figure 4.9 below.

4.2.6 Equity Derivatives Introduction will Attract Foreign and Local Investments

From figure 4.10 illustrating the responses derived from the respondents, 66.7 % of the respondents agreed while the remaining 33.3% were in strong agreement of the opinion that Equity derivatives introduction will affect the Foreign and local investment.
Figure 4.10 Equity Derivatives Effect On attracting Foreign and local investment levels

On analysis, a correlation between reduced market transaction cost and attracting foreign and local investment at 95% confidence level had a significance of 0.9, meaning the two variables were not correlated. Therefore, there is no correlation between reduced market transaction cost and attraction of both foreign and local investment levels as evidenced in table 4.6 below;

Table 4.6 Correlations between reduced market transaction costs and attracting foreign and local investments from equity derivatives introduction

<table>
<thead>
<tr>
<th></th>
<th>Equity Derivatives will reduce market transaction costs</th>
<th>Equity Derivatives will attract Foreign and local investment levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity Derivatives will reduce market transaction costs</td>
<td>Pearson Correlation 1</td>
<td>.022</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed) .900</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N 36</td>
<td>36</td>
</tr>
<tr>
<td>Equity Derivatives will attract Foreign and local investment levels</td>
<td>Pearson Correlation .022</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed) .900</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N 36</td>
<td>36</td>
</tr>
</tbody>
</table>
4.2.7 Other Additional Benefits

The respondents added that there were additional benefits; this include, employment creation by which the market will need staff capable to handle the trades, they also felt that the equity derivatives market would complete the market by providing investors with an array of instruments in which to put their money in, this would complete the market effectively. The respondents also felt that there would be increased stability and liquidity as a result to the introduction of the market; they also felt that increased scrutiny in the financial market would have a ripple effect on transparency in operations.

4.3 Factors that could affect adoption of equity derivatives in Kenya

4.3.1 Monetary Policy

From analysis, 5.6% of the respondents disagreed to the statement, 19.4% of the respondents were neutral 66.7% representing the majority agreed to the statement and 8.3% of the respondents strongly agreed to the statement that the monetary policy in Kenya would affect the introduction of Equity Derivatives as represented in the figure 4.11 below;

![Figure 4.11 The effect of monetary policy On Equity Derivatives Adoption](image)

4.3.2 Fiscal Policy

The yielded data was of a 5.6% disagreement basis to the statement, 22.2% of the respondents were neutral, 63.9% agreed to the statement and 8.3% strongly agreed to the statement that the fiscal policy in Kenya will affect the introduction of equity derivatives, the results are represented in figure 4.12 below;
Figure 4.12. The effect of the Fiscal Policy on Equity Derivatives

The analysis results on correlation prove that there is a significant statistical significance between the monetary policy and the fiscal policy at 95% confidence level. Therefore it is sufficient to state that the monetary and fiscal policies are correlated as evidenced by table 4.7 below;

Table 4.7: Correlations between The effect of monetary policy and Fiscal policy on Equity Derivatives adoption

<table>
<thead>
<tr>
<th></th>
<th>The monetary policy in Kenya will affect Equity derivative introduction</th>
<th>The fiscal policy in Kenya will affect the introduction of Equity Derivatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>The monetary policy in Kenya will affect Equity derivative introduction</td>
<td>Pearson Correlation 1</td>
<td>.789**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed) 36</td>
<td>.000</td>
</tr>
<tr>
<td>The fiscal policy in Kenya will affect the introduction of Equity Derivatives</td>
<td>Pearson Correlation .789**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed) .000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N 36</td>
<td>36</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

4.3.3 Liquidity Levels

From the analysis 5.6% of the respondents were neutral to the statement; the majority at 77.8% of the respondents agreed to the statement and at 16.7% respondents strongly
agreed to the statement that liquidity levels will affect the introduction of Equity Derivatives, the results are represented in figure 4.13 below;

![Pie chart showing liquidity levels and their effect on Equity Derivatives introduction](image1)

**Figure 4.13. The effect of Liquidity Levels on Equity Derivatives Introduction**

### 4.3.4 Market Capitalization

As represented in figure 4.14 below, 5.6% of the respondents were neutral to the statement, 11.1% of the strongly agreed to the statement and the largest percentage at 83.3% agreed to the statement that the market capitalization will affect the introduction of equity derivatives.

![Bar chart showing market capitalization and its effect on Equity Derivatives adoption](image2)

**Figure 4.14 The Effect of Market Capitalization on Equity Derivatives Adoption.**

### 4.3.5 Market Turnover

On analysis 8.3% of the respondents were neutral to the statement, 19.4% of the respondent strongly agreed and 72.2% representing the greatest number of respondents
agreeing to the statement that the market turnover will affect the introduction of Equity Derivatives as represented in figure 4.15 below.

![Figure 4.15. The Effect of Market Turnover on Equity Derivatives Adoption](image)

4.3.6 Deficiency in Skilled Equity Derivatives Experts in Kenya

As represented in figure 4.16 below, 5.6% of the respondents were in disagreement to the statement, 8.3% are neutral 27.8% agreed and the greatest percentage represented 63.9% of the respondents strongly agreed to the statement that a deficiency in skilled equity derivatives experts in Kenya.

![Figure 4.16 Deficiencies in Skilled Equity Derivatives Experts](image)

4.3.7 Other Challenges Pre-empted

The respondents thought that the lack of information and awareness would be the Achilles heel to the successful adoption; this coupled with inexperienced staff would
prove problematic. Past experiences with derivatives from fuel hedges such as by Kenya Airways also was a factor to be pose a challenge, monopolization by few wealthy investors as well inadequacy of regulation was also a factor needing attention. The major hindrance most of the respondents thought of was the lack of good political will; this was thought to be a major challenge. The lack of government support would prove detrimental to the successful adoption of equity derivatives markets.

At 95% confidence intervals, a t test analysis carried out on the challenges pre-empted for the equity derivative instruments had a statistical significance showing that the equity derivative markets would encounter the stated challenges, the test value being 4, meaning agreement, provided that the challenges pre-empted would need addressing prior the introduction of the derivatives markets as illustrated in table 4.9 below;

4.4 Measures needed for Equity Derivatives Market to Succeed in Kenya

4.4.1 Formation of Joint Ventures with Established Derivatives Exchanges

From the analysis 11.1% of the respondents disagreed with the statement on Joint ventures, formation, 5.6% of the respondents were neutral and an additional 58.3% of the respondents who made the bulk of the responses were in agreement, 25% strongly agreed with the statement that the derivative market should form joint ventures with established derivatives exchanges in order to ensure a successful introduction of equity Derivatives market. The results are represented in figure 4.17 below;

![Figure 4.17. Need for Joint Ventures before Introduction of Equity Derivatives](image-url)
4.4.2 Full Information Disclosure
On whether full information disclosure from traders to investors will impact investor action in the derivatives markets three reactions were received, one was be Neutral at 38.9%, and the second would be strong agreement at 8.3% and third at 52.8% respondents agreed, the information is represented by the figure 4.18 below.

Figure 4.18. Full Information Disclosure relevance to Equity Derivative Contracts

4.4.3 Need for Specific law Enactment
The data sort yielded a 97.2% strong agreement that there should be specific laws enacted in a bid to cater for equity derivatives market while only a paltry 2.8% agreed to the statement as represented in figure 4.19 below.

Figure 4.19 Need for Specific law’s Enactment to Equity Derivative market

4.4.4 Need for Full Demutualization
On the issue on demutualization, 19.4% of the respondents were neutral, while 30.6% of the respondents were in agreement. The bulk of the respondents however at 50% were in
strong agreement of the need for full demutualization prior the introduction of derivatives markets as represented in figure 4.20 below.

![Figure 4.20. The need for Full Demutualization to the Capital Markets](image)

**4.4.5 Need for Vertical Approach in Trading and Clearance**

The study yielded that 38.9% of the respondents were Neutral to the statement, in addition 52.8% of the respondents agreed with the statement forming the bulk of the respondents, the rest comprising of 8.3% were strongly in support of the statement that the vertical approach of trading is needed for a successful equity derivative market, the results are represented in figure 4.21 below.

![Figure 4.21. Vertical Approach Method in Equity Derivative Market](image)

**4.4.6 Training of Investment Advisors and Investors**

From the analysis, 100% of the respondents were in strong agreement to the statement that training of investment advisors and investors for a successful equity derivatives market.

A one sample T test of the specific laws that need enactment and the need for training did not offer any statistical significance at 95% confidence level, however from a mean
difference of 5, respondents had a minimal mean difference of between -0.08 and 0.03 for need for specific laws, therefore, the two variables were the most advanced measures from the respondents point of view as represented by table 4.8 below;

Table 4.8 One Sample Test of specific law enactment and the need for training of investors and advisors

<table>
<thead>
<tr>
<th>Test Value = 5</th>
<th>t</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>Specific laws on Equity Derivatives need to be enacted</td>
<td>-1.000</td>
<td>35</td>
<td>.324</td>
<td>-.028</td>
<td>-.08</td>
</tr>
</tbody>
</table>

4.5 Chapter Summary

The feasibility study carried out made an analysis of the data collected from the 36 respondents, each of the variables was analysed using SPSS and the results presented in form of tables and figures on the feasibility of the equity derivatives market, the analysis was in line with the questions posed where general questions were analysed first to get a view of the respondents knowledge, the feasible benefits that could be derived, the challenges and finally measures that needed to be addressed for a successful equity derivatives market.

The findings from the study provided that the 6 benefits; investor risk reduction, provision of efficiency in the capital markets, price discovery and fund performance, decreased market volatility, reduced market transaction costs and attraction of foreign and local investment were all feasible. The biggest challenges pre-empted was market capitalization concerns, market turnover and investor and trader awareness, the measures most important to the respondents were training of both the investment advisors as well as investor sensitization, full information disclosure was paramount in addition to enactment of laws specifically focusing on Equity derivatives market for a successful adoption.

The next chapter provides a discussion of the benefits; challenges and measures foreseen in the equity derivatives market, conclusions and the final recommendations are also discussed.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction
The chapter provides a summary of the purpose of study, the research questions that prompted the study, a brief summary of the research methodology and a summary of the major findings of the research prompted from the responses is provided. In addition to the summary, a discussion of the major research questions is carried out based on the research questions, this highlights both a presentation of both the research questions and how they polled and a conclusion based on the responses provided. The final part of the chapter encompasses the recommendations section; these recommendations are on improvement based on the research questions, and the final section is the recommendation for further studies.

5.2 Summary
The purpose of the study was mainly to establish the benefits that would be realised in case equity derivatives were adopted, the factors that might affect the adoption of efficient and successful equity derivative markets in Kenya and the consequent remedies for the said challenges, therefore the research questions were; what are the perceived benefits of equity derivatives in Kenya? What are the factors that will affect adoption of equity derivatives in Kenya? And, what measures need to be put in place to ensure successful implementation of the equity derivatives market in Kenya?

The researcher used both the descriptive and inferential statistics in the analysis of the results from the study, the population of the study was the 21 member firms of the NSE and the CMA for their role in regulation, the target population then was narrowed to 19 of the active member firms of the NSE and the CMA, the sampling technique used was the stratified random sampling with the regulators separated from the participants of the NSE, therefore, the sample derived was 40 respondents with 2 from each member firm of the NSE and 2 from the Equity regulation section of CMA. The data was collected via email with a 90% response rate, comprised of 2 respondents from CMA and 34 from the NSE member firms, the responses were then analysed using SPSS version 21, with the results presented in form of tables and figures.
The findings from six of the benefits derived from equity derivatives had the reduction of investor risks at 50% agreement while 36.1% of the respondents were in strong agreement, the issue on efficiency of capital markets had 75% of respondents agreeing while 16.7% were in strong agreement. However, a correlation carried out to determine whether a relationship existed between equity derivatives reducing investor risks and their consequent creation of efficiency in the capital markets at 95% confidence level yielded no statistical significance at 0.539. 69.4% of the respondents as well as 16.7% strongly agreed that the equity derivatives market would enhance price discovery as well as fund performance, in addition, a one sample T-test was also applied to test the correlation between equity derivatives creating efficiency and equity derivatives helping in price discovery and fund performance, the mean difference of a population mean of 4 between the two variables was between -0.9 and 0.25, 95% of the times for efficiency creation and -0.16 and 0.22 for price discovery and fund performance 95% of the times, however there was no correlation between the two test variables. 50% of the respondents agreed and 22.2% strongly agreed that the equity derivative instruments would decrease market volatility. On the issue of reduced market transaction, 47.2% of the respondents agreed while 22.2% strongly agreed the issue on attracting foreign and local investments had only two responses with 66.7% of the respondents agreeing while 33.3% strongly agreed on this benefit, additionally a correlation carried out to seek relationship between reduced market transaction costs and attracting of foreign and local investment yielded no relationship with a significance of 0.9.

Six factors that could affect the adoption of a successful equity derivatives market had the following reactions, monetary policy effect had 66.7% of the respondents in agreement while 19.4% in strong agreement, Fiscal policy as a hindrance had 63.9% of the respondents in agreement and 22.7% in strong agreement. There was a statistically significant correlation of 0.00 between the fiscal policy and the monetary policy at 95% confidence level. Liquidity levels effect had 77.8% of the respondents agreeing while 16.7% in strong agreement while market capitalization had 83.3% of the respondents in agreement while 11.1% of the respondents were in strong agreement. The last two of the factors presented were market turnover at 72.2% agreement while 19.4% were in strong agreement, and a deficiency in information both from an investor point of view and a deficiency in skilled handlers of derivative traders had 63.9% of the respondents in strong
agreement, 27.8% agreed that this was a factor in successful adoption of equity derivatives market in Kenya.

In the final analysis, 6 measures presented to the respondents to gauge the reaction were polled as follows; the first one was the formation of joint ventures which had 58.3% of the respondents agreeing, 25% of the respondents strongly agreed to this statement, the issue of information disclosure had 41.7% of the respondents agreeing while, 58.3% of the respondents were in strong agreement. The third measure was on enactment of specific laws to cater for the equity derivatives market, at 97.2% the respondents strongly felt that this was vital while the remaining 2.8% agreed, at 50% response demutualization was a measure the respondents agreed on. The fifth measure was an adoption of the vertical approach in trading with 52.8% agreeing, however 38.9% of the respondents were neutral, the last measure involved the training of investment advisors and the sensitization of the investors on the equity derivatives instruments, 100% of the respondents strongly agreed that this measure was the most vital of all the measures involved, additionally a one sample T-Test carried out on need for specific law enactment to cater for equity derivatives and need for training of investment advisors with the mean difference of a population mean of 5 between the two variables was between -.08 and 0.3, 95% of the times, however there was no relationship between the two variables at a significance of 0.324.

5.3 Discussion

5.3.1 Perceived Benefits of Equity Derivatives

In the literature reviewed on investor risk, researchers argued that derivatives are vital tools for ensuring information efficiency, price discovery and most importantly hedging against risk, equity derivatives as per the review allowed risk management by shifting of risk from a person who does not want to bear the risk to a person who wants to bear the risk, the researcher thus posed the same question on the feasible benefit, the results from the analysis provided a similar opinion whereby the respondents agreed with the statement made, therefore bringing a consensus between the value derived on reduced investor risk from trading in equity derivatives, therefore; both the respondents and the literature reviewed had a similar opinion.

Derivative markets, and more so equity derivative markets according to the financial vehicles literature reviewed incorporated an efficient transactional framework this was
mostly with the high level volatility products that were underlying, these according to previous researchers resulted in higher levels of trading volumes for stocks, and this was mostly of the stocks with high levels of volatility. The current research agreed with the statement showing similarity in the previous opinions and the current research, in this respect, there is substantial evidence proving that equity derivatives have an effect on the creation of efficiency in the capital markets sphere, this therefore brings the previous literature reviewed and the current research in a consensus. However, a correlation test carried out to determine whether there’s a relationship between reduced investor risk and creation of efficiency in the capital markets yielded no significance implying that there was no relationship between improved efficiency and reduced investor risk.

Equity derivatives markets provided a mechanism by which diverse and scattered opinions of future are collected into one readily discernible number providing a consensus of knowledgeable thinking aiding in price discovery, this was one of the reviewed literature findings, the researchers also stated that Equity derivatives contributed to the development of the stock market, this is of a high significance especially in the forecasting of future growth of per capita GDP by facilitating cross border flows and allocation of capital more efficiently, the equity derivatives in particular, reduce both peak and depths on price fluctuations and thus leading to price stabilization, the current research had a significant amount of consent with the previous literature that was reviewed. A one sample T-test carried out on the data gathered in a bid to compare differences in mean between the efficiency creation and price discovery and fund performance offered no relationship.

The literature review presented two opposing schools of thought on the impact of future trading, which are commodities of equity derivatives, on the volatility of the stock market, proponents of market completion or stabilizing forces hypothesis argued that arbitrage in the futures market add more informed traders to the stock market thus improving market efficiency thus reducing volatility and thereby causing stabilization in the market. The contrary opinion stated that introduction of the equity derivatives added more uninformed and irrational traders in the markets who were simply in search of short-term gain (making a quick buck) thus seeking grounds to increased volatility and thus destabilization in the market, the current research discovered that there still seems to have a difference in opinion, however the current research had some fair inclination to the proponents of the literature reviewed.
The literature reviewed pointed out that equity derivatives markets specifically, are aids to reduced market transaction cost, the review provided by the CFA provided that the instruments are a form of insurance or rather risk management, this means that the cost of trading in the derivative market has to be low or investors would not find it financially sound to purchase the instruments for solidifying their positions, the current research therefore, the current research brought some form of consensus to findings from previous researchers, there is an agreement that equity derivatives have an impact in terms of decreasing market transaction costs.

Equity derivatives markets are said to supplement development of stock markets in many developed countries, thus, a major need for developing countries to embrace equity derivative trades, this being a subject of reviewed literature, current research provided only two types of responses, the responses yielded a substantial approval to the previous literature reviewed where all the respondents had similar opinions therefore there is a substantial amount of agreement between the current and previous literature reviewed on the increased investment both locally and from foreigners from the introduction of equity derivatives. A correlation carried out to find the relationship between the reduced market transaction costs and attraction of foreign and local investment provided that there was no statistical significance hence there was no relationship between the two variables.

5.3.2 Perceived Challenges of Equity Derivatives Markets

The monetary policy being a process by which a country’s central bank influences level of money supply credit in an economy is key in influencing the flow of money especially in cases where investment is concerned, cases of interest rate and exchange rate policies are brought the fray due to this specific macro-economic policy, the literature reviewed call for a semblance of a sober attitude in how the policy is set, if it is mis-prioritized and formulated with malice investment activity is consequently affected, from the current research it was quite evident that the respondents also had an agreement that the monetary policy is a cause of concern as far as equity derivatives are concerned.

Analysis of economic freedom, in essence, prying into the idea of government intervention in the equity market was a major factor considered from the reviewed literature, in the same it emerged that there’s a substantial belief that it engenders prosperity, the researchers cited that there is some correlation among the capital market returns with the country’s economic freedom, an increase in economic freedom was
linked to improved socio-economic benefits, this left investors a happier lot, the current research investigated the same claim but basing it in the Kenyan market and in regards to investment in the equity derivative market, the respondents polled, there was a substantial agreement between the current research and the literature reviewed, in addition the respondents actually commented that unless the fiscal policy was to get revamped in effect taxing on the gains realised from capital proceeds, it was not much of a factor in its current state. In addition there was a high correlation between the monetary policy and fiscal policy, this implies that fiscal policy and monetary policy have a relationship as far as the derivatives exchange is concerned.

Literature reviewed stated that the numbers of futures exchanges in a country is an issue needing proper insight and reflection on the countries market needs and cash-flow, this is so because, the two metrics that measure any successful future exchange derives its basis on two major variables; first, the trading volumes; and second the open interest, this referring to the total number of derivative contracts not settled, in the immediate time frame, thus an open interest that’s large is most appropriate as it indicates for liquidity and increased activity in the contractual agreement, therefore they stated that liquidity was an actual factor to be considered, the current research had had a strong inclination in the same line and breadth suggesting that the issue of liquidity was vital in a bid to ensure sustainable growth opportunity.

The capital adequacy is based on risk profiling thus revealing major flaws in the perceptions of both capital and adequacy, this was according to the literature reviewed, the literature reviewed also added that common equity ratios are bound to be minimalistic, in addition from the literature it was noted that a futures exchange would take a minimum of two years to ascertain its continued survival, it is thus vital to have an initial sufficient paid up capital as well as a sufficient net worth for survival in the initial stages, this is done in order to avoid further capital injections in additional periods, the current reviewed literature had a substantial support in the same line, therefore it is sufficient to state that the market capitalization surely would be a considerable factor in the adoption of the equity derivatives market.

The literature reviewed did not specify the exact market turnover threshold needed for setting up the venture, however it was clear evident from the research that with the consideration on a rule of thumb, market turnover would determine the survival of the
company, in essence, it is in turn advisable that the size, this being the capitalization and trading volume should be substantial enough to ensure profitability and continued survival of the derivatives trade during the infant stages of the equity derivatives market, the current research findings presented results on the same lines, in this respect, the literature reviewed and the current findings were in agreement.

Researchers reported that significant use of complex derivatives without relevant expertise increases inherent risk, in addition a survey conducted by KPMG among financial managers and investors revealed a lack of in-depth knowledge about derivatives and risk management the researchers, therefore concluding that there is a lack of expertise in handling derivatives, this is one of the main reasons for the minimal usage of derivatives and also a factor of a complete misuse of the instruments, this has been attributed to the difficulty in understanding complex derivative products, since it acts as an intimidating factor, the current research had a similar opinion as most of the respondents were in agreement to the same statement, thus the current research agreed with the findings from previous researchers, therefore there’s a substantial need for increased expertise.

5.3.3 Prudential Measures that need to be adopted for a Successful Derivatives Market.

Vital recommendations on how emerging markets should go about the establishment of equity derivatives exchanges have been fronted by the researchers of previous researches, such are on the markets being independent exchanges or as departments or division of the existing stock market and the need for joint ventures (JVs) with already successful derivative exchanges, the basis for having joint ventures would provide the new exchange with vital information on how to carry operations as well as software for the operations, the respondent of the current research had similar opinions on the same, therefore the literature reviewed seems to have merit.

Reviewed Literature review seemed to have some semblance that the ideology of information symmetry is vital for the functional aspects in the equity derivative market, they further stated that in order to obtain results information is key thus a good analysis set for the current research, the vital requirements under which such analysis is carried out would incorporate the preliminary regulatory requirements, trading and risk management systems the microstructures, the researchers looked into aspects of the noise
trader hypothesis, also termed as the bull-and-bear hypothesis which presented speculators as generally de-stabilised. Therefore it was pretty vital for information disclosure, the current research proved that there was a substantial consent between previous and current research, therefore information disclosure is vital for the formation of this market.

In any institution, a regulatory, prudential and legal framework is vital and needs to be put up in a bid to provide for careful supervision and governance of the market, this thoughts were echoed through the review with others stating reasons would include, reduction of systemic risk, protection of investors and ensuring markets are fair, efficient and transparent. The researchers focussed on disclosure regime as a result of information deficiency has consequently led to a reduction of investors’ confidence, and therefore to increased costs of raising capital, therefore there is a need to have laws specifically focussing on Equity derivatives market, the current research also posed the same question and from the responses received a strong support of the statement proved that there should be specific laws enacted in a bid to cater for equity derivatives market.

A vital factor in the derivative market that would reflect on the regulatory framework is the ownership structure of such an institution, the literature reviewed had a recommendation for a demutualized structure set-up; this is in a bid to separate ownership from the right to trade. The proposed ownership of each shareholder was expected to be less than a quarter of the entire market, with at least a fifth of this domiciled locally in the country, in this case Kenya, the current research therefore enquired from the respondents and there was some substantial agreement with previous literature, therefore there’s a need for a demutualized set up and thus enhanced equity derivative trade with the presence of a demutualised structure.

In terms of trading and clearance, there was an opinion that the vertical approach, also christened the silo approach in which the transactions are carried by the futures exchange either directly or there’s a separation of clearing from the settlement activities, in this case they are undertaken by a fully owned legal entity, In terms of operations trading, clearing and settlement is decentralized and credit risk management is located within individual institutions, counterparties will only prefer to deal only with highly rated and well-capitalized intermediaries this is bound to minimize counterparty risk, the respondents in
the current research were therefore asked whether this was the best strategy and there was some varied opinion however most agreed to the statement.

The need of training of staff as well as the investment advisors of individuals who will be in charge of the derivatives market is extremely vital from the literature reviewed, further research on awareness levels for investors proved that education helps to break down the barriers and makes the fearful known, amidst all this, what is needed is an informed, knowledgeable and experienced investor who best understands how and when to use derivatives, is capable of dealing with derivatives in complex situations, current research seems to agree totally that there’s a need for training of both investment advisors and the investors in a bid to rid inherent risks of the new venture. There was however no statistical significance from the one sample T-test conducted on the specific law enactment with the training of investment advisors hence no relationship exists.

5.4 Conclusion

5.4.1 Benefits of Equity Derivatives Markets
The benefits of derivatives market that were most pronounced based on the respondents remarks were creation of efficiency in the capital markets, equity derivatives are thus vital in the provision of efficiency, the need for price discovery and fund performance was second according to the respondents, the attraction of foreign and local investment was polled third, the major investors according to the respondents were thought to come from the investors from the corporate world both foreign and local. The most anticipated financial derivative contracts pre-empted by the respondents were options followed by futures. The reduction of investor risks was also a benefit with considerable responses in agreement tied with decreased market with similar statistics, the final benefit sort was reduced market transaction cost, therefore with the responses provided, there was a revelation that a considerable number of respondents were in agreement that the equity derivatives market was beneficial to the Kenyan market, the additional benefits the responses had apart from the researched benefits included the provision of employment opportunities and provision of an array of investment opportunities to investors.

5.4.2 Challenges Pre-empted in the Equity Derivatives Introduction
The challenge that most of the respondents thought would affect the market was Market capitalization, the second was a concern on the liquidity levels. The respondents also felt that the market turnover would be a major hindrance to the equity derivatives market. The
respondents agreed that the fiscal policy would affect the equity derivatives market, it was also evident that both the monetary policy and fiscal policy had a statistical significance, both the deficiency of skilled equity derivative experts and the fiscal policy was a concern for the respondents as they agreed that it could be a hindrance to the market. In addition, the other additional pre-empted challenges by the respondents included a lack of good political will from the concerned parties and the major challenge felt across the board concerned the inexperienced derivative trader in the country and summing this up, the low levels of investor awareness on the financial instruments would prove a herculean task to the derivative market.

5.4.3 Measures provided for Success in the Derivatives Market

There was a unanimous response stating that investor sensitization as well as training of financial derivative advisors was extremely vital to the introduction of the equity derivatives market, the second measure that had a considerable response was the need for enactment of specific laws targeting the equity derivatives market, this is in a bid to protect investor interests and resolve disagreements in time. Both formation of joint ventures and full information disclosure were considered vital, additionally the respondents felt strongly the need for demutualization was vital for the market thriving. The final researched measure had respondents in agreement that the vertical trading approach was most vital, the additional measures the respondents provided was a need to cultivate good political will and expeditious service both in trading and resolution of disagreements, there was also a need for market freedom in terms of operations with an independent oversight body overseeing the running of business at the equity derivatives market.

5.5 Recommendations

5.5.1 Recommendations for Improvement

5.5.1.1 Benefits of Equity Derivatives

The benefits of equity derivatives markets come in many forms in a bid for a successful derivatives markets there is a crucial need for the government through the capital markets to provide investors with sensitization campaigns in a bid to enable the investors to attain awareness on the benefits they can derive from the investment in the instruments, it is also crucial for the government to be emphatic on the correct use of the instruments because of the complexity they offer this is in a bid to reinforce the knowledge in the
equity derivatives markets. The sensitization should also include schools both the higher level training in secondary and tertiary institutions, this will create awareness on the need of the same and spike interest from an early age and provide the benefits of the same such as employment opportunities available in the sector.

### 5.5.1.2 Challenges Pre-empted on Equity Derivatives Market

From the discussions presented, it was evident that investor education and an abundance of skilled derivative handlers were lacking, therefore the first recommendation would be provide information and training, the monetary and fiscal policies were also concerns that elicited reactions, the current state would not be a pre-cursor for a thriving derivatives trade, therefore there’s a need for the government to intervene and make the policies to be in line with promotion of investment in the new market. The points on market capitalization, market turnover and liquidity levels all rely on the macro-economic policies existing therefore the government must play its fair part and encourage the investment both from the locals and tap the foreign investors.

### 5.5.1.3 Measure that need Enforcement before Adoption of the Equity Derivatives Market

From the analysis it was evident that 100% of the respondents that training was critical, therefore the government needs to create the proper infrastructure to foster the advancement of information at all levels, the need for enactment of specific laws in the sector will go a long way in ensuring that investor funds are protected and that expeditious conflict resolution mechanisms are put forward, the need for demutualization was also a critical element thus creating autonomy of operations granting freedom to respective organs of trade, the need for an autonomous oversight body was also forwarded, in addition to all this the respondents also recommended for cultivation of good political will thus making investment in the country attractive from the foreign markets.

### 5.5.2 Recommendations for Further Study

Once the Equity derivatives market is active in Kenya there is a crucial need to understand the market dynamics and understand the benefits that have been identified and more specifically which contracts of equity derivatives markets are most beneficial, the operational bottlenecks experienced, and finally the mitigation of the same challenges on a trade platform perspective.
REFERENCES


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Tremblay, R. (2009), How American politicians and bankers built a financial debt house of cards, Policy Options, 2, pp. 50-4.


## APPENDIX I: LIST OF NSE MEMBER FIRMS

<table>
<thead>
<tr>
<th>Name of firm</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dyer &amp; Blair Investment Bank Ltd</td>
<td>Pension Towers, 10th floor</td>
</tr>
<tr>
<td>Suntra Investment Bank Ltd</td>
<td>Nation Centre, 7th Floor</td>
</tr>
<tr>
<td>Kingdom Securities Ltd</td>
<td>Co-operative Bank House, 5th Floor</td>
</tr>
<tr>
<td>Sterling Capital Ltd</td>
<td>Barclays Plaza, 5th Floor</td>
</tr>
<tr>
<td>NIC Securities Limited</td>
<td>Ground Floor, NIC House, Masaba Road</td>
</tr>
<tr>
<td>Discount Securities Ltd. (Under Statutory management)</td>
<td>Nairobi</td>
</tr>
<tr>
<td>Genghis Capital Ltd</td>
<td>Prudential Building, 5th Floor</td>
</tr>
<tr>
<td>Francis Drummond &amp; Company Limited</td>
<td>Hughes Building, 2nd floor</td>
</tr>
<tr>
<td>NgenyeKariuki&amp; Co. Ltd. (Under Statutory Management)</td>
<td>Corner House, 8th floor</td>
</tr>
<tr>
<td>Old Mutual Securities Ltd</td>
<td>IPS Building, 6th Floor</td>
</tr>
<tr>
<td>SBG securities ltd</td>
<td>CFC Stanbic centre Westlands</td>
</tr>
<tr>
<td>Afrika Investment Bank Ltd</td>
<td>Finance House, 9th Floor</td>
</tr>
<tr>
<td>ABC Capital Ltd</td>
<td>IPS Building, 5th floor</td>
</tr>
<tr>
<td>CBA Capital Limited</td>
<td>CBA Centre Mara Ragati Road Junction</td>
</tr>
<tr>
<td>Apex Africa Capital Ltd,</td>
<td>Rehani House, 4th Floor</td>
</tr>
<tr>
<td>Faida Investment Bank Ltd</td>
<td>Windsor House, 1st floor,</td>
</tr>
<tr>
<td>Standard Investment Bank Ltd</td>
<td>ICEA Building, 16th floor,</td>
</tr>
<tr>
<td>Kestrel Capital (EA) Limited</td>
<td>ICEA Building, 5th floor</td>
</tr>
<tr>
<td>African Alliance Kenya Investment Bank Ltd</td>
<td>Trans-national Plaza, 1st Floor</td>
</tr>
<tr>
<td>Renaissance Capital (Kenya) Ltd</td>
<td>Purshottam Place, 6th Floor, Westland, Chiromo Road,</td>
</tr>
</tbody>
</table>
APPENDIX II: INTRODUCTION LETTER

United States International University – Africa (USIU-A)

Chandaria school of Business Administration

P.O Box 14634 -00800

Nairobi.

Dear Sir/ Madam

RE: Graduate Research Questionnaire

I am undertaking a project titled; “A feasibility study on equity derivatives adoption in Kenya.” you have been identified as one of the respondents to the questionnaire because of the expertise you possess in the financial investment sector.

In this regard I kindly request you to fill the questionnaire attached, the responses to the questions therein and any information will be purely for academic research, the purpose and the information provided will be treated with the strictest of confidence and anonymity.

Results of the study will be vital to current and future students, researchers, regulatory bodies as a pre-cursor for the introduction of Equity derivatives in the Kenyan market. Your assistance and support will be highly appreciated.

In case you may want a summary of the findings of the research, I’ll not hesitate to email them to you, if you attach your contact details on the filled questionnaire or email the request to the email kmugambi6@gmail.com.

Thank you in advance.

Yours sincerely,

Kinyua, Kelvin Mugambi
QUESTIONNAIRE

Instructions: Please fill in the questionnaire provided by ticking appropriately or filling in as directed. (Check boxes provided for easy web user interface/ you don’t have to print the document)

SECTION A

1. Please indicate your highest education level completed
   College diploma ☐ Bachelor’s degree ☐ Post graduate degree ☐

2. Have you attended any course on financial derivatives?
   Yes ☐ No ☐

3. How long have you worked for your organization? (years)
   0 -3 years ☐ 4 -7 years ☐ 8 -11 years ☐ 11 years and above ☐

4. What activities does your organization trade in?
   Stock brokerage services ☐ Corporate finance ☐
   Portfolio management ☐ Share transfers ☐

5. In your opinion, the central government is doing the best it can in the development of Equity derivatives markets? (kindly indicate the extent you agree with the statement in the range 1 to 5, with 5 for strong support, 1 for Strong disagreement)
   1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

6. The trading in Equity derivative market will greatly be influenced by…
   {Kindly tick in the appropriate box (s)}
   Local Individual Investors ☐ Foreign Individual Investors ☐
   Local Corporate Investors ☐ Foreign Corporate Investors ☐

7. Which of the following Equity derivative contracts in your opinion will likely dominate trading in Kenya in terms of contract success?
   Options ☐ Swaps ☐
   Futures ☐ Forwards ☐
SECTION B

8. A. Please indicate the extent to which you agree or disagree with the following statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity derivatives will help in reducing investor risks.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Equity derivatives will create efficiency in the capital markets.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Equity derivatives will aid in price discovery and increase fund performance.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Equity derivatives will decrease the market volatility in the NSE</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Equity derivatives will reduce market transaction costs</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Equity derivatives introduction will attract foreign and local investment</td>
<td>☐</td>
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<td>☐</td>
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</tbody>
</table>

8. B. What are the other benefits you anticipate from the introduction of equity derivatives?


SECTION C

9. A. Kindly indicate the extent to which you agree or disagree with the following statements on factors that might affect equity derivatives adoption in Kenya.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The monetary policy in Kenya will affect the introduction of equity derivatives</td>
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<td>☐</td>
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<tr>
<td>The fiscal policy in Kenya will affect the introduction of equity derivatives</td>
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<tr>
<td>Liquidity levels will affect the introduction of equity derivatives</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Market capitalization will affect the introduction of the equity derivative market</td>
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<tr>
<td>The market turnover will affect the introduction of the equity derivative market</td>
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<tr>
<td>There is a deficiency in skilled equity derivative experts in Kenya</td>
<td>☐</td>
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</tr>
</tbody>
</table>

9. B. What are the other factors you anticipate to hamper the introduction of derivatives?

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SECTION D

10. A. Please indicate the extent to which you agree with the following statements on the regulatory framework that needs to be set up prior derivative introduction.

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
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</thead>
<tbody>
<tr>
<td>The derivative exchange should form joint ventures with established derivatives exchanges</td>
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<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>There should be full information disclosure from the traders to investors for a successful derivative market</td>
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<td>There must be specific laws to cater for equity derivative market for its success</td>
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<td>The equity derivative market should be fully demutualised</td>
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<td>The vertical approach of trading and clearance should be adopted</td>
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<td>For a successful equity derivative market training of investment advisers is vital</td>
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10. B. What are the other suggestions you would propose to cater for a successful introduction of Equity derivatives market in Kenya?

END: Thank you for your participation