# AN INVESTIGATION INTO FACTORS INFLUENCING THE DEVELOPMENT OF DERIVATIVES MARKETS IN KENYA

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## DECLARATION

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

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## DEDICATION

I dedicate this work to:

To my Lord Jesus Christ for seeing me through by His grace, to my late brother Edwin, for always believing in me; thank you and may your soul rest in peace and lastly to Andrew Mbwi, the Director of Cooperative Audit, for being the most understanding and encouraging boss.

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## DEFINITION OF TERMS

**Arbitrage-** This is the simultaneous purchase and sale of the same underlying in two different markets in an attempt to make profit from price discrepancies between the two markets.

**Derivatives-** These are financial instruments whose value is derived from the performance of other instruments like assets, interest rates, currency exchange rates or indexes.

**Derivatives markets-**These are markets where the trades of derivatives products/ contracts take place.

**Forward contract-** This is a customized contract between two entities, where settlement takes place on a specific date in the future at today's pre-agreed price.

**Futures-** This is an agreement between two parties to buy or sell an asset at a certain time the future at the certain price. Futures contracts are the special types of forward contracts in the sense that are standardized exchange traded contracts.

**Idiosyncratic risk-**This is the firm specific risk and is risk to which only specific agents or industries are vulnerable.

**Netting-** This is the process of reducing multiple obligations with various counterparties to fewer obligations or a single obligation.

**Options-** There are two types: call and put options. Call option gives the holder the right but not obligation to buy Underlying asset, at a give price on or before a given future date. Put option gives the buyer the right but not the obligation to sell a give quantity of the underlying asset at a given price on or before a given date.

**Repos-** Also known as a repo, RP, or sale and repurchase agreement, is the sale of securities together with an agreement for the seller to buy back the securities at a later date.

**Swaps-** These are private agreements between two parties to exchange cash flows in the future according to a prearrange formula. They can be regarded as portfolios of forward's contracts.

## ABBREVIATIONS

| | | |
|---|---|---|
| BIS | - | Bank for international settlements |
| Caricom | - | Caribbean Community |
| CBOT | - | Chicago board of trade |
| CBK | - | Central Bank of Kenya |
| CMA | - | Capital Markets Authority |
| CME | - | Chicago mercantile exchange |
| CPI | - | Consumer Price Index |
| GDP | - | Gross Domestic Product |
| FDI | - | Foreign direct investment |
| FII | - | Foreign institutional investor |
| IMF | - | International Monetary funds |
| KACE | - | Kenya agricultural commodity exchange |
| LIBOR | – | London Interbank Offered Rate |
| MFA | - | Midwest finance association |
| NSE | - | Nairobi Securities Exchange |
| NYCE | - | New York Cotton Exchange |
| OTC | - | Over the counter |
| SSA | - | Southern Sahara Africa |

## ABSTRACT

The trading with derivatives has developed over a long period of time though the greatest impact has been felt over the last three decades. Derivatives markets have changed overtime from trading with the simple contracts to very advanced and exotic instruments. Though Kenya has been lagging behind in the derivative markets development, a lot of ground work has been put in place for the trading with legislature in place and the CMA putting up a department to oversee the development. Lack of sufficient ways to access finance due to shallow markets and insure on fluctuations on various items makes it very important to understand why derivatives markets have not been developed. There are many economic benefits attributed to economies with derivatives markets and as well a lot of challenges having been identified in developing the markets. The research objectives and research questions were set out and the scope of study limited to Nairobi. Descriptive research design was used in the study. The population from which a census was drawn was from the Nairobi Securities Exchange brokers financial/investment advisors and key staff from the Capital Markets Authority of Kenya as a result of purposive non probability sampling technique. Both primary and secondary data were used. Data collected was validated, edited and coded then analyzed using Statistical Package for Social Sciences (SPSS) software. Descriptive statistics such as percentages and frequencies were used to summarize the data. Data presentation methods used are tables, charts and diagrams. From the research findings it was identified that government spending on financial infrastructure was inadequate for successful derivatives markets and that taxation hampers the progress of derivatives markets. Derivatives cannot diminish the ultimate control that the monetary policy has over the levels of inflation. On the other hand, high levels of foreign exchange reserves will greatly enhance derivatives trading and facilitates cross border capital flow. The regulatory measures put in place were adequate. It was noted that there will be the likelihood of scarce supply of derivatives instrument for hedging in the local market since the demand for derivatives is likely to be low. Derivatives trading will enhance market turnover of the underlying markets and will also improve the GDP of the country. The trading in the derivatives markets greatly influenced by local institutional and retail investors as well as by overseas institutional and retail investors. The success of the derivatives markets in Kenya will largely be influenced by political environment, knowledge of derivatives, participants' attitude, financial infrastructure and foreign competition. It was identified that the support received from the central government in the development of derivatives markets could be rated as fair while the awareness levels about derivatives instruments by investors rated as low. The main reason for trading on derivatives will be hedging. The derivatives markets will lead to increased transparency in the way of doing business through increased information disclosure. The study thus recommends that there is need for government to increase its intervention through increased spending on financial infrastructure, putting in place tax laws that will not discourage derivative trading. Also sensitization should be carried out to create awareness to the general public on role of derivatives trading.

# CHAPTER ONE
# INTRODUCTION

In this chapter the author discuses the background of the study, the historical development of the derivatives and importance of derivatives markets in an economy. The chapter further states the problem statement, the objectives of the study, the justification scope and the limitations of the study.

## 1.1 Background of the study

Dodd (2002) stated that, a complete view of capital markets is a four legged table made up of securities markets, banking industry, insurance and pension funds and the derivatives markets. Derivative markets are investment markets that are geared towards the buying and selling of derivatives mainly for risk management and price discovery. Derivatives markets are divided into two; the over the counter (OTC) and the exchange markets. Though both exchange-traded and OTC derivative contracts offer many benefits, the exchange traded contracts have rigid structures compared to the OTC. The exchange-traded derivatives market works through a clearinghouse or exchange which is central to its operation and with standardized contracts. OTC derivatives, on the other hand, are private contracts between two parties, typically either between the proprietary trading desks of two banks, or between a bank and one of its customers and these contracts are heterogeneous (González-Hermosillo, 1994).

### 1.1.1 Historical development of derivatives

When commercial trading started several years ago, it was meant to solve the problems which were occasioned by barter trade due to the nature of the products traded in. In barter trade, the trading was not organized or controlled thus each party was to trust the other in order to trade. Most of the products were natural products of the soil. Between 16th and 18$^{th}$ century, trading of commodities in the western world utilized agreements that are similar to forward contracts. The problem was that the agreements were still between parties that must had to deal with each other directly and the parties had to trust each other party for trade to take place.

Around 1730, the Dojima Rice Exchange was established with the full support of the government in Japan. At the exchange, there were two types of rice markets; the Shomai and Choaimai. The Choaimai was where the first futures market was operating. This market had all the features of a modern derivatives market with standardized agreements, a well structured clearinghouse with limited contract and settlement periods set. These characteristics of the exchange led to the Dojima Rice Exchange to be considered to be the first futures market (Chance, 1995).

Modern markets for derivatives are believed to be in existence for around 300years connected with the historical situation in United States of America. Chicago Board of Trade (CBOT) was established in 1848 in order to bring order and control in the markets (Pathak, 2011). The establishment of the CBOT solved the problem of credit risk among the trading parties and provided centralized location to negotiate formal contracts by developing rules and product standards, which allowed the grain market to operate more efficiently,Pathak (ibid). Existence of formal contracts enabled the traders to hedge effectively against fluctuations in the market. All this time only forward contracts were traded.

Later on, in 1870 the New York Cotton Exchange (NYCE) was founded and in 1874 way after the Chicago Produce Exchange, which was succeeded by the establishment of Chicago Mercantile Exchange (CME) founded in 1919. CME was the greatest bourse for derivative trading ever and can be considered as a spin-off of CBOT (Pathak, 2011).Standardized agreements were introduced with the exchange in 1865 as the counter party futures agreements similar to what the Japanese were doing 130 years earlier.

With the advances in finance theory in the 1970's, with Fischer Black and Myron Scholes 1973 paper, "The Pricing of Options and Corporate Liabilities", derivatives gained widespread use (Chance, 1995). That same year the CBOT opens the Chicago Board Options Exchange. Whereas in 1970s many new derivative instruments emerged, in

1980s there was typical use of these new instruments on various new underlying assets. In 1982 trading with options on sugar and futures on gold began (Chance, 1995).

In 1990s the options on share indexes, currencies, bonds, futures and interests swaps (Flavell, 2010). At the end of 1990s, one can trade even the derivatives on weather. Close of the 20th century, the competition was tough and trading with derivatives exploded with the growth of Information Technology and Information Systems (Giddy, 1994). The logic of derivative trading changed from simple protection against price volatility of the underlying assets to protection against financial risk connected with the unexpected price volatility of shares, bonds, or currency exchange rate (Pathway, 2011).Most recently, in June 2009, equities were developed to allow traders to effortlessly invest or hedge real estate risk thus allowing even greater access to property derivatives for small investors since equity-trading accounts have smaller deposit requirements.

### 1.1.2 Importance of derivatives markets in the economy

Derivatives markets can facilitate the management of financial risk exposure, since they allow investors to unbundle and transfer financial risk. In principle, such markets could contribute to a more efficient allocation of capital and cross-border capital flow, create more opportunities for diversification of portfolios, facilitate risk transfer, price discovery, and more public information (Tsetsekos and Varangis, 1997). Further they argued that derivatives exchanges contribute to the development of the financial infrastructure of a country by providing the links among cash markets, hedgers, and speculators. Ilyina (2004) stressed that financial derivatives are essential for the development of efficient capital markets because of their contribution to a more efficient capital allocation, facilitation of cross-border capital flows, and creation of opportunities for portfolio diversification.

Dodd (2002) stated that the economic functions of derivatives are close complements 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.

In doing so, derivatives facilitate the flow of capital by unbundling risk and redistributing it away from investors who did not want it and towards those more willing and able to bear it. Further, Dodd (2002) stated that an important incidental benefit that flows from derivatives trading is that it acts as a catalyst for new entrepreneurial activity. The derivatives have a history of attracting many bright, creative, well-educated people with an entrepreneurial attitude. They often energize others to create new businesses, new products and new employment opportunities, the benefit of which are immense.

Singh (2009) and Dodd (2002) argue that derivatives markets also help to transfer risks from those who have them but may not like them to those who have an appetite for them. This is most important function of derivatives. Risk management is not about the elimination of risk rather it is about the management of risk. Financial derivatives provide a powerful tool for limiting risks that individuals and organizations face in the ordinary conduct of their businesses. Vashishtha and Kumar (2010) notes that effective use of derivatives can save on cost, and it can increase returns for the organizations. Due to their inherent nature, derivatives are linked to the underlying cash markets. Dodd (2002) emphasizes that with the introduction of derivatives, the underlying market witnesses higher trade volumes because of participation by more players who would not otherwise participate for lack of an arrangement to transfer risk.

In the arguments of Vashishtha and Kumar (2010), derivatives markets provide efficiency in trading by providing additional economic benefits, by helping to complete otherwise imperfect commodity or securities markets and they can also help arbitrage between markets so that prices can more efficiently reflect all the relevant information in the market. Further they help to keep a stabilizing influence on spot prices by reducing the short-term fluctuations Derivatives markets also help reduce market transaction costs in that since they are a form of insurance or risk management, the cost of trading in them has to be low or investors will not find it economically sound to purchase such insurance for their positions (CFA, 2009). In spite of the fear and criticism with which the derivative markets are commonly looked at, these markets perform a very important function in the

economy. Siopis and Lyroudi (2007) found out that the operation of futures markets and the introduction of futures contracts trading in stock markets have lead to a decrease in the volatility of the underlying index which results from the increase in the market liquidity. The increased market liquidity enables investors to hedge their positions more effectively and thus, reduce their risk.

In conclusion 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. 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. Derivatives markets also 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. 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 peak and depths on price fluctuations and leads to price stabilization effect in the cash market for underlying asset. The derivatives market is a step in the right direction for increased access to finance and financial risk management, financial market deepening and to meet the challenges of globalization (Olatandun, 2009).

### 1.1.4 Global Derivatives Market

Historically, large derivatives exchanges were almost exclusively located in the US. Today, Europe is the most important region in the global derivatives market, with 44 percent of the global outstanding volume in derivatives trade significantly higher than its share in equities and bonds. Strong European derivatives exchanges appeared only after deregulation and demutualization in the 1980s and 1990s. These European exchanges were more independent of their users. The European exchanges revolutionized trading by introducing fully electronic trading and by setting industry standards (DBG, 2008). In India Derivatives markets have been in existence in one form or the other for a long time.

In the area of commodities, the Bombay Cotton Trade Association started futures trading way back in 1875. In 1952, the Government of India banned cash settlement and options trading. Derivatives trading shifted to informal forwards markets. In recent years, government policy has shifted in favour of an increased role of market-based pricing and less suspicious derivatives trading. Derivatives trading commenced in India in June 2000 after Securities and Exchange Board of India (SEBI) granted the final approval for the reintroduction. Since the introduction in 2000, financial derivatives market in India has shown a remarkable growth both in terms of volumes and numbers of traded contracts (Vashishtha and Kumar, 2010).

### 1.1.5. Derivative Markets in Africa

Alexandria's futures market in Egypt is one of the oldest in the world. The first locally recorded cotton transaction took place in 1865 in Alexandria's Café de l'Europe. It was there that cotton merchants met and cut deals based on supply and demand. Over the years, business grew and in 1899, Alexandria Cotton Exchange was created. In 1909, cotton forward contracts were legalized. However, after a series of agrarian reform laws, the Bourse was nationalized in the 1950s and subsequently abolished. Initiatives about the re-introduction of the exchange are revived from time to time (MFA, 2008).

In Africa, South Africa is in the lead with other sub-Saharan countries debating whether it is beneficial to have the derivatives market, taking into consideration the costs involved in providing the necessary infrastructure and the regulatory framework into place. The development of exchange-traded derivative instruments in South Africa started in the late 1980s. The South African Futures Exchange (SAFEX) was informally launched in 1987 and over the years evolved as a leading emerging market. It started trading on financial futures including options on futures- and gold futures, 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. Later options on agricultural products were launched in 1998. In 2001, JSE Securities Exchange, in South Africa, absorbed SAFEX to become Africa's most active and important commodity

exchange. JSE also trades on its own single-stock futures contracts, index futures and options, and some commodities futures (MFA, 2008)

The latest to establish a successful derivatives market in Africa is Mauritius. Mauritius started its derivatives trading in September 2010 and by June 2011, it had already experienced a trillion dollar turnover in trading. A number of other countries are looking into the possibility of introducing commodity exchanges such as Côte d'Ivore, Ghana, Uganda and Morocco. Some other like Malawi, Zambia and Nigeria have had short-lived exchanges for which factors including inappropriate trading software, staff training and government intervention undermined their success (mfa,2008).

**The status of development of derivatives in Kenya**

In Kenya there is the existence of the Kenya agricultural commodity exchange (KACE) which deals with agricultural products. KACE was established in 1997, as a forum for trade in spot and forward contracts for a range of commodities. KACE is a private sector firm launched in Kenya in 1997 to facilitate competitive and efficient trade in agricultural commodities, provide reliable and timely marketing information and intelligence, provide a transparent and competitive market price discovery mechanism and harness and apply information and communication technologies (ICTs) for facilitating trade and information access and use in Kenya and subsequently scale out to the East African Community (www.kacekenya.co.ke). Among the countries that Kenya is looking up to as a model in the setting up of an agricultural commodity derivatives market is South Africa.

The Kenyan government is putting together a derivatives exchange. At present, there are no exchange traded derivatives or documented over-the-counter derivative markets in the country. The first steps have already been made in this direction as relevant legislation is being put in place. The then finance minister Uhuru Kenyatta in the 2011 budget talked of the development of a derivatives exchange which is a very welcome move. The capital markets authority of Kenya is in the process of establishing the exchange and established

a department to cater for this and the request of proposals has already been done with submission of the financial proposals already in progress. Currently Kenyan companies/ firms that need to hedge use foreign exchanges through brokers.

## 1.2 Statement of the problem

As stated in the parts of literature in the paper, derivatives markets enable increased access to finance by allocating finances to the most suitable investments; enable financial risk management by providing businesses with the choice of obtaining insurance against price fluctuations and enhance financial market deepening and assist economies to meet the challenges of globalization by contributing to development of stock market and influencing cross border flows. According to Olatundun (2009), emerging economies are characterized by shallow financial markets and inadequate access to finance which is a major problem and derivatives trading would greatly assist in the solving of the problem. Currently at the NSE, there is no trading on derivatives even though derivatives are known to supplement other sources of financing and insurance in financing investments. With the absence of derivatives investors are left with limited sources of these services. In Kenya, investment activities are financed in primary markets by IPOs and secondary markets at the securities exchange. To date no study has been conducted to provide explanation of the absence of the derivatives in the securities exchange, yet in the developed economies and some emerging countries derivatives are the most popular sources of insurance in financial markets and forms of financial deepening. This is the gap in knowledge that the study was established to fill.

## 1.3 Objectives of the study

### 1.3.1 General objective

The general objective of the study was to establish the main factors that influence development of efficient and successful derivative markets in Kenya.

### 1.3.2 Specific objectives

The specific objectives of the research were:

1. To evaluate how the macro economic and structural policy influence derivatives market.
2. To determine how the legal and regulatory framework influence development of derivatives market.
3. To identify the most suited derivatives instrument for the Kenyan market.
4. To assess the role of liquidity to a well functioning derivatives markets.
5. To find out the impact of derivative markets in the Kenyan economy.

## 1.4 Research Questions

In carrying out the study, the study was guided by the following research questions derived from the objectives of the study:

1. How does the macro economic and structural policy framework influence derivatives market?
2. How do the legal and regulatory frameworks influence development of derivatives market?
3. What are the most suited derivatives instruments for the Kenyan market?
4. What role does liquidity play in derivatives markets?
5. What impact will derivative markets have in the Kenyan economy?

## 1.5 Scope of the Study

The study was carried out in Nairobi and focused on the NSE brokerage firms, financial/investment advisors, CMA analysts and draw input from World Bank and BIS source materials on derivatives markets.

## 1.6 Significance of the study

The government may find the need to accelerate the development of derivatives markets to attract foreign capital which would improve the balance of payments for the country thus improving the economic growth of the country since this is evident from the impact

the markets have created in Mauritius. Also with the price discovery process the products of the country would be properly and well valued and this would enable proper channeling of global savings to the most beneficial investment. Introduction of derivatives market would lead to more stringent regulations and thus requiring more transparency and voluntary disclosure which would lead to spillover in all business activities in Kenya.

Further, the current financial systems are far from covering financing needs for government and firms in Kenya leading to the government having to mobilize external resources to fill their financing gaps through loans in foreign currencies and foreign interest rate. Since any fluctuations in foreign currency or foreign interests likely affect the debt repayment services by government and firms the derivatives trading would help in hedging against fluctuations and thus lock-up the prices to pay and thus be able to plan ahead without the price worries. Influential policy makers have suggested that access to derivatives can enhance macroeconomic development and that is why it is important to determine what country specific factors, promote or inhibit the use of derivatives especially if these factors can be influenced by policy. In addition, the creation of these markets would enhance growth in skills and capabilities in the financial industry through working with derivatives and aid it to come up to international standards. The study is expected to create interest in derivatives trading on the Kenyan citizens and thus once the exchanges are launched there would be a beehive of activities.

### 1.7 Limitation of the study

Due to the limited financial resources available to the researcher, data collection was not done on all participants but was limited to the NSE stock brokerage firms and CMA regulators. The findings were generalized to represent the entire possible participants view in terms of the derivatives markets. This was expected to be overcome by the fact that the CMA are both the regulators and developers of the capital markets while the NSE brokerage firms act on behalf of investors and thus they can relay the fears and concerns of all participants.

There were challenges in getting sincere and informed responses from respondents. The researcher had anticipated to overcome this problem by assuring respondents that the information they give in the study would purely be for academic purposes. There also was time constraint which limited the ability to gather all the required and relevant information in a short period of time. The researcher overcame this limitation by employing the services of research assistants in data collection.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1. Introduction

This chapter examines the theoretical review of factors affecting the development of derivatives market and the empirical information available in the area of development of derivatives markets is reviewed.

## 2.2 Theoretical review

Capital market development is an important component of financial sector development and supplements the role of the banking system in economic development. Udo (2004) stated that Developed economies are characterized by high financial deepening which has, in turn, led to the growth and development of the entire economy. Countries with high financial deepening are likely to have the potential to generate positive employment, improved productivity and growth. Further Udo (2004) noted that continued decrease in the size of financial assets in most SSA countries due to non-existing or poor functioning of the capital markets, as well as the absence of structural reforms relating to financial institutions, contributes to shallow financial deepening. Dabla-Norris (2012) refers financial deepening to the process of enhancing and broadening financial systems by increasing the depth, liquidity, efficiency, and volumes of financial institutions and markets, diversifying domestic sources of finance, and extending access to banking and other financial services.

According to Ngugi et al. (2009) capital market development makes the financial market move towards a level of complete market which is the financial deepening. When the capital markets develop, they offer opportunities to the investors to diversify their financial asset basket and the firms' opportunity to diversify the sourcing of finance. Moreover, access and size and depth have significant implications on the real activity, economic growth and welfare. Derivatives markets are believed to bring about financial deepening in an economy through the various services they provide.

### 2.2.1 Theory of market microstructure

This study on derivatives markets is based on the theory of market micro structure which is a field in economics and finance concerned with the details of how exchange occurs in markets, most commonly financial markets. The microstructure theory focuses on how specific trading mechanisms affect the price formation process. Market microstructure research typically examines the ways in which the working process of a market affects trading costs, prices, volume and trading behavior (Sewel, 2007).Market microstructure deals with issues of market structure and design, price formation and price discovery, transaction and timing cost, information and disclosure, and market maker and investor behavior according to O'Hara, (2007) market microstructure is the study of the processes and outcomes of exchanging assets under a specific set of rules. In addition market micro structure examines trading in instruments. These instruments according to Harris (2002) include common stocks, preferred stocks, bonds, convertible bonds, warrants, options, futures contracts, foreign exchange contracts, swaps, reinsurance contracts, commodities, pollution credits, water rights and other betting contracts.

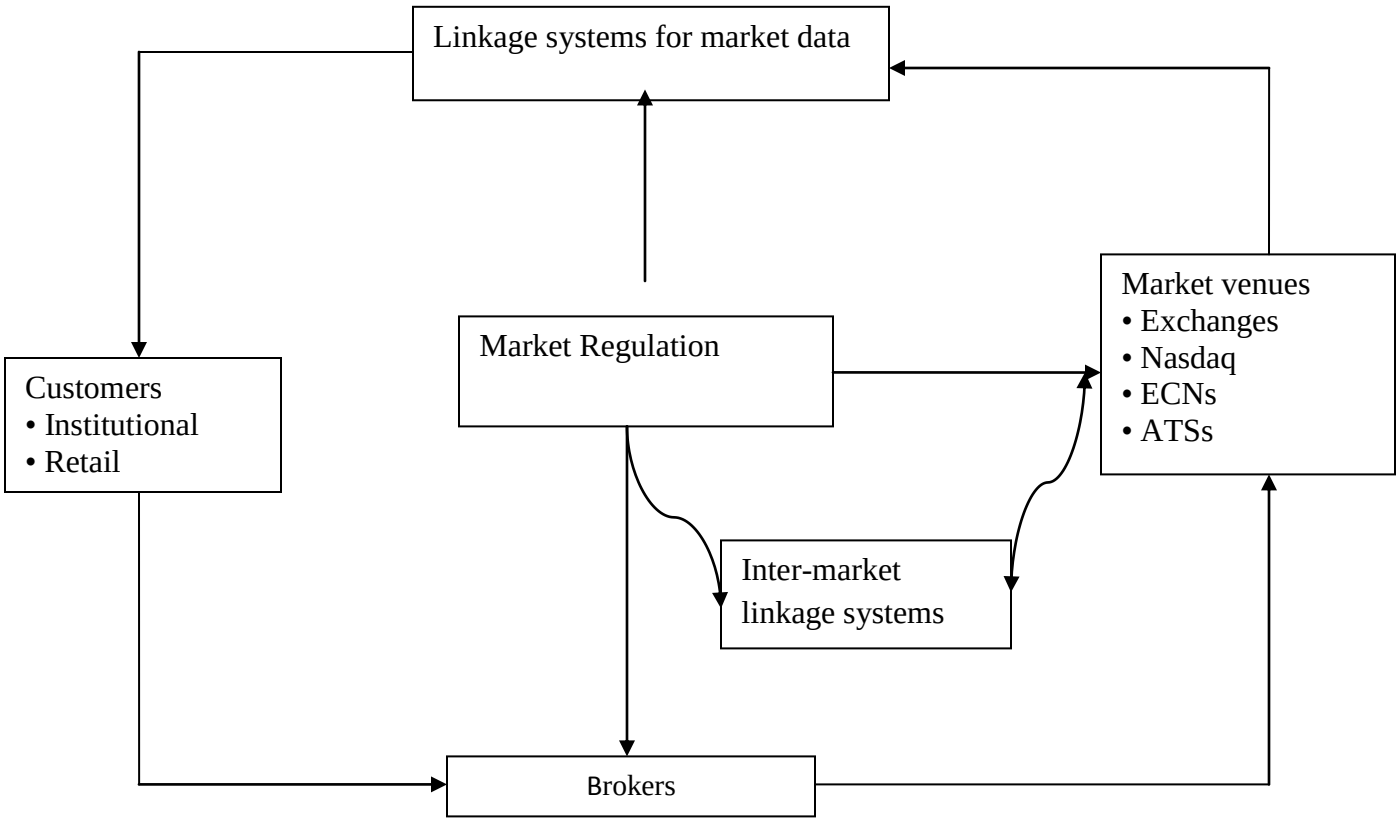
The market structure and design focuses on the relationship between price determination and trading rules of the derivatives. One of the important questions in microstructure research is how market structure affects trading costs and whether one structure is more efficient than another. Harris (2002) described the market structure as consisting of trading rules, the physical layout, the information presentation systems and the information communication systems of the market. This determines what traders can do and what they can know and as a result affecting the power relationships among traders and their profitability. Market infrastructure allows the smooth and efficient operation of the derivatives exchange and hence it should be well structured. A well structured market will provide efficient price discovery, low cost risk management and help capital markets in raising capital (Dodd, 2007).

The growth in information and computing technology has changed how people trade how trade will occur in future. The information and computing technologies have a big role to

play in markets since markets are essentially information processing mechanisms. Markets process information about who want to trade, how much to trade and at what prices. The resulting prices aggregate information about fundamental values (Harris, 2002).The price formation and discovery focuses on the process by which the price for an asset is determined including both static issues such as the determinants of trading costs and dynamic issues such as process by which prices come to impound information over time (Madhavan, 2000).The evolution of technology has great influence the exchange architecture. Modern finance theory treats a derivatives exchange as an information process or a mechanism that facilitates information production and transfer of information across agents and constituencies with the ultimate objective of improving fair price discovery **(**Tsetsekos, 1997).The transaction cost and timing cost focuses on the impact of transaction cost on investment returns and execution methods. Transaction costs include order processing costs, adverse selection costs, inventory holding costs, and monopoly power. According to Harris (2002), transaction costs include all costs associated with trading. These include explicit costs, implicit costs and missed trade opportunity costs. Traders must effectively manage their costs to successfully trade.

The information and disclosure focuses on the market information and transparency, and the impact of the information on the behavior of the market participants. Transparency is the ability of market participants to observe the information in the trading process (O'hara, 1995). Information-based microstructure models have demonstrated that the information available in the trading process can affect the trading strategies of market participants. It thus follows that the market equilibrium depends on the degree of transparency. Differences in transparency may play a significant role in the creation of liquidity. As a factor in traders' strategic decisions, transparency can influence their willingness to participate in the trading process. Transparency is also a crucial consideration in the competition among markets for trading volume, and thus in the prospects for further fragmentation of liquidity. The market microstructure on derivatives basically looks at how derivatives trade; the contract cycles, the operations of the clearing house in the execution of the contracts, and the role of arbitrage in market efficiency. It

also looks at the role of liquidity in making arbitrage cheap and convenient through the low transaction costs enabling small mispricing to be removed by arbitrageurs (Harris, 2002; Madhavan, 2000; O'Hara 1995).




Source: Hasbrouck(2004): Empirical Market Microstructure page 167

**Figure 2.1 Market components and relationships**

**Key**

NYSE-New York stock exchange (represents the listed market; the exchange)

Nasdaq- represents the unlisted market

ECN- electronic communication networks (market organized as an electronic limit order)

ATS's-alternative trading systems (where trade occurs)

### 2.2.2 Macroeconomic factors

Policy and institutional factors play a key role in development of the capital markets. Investors require confidence, protection and information to participate in the market. Firms look for fiscal incentives, ease of entry and the internal firm policy (Ngugi et al.,

2009). Good macroeconomic variables and structural policies lead to reduced inflation, promote continuing high growth rates of output and employment, contain fiscal deficits to levels that can be financed internally and externally without difficulty, lead to strengthened banking system, and a comfortable level of foreign exchange reserves be secured and, those that ensure the population's basic needs are met and that the growth process contributes to a reduction of poverty (Bank of Guyana, 1996). Macroeconomic policies and political fundamentals need to be strengthened to attract and sustain foreign investors' interest in the derivatives market. Weakness in the domestic economic and political climate and domestic financial systems are often accompanied by a reversal of capital flows and a reduction in emerging markets' access to international capital (Olatundun, 2009)

### 2.2.3 Legal and Regulatory framework of derivatives market

Legal, regulatory, and prudential frameworks should be developed for purposes of governance and supervision of the markets. The three basic objectives of regulation are to protect market integrity, to ensure fierce levels of competition, and to prevent fraud (Sewel, 2007).

#### a) Clearinghouse privileges and taxes

Clearinghouse privileges and taxation are the main legal issues that need to be addressed in the development of derivatives markets. Creating the desired contract structure for trading in the exchanges can be complicated and thus the clearinghouses needs protection of the law and also make necessary efforts to avoid ranking as regular creditor in margin funds in events of bankruptcies for it to operate effectively. This may require capital markets laws to be changed to accommodate derivatives trading needs (Alberta Market Solutions Ltd., 2003). Taxes tend to constitute an increase in explicit transaction costs, which could affect market liquidity. Such taxes can become impediments to the creation of deep and liquid markets in the sense that raising trading costs can constitute an entry barrier, attracting fewer dealers and investors (Ahuja, 2006). Government should weight the potential increase in tax revenues against the potential decline in market liquidity. If

imposed, should be levied so as to minimize their impact on market liquidity. Furthermore, certain tax exemptions can create further incentives to the entrance of new investors in the market. For instance, reducing taxation for foreign investors can sometimes contribute to increase investors' shape in number and investment horizons (Le-Grazie and Fernandez, 2007).

**b) Licensing requirements, trading and clearing rules**

For new derivatives trading, the regulator needs to establish its policy on licensing intermediaries. This extends to clients of those intermediaries and proprietary traders so that all market users will need to make preparations to participate in the market. This also extends to the clients of these advisors so that it is mandatory for clients to sign paperwork asserting that they have read the warnings and understand the risks. In this case the exchange needs to develop training courses and training materials and prepare users; intermediaries and investors well in advance of the market launch (Alberta Market Solutions Ltd., 2003).Most of the regulatory requirements manifest themselves in the trading and clearing rules. The rules cannot be completed until all the legal and regulatory research and negotiation has been completed. If the derivatives market is being created by the operator of an existing exchange and clearinghouse, the task of adding derivatives rules is simplified since there are many areas particularly in the trading rules which can be common to both markets. The period of time the market operator takes to draft, review and finish new derivatives rules should not be underestimated (Dodd, 2007).

**c) Financial integrity**

i) **Prudential or financial safety requirements** are required to not only protect markets and funds from credit and systemic risk, but also to ensure that only those persons who are deemed credit-worthy and have a stake in the proper conduct of business should have access to the markets (Saksena, 2003).This will be done through requirements on registration and reporting, capital and collateral requirements and customer protection regulation.

**ii) Registration and reporting:** Registration is a means to ensure that all financial institutions meet minimum standards, that the regulatory authorities have a census of all relevant financial institutions, and that it provides an easy way to identify illegitimate businesses and to shut down illegal activity. Reporting requirements should apply to all derivatives dealers and major market participants. The information acquired by the regulatory authority through these reporting requirements helps their efforts in market surveillance. The public interest is best protected when the regulatory authority has sufficient information to control malfeasance and help prevent market disruptions caused by fraud and manipulation (Dodd, 2007).

**iii) Capital and collateral requirements**: The regulators should require minimum capital requirements for all derivatives dealers and set minimum collateral requirements for derivatives transactions. Especially important is the use of capital requirements to limit the amount of foreign currency exposure at financial institutions. Collateral requirements for financial transactions function like capital requirements for financial institutions; both provide a buffer against financial failure, and both provide incentives to economize on risk-taking by raising the cost of holding open positions. Adequate collateral usage will reduce the need for capital by reducing the collateral adjusted exposure to counterparty credit risk(Dodd, 2007).

**iv) Customer protection regulation**: Customer protection concern is usually addressed by regulatory standards imposed on financial intermediaries relating to the integrity, skill and diligence, conflicts of interest, conduct of business, including order execution, restrictions on misuse of information, prohibition on misrepresentation, disclosure standards and the availability of procedures to resolve customer grievances (Saksena, 2003).

### 2.2.4 The Derivatives Instruments

There are various derivatives contracts traded in various exchanges. The most commonly traded contracts are from options futures, forward contracts and swaps. The contracts are based on various instruments as discussed below.

**a) Equity derivatives**

Equities tend to be the most actively traded and closely followed financial instruments in most markets, both emerging and developed. Equity derivatives offer retail investors another way to participate in the price action of an underlying security. The value of an equity derivative comes, at least in part, from the value of the underlying security. Investors who trade in equity derivatives seek to transfer certain risks associated with the underlying security to another party (CFA, 2009).

**b) Currency derivatives contracts**

Currency derivatives contracts are foreign exchange based derived contract. There are various types of currency derivatives contracts. These contracts can be based on any of the world currencies. They are very common derivatives due to the nature of currencies appreciating and devaluating against each other **(**CFA, 2009).

**c) Interest rate derivatives**

Financial instrument based on an underlying financial security whose value is affected by changes in interest rates are known as Interest Rate Derivatives. Interest-rate derivatives are hedges used by institutional investors such as banks to combat the changes in market interest rates. Individual investors are more likely to use interest-rate derivatives as a speculative tool hoping to profit from their guesses about which direction market interest rates will move (CFA, 2009).

**d) Commodity derivatives**

Commodity derivatives contracts are contracts derived from certain commodities. The good thing about commodities is that most countries have a local commodity which is of particular importance to the local community whether it be rice, gold, palm oil or livestock which can attract trading interest even if there already exists an international benchmark (CFA, 2009).

**e) Credit derivative contracts**

Credit derivatives are financial tools used to shift risk from one party to another. By allowing the mitigation of risk by spreading it out over a number of investors, companies

and banks are able to see increased profits since they are no longer alone when it comes to facing the risk of a credit event or a loan. The value of the derivative is derived from the value of the bond held by the bank. The credit derivative allows investors to invest in the risks of a firm without actually having to purchase that firm's bonds or loans (CFA, 2009).

### 2.2.5 Liquidity and derivatives

Liquidity is the ability to trade large size quickly at low cost when one wants to trade. It is the most important characteristic of a well functioning market (Harris, 2002). Liquidity is often thought of in terms of trading quickly, about trading large size and about trading at low cost. Liquidity is a bilateral search where buyers such for sellers and sellers search for buyers. When a buyer finds a seller who will sell at mutually acceptable terms the buyer has found liquidity and likewise when the seller has found a buyer at acceptable terms the seller has found liquidity. Liquidity in the underlying market implies there is interest in the asset itself and therefore a demand for investors to use derivatives to hedge their exposure to that asset. Lack of sufficient liquidity in most newly initiated market results to relatively high cost of hedging and inhibits the growth of contracts (Dodd, 2002). And if the cross markets provide more liquidity, the investors will prefer to use the cross markets even if they may have a lower hedge than the country's market. The role of liquidity is in making arbitrage cheap and convenient. If transactions costs are low, then the smallest mispricing on the derivatives market will be removed by arbitrageurs, which will make the derivatives market more efficient.

### 2.2.6The possible impact of derivatives market to the Kenyan economy

Internationally, the launch of derivatives has been associated with substantial improvements in market quality on the underlying equity market. Liquidity and market efficiency on Kenya's equity market will improve once the derivatives commence trading. Many risks in the financial markets can be eliminated by diversification. Foreign investors coming into Kenya would be more comfortable if the hedging vehicles routinely used by them worldwide are available to them. The launch of derivatives

markets is a logical next step in the development of human capital in Kenya since skills in the financial sector have grown tremendously in the last few years, due to the structural changes in the market.

At the larger level of the economy, well functioning derivatives markets will improve the market efficiency of the underlying cash market. It will improve the market's ability to carefully direct resources towards the projects and industries where the rate of return is highest and in turn this will improve the allocation efficiency of the market. By improving the allocation efficiency, a given stock of investible funds will be better used in procuring the highest possible GDP growth for the country. Therefore the real linkages will go from derivatives to market liquidity and market efficiency and then from market efficiency to GDP growth.

### 2.2.7 Factors that hinder the development of the derivatives market

There are several factors that hinder development of derivatives markets. The major contributory factors for success or failure of derivatives market are market culture, the underlying market including its depth and liquidity and financial infrastructure including the regulatory framework (Hathaway 1998).There are the allegations that derivatives disrupt the underlying market. There are also claims that they increase volatility and encourage needless speculation. A start-up exchange needs to be aware of these oppositions and be prepared to fight it with facts (Alberta Market Solutions Ltd, 2003).Inadequate competition in the underlying securities industry by brokers who were unfamiliar with the product, make derivatives trading sometimes appear unattractive. The political climate is very important in the development of capital markets as they due to the influence they have on foreign investors in a country. The political stability can be measured by political instability index, economic distress index, massive protests against the government, and frequent changes in cabinets. A country unstable politically has little chances of developing successful derivatives market.

In some markets, a foreign competitor may already have dominated trading in the most attractive derivatives contracts. However, even if a foreign exchange operator has already created a competing derivatives contract, there are always significant home advantages not the least of which is that local investors are more likely to access a home market than an overseas market. In this scenario, foreign competition may not be a serious impediment in development of derivatives markets (Alberta Market Solutions Ltd, 2003).

Liquidity in the underlying market implies that there is interest in the asset itself and therefore a demand for investors to use derivatives to hedge their exposure to that asset. Lack of sufficient liquidity in most newly initiated market results to relatively high cost of hedging and inhibits the growth of contracts. And if the cross markets provide more liquidity, the investors will prefer to use the cross markets even if they may have a lower hedge than the country's market. Lack of liquidity will inhibit potential market makers and other suppliers of liquidity ability to hedge effectively. Liquidity is very critical for markets in benchmarking rates or prices (Dodd 2002). The IMF (March, 2003) cited reasons for the underdevelopment of most local derivatives markets as the underdevelopment of the underlying securities markets among other issues. The report stated that it may be difficult to introduce an index future into a market dominated by one stock or by a very small number of stocks especially if there is a margin trading. In this case, the liquidity may be so efficiently focused on those stocks that the introduction of a futures contract has no competitive appeal (Alberta Market Solutions Ltd, 2003)

Training and the introduction of expert personnel is the backbone to the development of the derivatives market. Financial derivatives transactions have a high technical and complex nature fundamentally different from that of the traditional banking business (Tian, 2005). There is the need for experts in the derivatives trading and risk management to have high-quality and complex knowledge structure on various aspects derivatives and be familiar with international markets operation rules and regulations and be in touch with the changes in the global markets in order to run efficient and sustainable derivatives markets. Lack of training and experts in derivatives field poses a great disconnect to

development of efficient derivatives markets (Alberta Market Solutions Ltd, 2003; Ransley, 2002).It requires a thorough understanding of the basic principles that regulate the pricing of financial derivatives.

Legal and regulatory framework should be clear and properly detailed. The laws and rules should also be operational and implemented for a successful derivates exchange. Though strong regulations can greatly hinder establishment of an exchange, lack of proper regulations can lead to improper trading and can encourage proliferations of illegal operations. Thus balanced rules and laws will encourage and safe guard and monitor trading. The regulators therefore have the job to ensure that investors are protected and will do this by deciding how to regulate the market (IMF, 2003).Many markets already have surrogate derivative products, which are effectively competitors to futures or options market. Warrants are nearly always classified as securities and only secondarily as derivatives. Most markets regulate derivatives differently from securities and require higher tests of client suitability (Alberta Market Solutions Ltd, 2003).

### 2.3 Empirical Review

Tsetsekos and Varangis (1997) stated that the process of introducing successful derivative products was lengthy and that both government regulations and a self-regulatory structure are usually needed. There is a fine balance between government's regulatory role and an exchange's self-regulations. The basic assumption is that having a well-functioning derivatives market is in the interest of all concerned. Governments could encourage and support assessments of the feasibility of such markets; to assure a broad domestic and foreign participation in the process; and to clearly define and implement the regulatory framework. It is up to the market participants and the exchanges to develop appropriate products, trading mechanisms, and self-regulatory systems compatible with the degree of market development.

Dodd (2002) stated that there are public interest concerns with derivatives in developing countries and broke down these concerns into two categories: Abuse of derivatives and the second the Misuse of derivatives. The former poses a threat to the integrity of markets

and the information content of prices while he described the misuse as the one which poses a threat to the stability of the financial sector and the overall economy by increasing systemic risk, risk of contagion and possibly serving as a catalyst, or an accelerator, to financial disruption or crisis. He also added that the presence of poorly structured and improperly regulated derivatives markets can generate new risks which renew levels of existing risk and create new economy wide vulnerabilities. Further he warned that even though individual firms and investors successfully hedge by shifting risk from those who can least beat it towards those who are more willing and able to do so, the entire financial sector now includes new and greater risks from the presence of this trading activity and the resulting outstanding derivatives contracts. IMF (2002**)** found out that the most common problems that constrain the development of local derivatives markets are relatively underdeveloped markets for underlying instruments, weak or inadequate legal and market infrastructure and restrictions on the use of derivatives by local and foreign entities.

Ersen and Karagozoglu (2003) found out that between 1989 and 2000, 183 derivatives contracts were introduced by 10 derivatives exchanges in emerging countries and that they were mostly futures contracts on financial assets. They indicated that 45 percent of the contracts launched by emerging country exchanges failed on average after 2.75 years and were no longer offered for trading. They show that among the successful derivatives, equity, interest rate and exchange rate contracts attain the highest volume of trade, respectively. This was as a result of a model developed based on macroeconomic, financial risk and market size variables to explain the trading in derivatives contracts in emerging markets.

Roopnarine et al. (2005) found out that investors and top executives in the caricom region were not ready or adequately prepared to allow the development and expansion of derivatives trading because of the fears they had on the derivatives. Roopnarine et al. (2005) further suggested that limited understanding of derivatives trading on the part of dealers and directors of institutions were the probable hindrances to the development of

the derivative market. Furthermore, for a local derivatives exchange to operate efficiently it is important for employees to have sufficient education and training in the use of derivatives. In addition Roopnarine et al. (2005) further recommended that; first education and knowledge among all market participants should be enhanced, then reinforce information standardization and disclosure at all levels of the derivatives industry, in addition they should ensure performance measurement and financial compensation schemes of employees are incentive-compatible. Moreover Roopnarine et al. (2005) added that government regulating mechanisms should be introduced only if self-regulating mechanisms fail, and that the Central Bank should have a more active role in the domestic derivatives market in pursuing credit risk reduction mechanisms such as netting and settlement agreements.

MFA (2008) identified several trends which have characterized the development of derivatives exchanges in emerging markets. First, the consolidation of exchanges within or between countries aimed to achieve higher efficiency and market depth, fostered by market globalization and communication technology improvements. Second, increasing cooperation denoted by the signing of memoranda of understanding between exchanges in different countries which serve a variety of purposes including personnel training, sharing of internet-based trading platforms, and joint listing of products. Third, a preference for financial over commodity derivatives products in the newly created exchanges in emerging markets contrasting with older exchanges, which usually started trading just commodities. Finally, the segregation of trading rights and membership rights allowing outside ownership of the exchange that is demutualization in stock and derivatives exchanges.

Olatundun (2009) pointed that South Africa success was as a result of their gradually relaxing exchange controls and further developing its financial market with the introduction of the currency futures market. Through ensuring proper regulation and enhanced supervisory capacity in place for derivatives markets in other sub Saharan African countries can increase liquidity in their markets since increased interest from

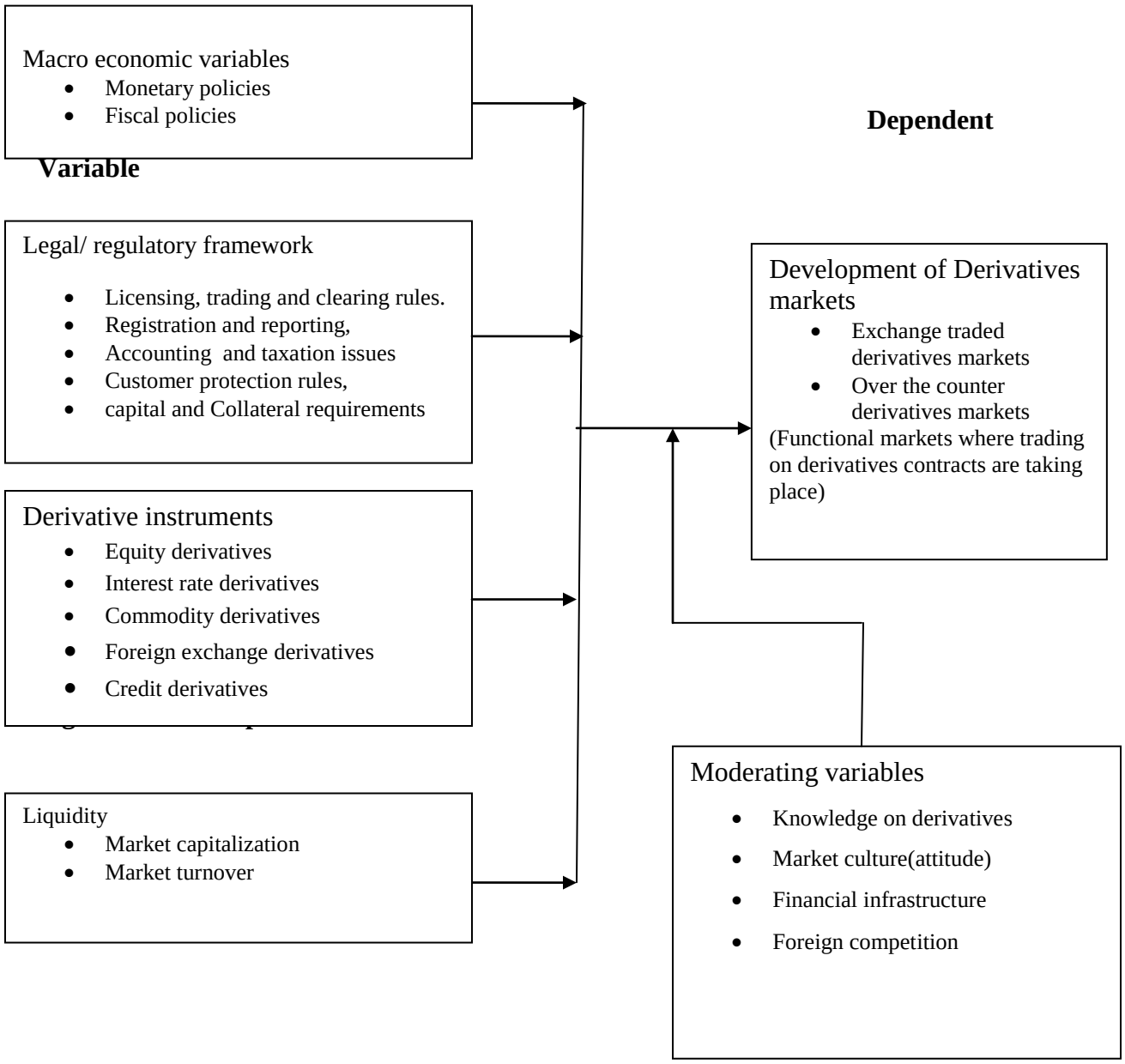
external investors enhances market liquidity and financial deepening. Olatundun (2009) further stated that development of derivatives markets can provide an alternative to bank credit as a source of funding and that this can help to create a more stable source of local currency funding, thereby cushioning the funding gap from capital flow reversals or sudden stops. Olatundun (2009) further added that hedging instruments accompanied by tight regulation and enhanced supervisory capacity would need to be available for the proper development of the derivatives market.

According to Mugo (2009) introducing derivatives exchange based on Asia's emerging markets, the study concluded that derivatives trading has immense benefits and stressed that emerging markets should strive to establish derivatives markets to enjoy the benefits of derivative trading as enjoyed by most developed markets. Also Mugo (2009) added that derivatives markets complement development of stock markets in many countries. Though she cautioned that the establishment of these markets should not be done blindly but first the prevailing conditions in a particular economy should be assessed. Further Mugo (2009) gave recommendations on how emerging markets should go about in establishing exchanges. The first suggestion is that the emerging markets can introduce the markets as independent exchanges or as departments or division of the existing stock market, secondly they can form joint ventures with already successful derivative exchanges by which they will benefit from the technology and knowhow of existing exchanges, thirdly, the emerging markets can first design and list their products in well established derivatives exchanges to gain popularity and lastly she suggested that markets in the same geographical region especially those that have cross-listed companies in their capital markets can establish regional derivatives market.

## 2.4 Conceptual Framework

This process discusses the conceptual framework for analysing the factors influencing development of derivatives market in Kenya.

**Independent Variable**



# CHAPTER THREE
# METHODOLOGY

## 3.1 Introduction

This chapter describes in detail the procedure that was adopted in this study with respect to the factors that influence the development of derivatives market in Kenya. Specifically the focus would be on the research design, the target population, sampling design and sample size, data collection tools and instruments and data analysis techniques.

## 3.2 Research Design

The research design which was used in this study is descriptive survey. Descriptive research determines and reports the way things are and also helps a researcher to describe a phenomenon in terms of attitude, values and characteristics (Mugenda and Mugenda, 2003). Also descriptive design allows researchers to gather, present and interpret information for purposes of clarification. According to Malhotra (1996), a descriptive study has its objective as a description of something in regard to who, what, where, when, and how, of a phenomenon, which is the concern of the current study hence this involved description, analysis and the interpretation of the prevailing circumstances during the time of the study. This method was the most appropriate for the research since this study seeks to investigate the factors influencing development of derivatives markets in Kenya.

## 3.3 Target Population

The target population is the 19 broker firms that participate in the NSE, but since two of these firms are under statutory management only the 17 would form the population since it would be more logical when they are eliminated from the study.Further, some staff of Capital Markets Authority with a population of 135were part of the respondents. The selection on the organizations was due to the roles they play in capital markets and the roles they were expected to play in the derivatives markets. This population was selected also because it was closely available and thus convenient in data collection.

### 3.4 Sampling design and sample size

All NSE brokerage firms were chosen except for the two firms under statutory management as noted because the selected population had fewer elements and another sampling method would not be logical (Mugenda and Mugenda, 2003). Therefore a census was conducted on the 17 Nairobi securities exchange brokerage firms (one investment/financial advisor).A selection of 17 analysts from the CMA staff was done. The numbers of the selected analysts were based on the information received from the CMA on those that were to play a great role in the development and regulation of the derivatives markets once they are functional. Purposive sampling technique was used in the selection of the participants from the brokerage firms and on the CMA staff. This is because the sampling technique allows the researcher to use cases that have the required information with respect to the objectives of the study. According to Dolores (2007) purposive sampling is the deliberate choice of an informant due to the qualities the informant possesses. The total number of respondents was therefore 34 analysts and advisors.

### 3.5 Data collection methods

Data was collected using semi-structured questionnaires developed from the objectives of the study and from the review of literature on the common characteristics that other countries in other emerging markets with developed derivative markets. The use of a semi structured questionnaire was to collect the primary data and give room to the respondents to give additional information where necessary to add weight to their preferences.

### 3.6 Validity and reliability of the instruments

Golafshani (2003) stated that validity and reliability are conceptualized as trustworthiness, rigor and quality and that validity would determine whether the research truly measures that which it was intended to measure or how truthful the research results are. The development of a content valid instrument would be achieved by a rational analysis of the instrument by raters familiar with the variable of interest. Raters would

review all of the items for readability, clarity and comprehensiveness and come to some level of agreement as to which items should be included in the final instrument. Golafshani (2003) explains reliability as the extent to which the questionnaire measurement will produce the same results on repeated trials. It is the degree to which an individual's responses on a survey would stay the same over time. That is why more items had been included in the scale to measure the variable of interest and thus the scale becomes more reliable.

### 3.7Data collection procedures

The developed questionnaire were sent to each of the 17 brokerage firm (financial/investment advisors) and to the 17 CMA staff together with the letter of introduction.The questionnaires were then distributed to all the respondents to fill in their responses via email and where possible hand deliveries to their offices with the help of the research assistants employed.

### 3.8 Data analysis techniques

The types of data collected were both qualitative and quantitative data. The qualitative data were coded and analyzed 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 were validated, edited and coded and then analyzed using descriptive statistics such as percentage and means. The data presentation methods used was tables, charts and diagrams. Quantitative data helped the researcher to obtain detailed information which enabled in coming out with useful conclusions and recommendations on factors influencing development of a derivatives market in Kenya. The data was be analyzed with statistical package for social sciences (SPSS) software.

# CHAPTER FOUR

# RESULTS AND DISCUSSIONS

## 4.1 Introduction

This chapter presents data analysis and discussions of the study findings on factors influencing the development of derivatives markets in Kenya. The analysis is based on research questions and objectives as identified in the study and then analyzed using SPSS version 16.0.The results have been presented in form of tables, charts and graphs.

## 4.2 Background information

### 4.2.1 Response rate

This study had targeted 34 respondents which were from the NSE broker firms and CMA. However questionnaires were sent to two respondents per the 17 broker firms that participate in the NSE and 17 to CMA. However, due to the study limitation, 31 responses were achieved which represent 91% response rate. This formed the basis for the analysis presented in this chapter.

### 4.2.2 Age of the respondents

Most (64%) of the respondents were aged between 30 and 39 years, 26% of the respondents were in the ages 20 to 29 years while 10% of the respondents were aged between 40 to 49 years. This suggests that most of the financial/investment advisors in the selected organizations were of the age brackets of 30 to 39 years while individuals over the age of 50 are not active as advisors in the securities market (Table 4.1)

**Table 4.1: Age of the respondents**

| Age categories | Frequency | Percent |
|---|---|---|
| 20-29 years | 8 | 25.8 |
| 30-39 years | 20 | 64.5 |
| 40-49 years | 3 | 9.7 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.2.2 Gender of the respondents

The findings indicate that majority (65%) of the respondents were male while female respondents comprised of 35%. This implies that majority of the respondents were male as compared to their female counterparts (Figure 4.1)

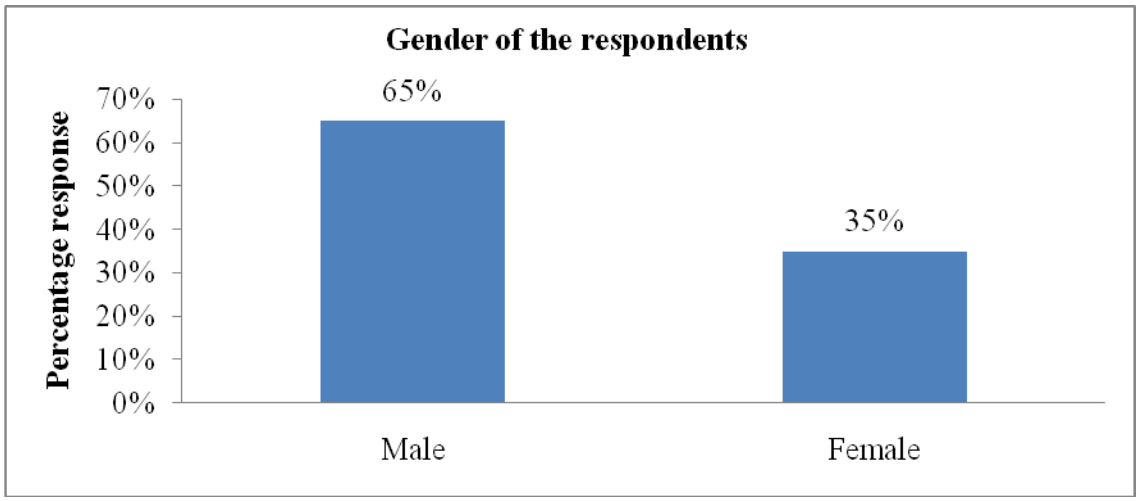



**Figure 4.1: Gender of the respondents(Researcher, 2012)**

### 4.2.3 Education level of the respondents

Most of the (52%) respondents were degree holders, 45% of the respondents had attained a post graduate education level while only 3% had attained diplomas. This implies the majority of the financial/investment advisors/analysts were knowledgeable in the securities markets (Table 4.2)

**Table 4.2: Education level of the respondents**

| Education level | Frequency | Percent |
|---|---|---|
| Diploma | 1 | 3.2 |
| Degree | 16 | 51.6 |
| Post graduate degree | 14 | 45.2 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.2.4 Attendance to a course on financial derivatives

Majority (65%) of the respondents had attended a course on financial derivatives while 35% had not attended a course on financial derivatives. This could mean that majority of the financial/investment advisors had the right and required skills and knowledge to

implement the aspect of financial derivatives in their individual organizations (Figure 4.2)

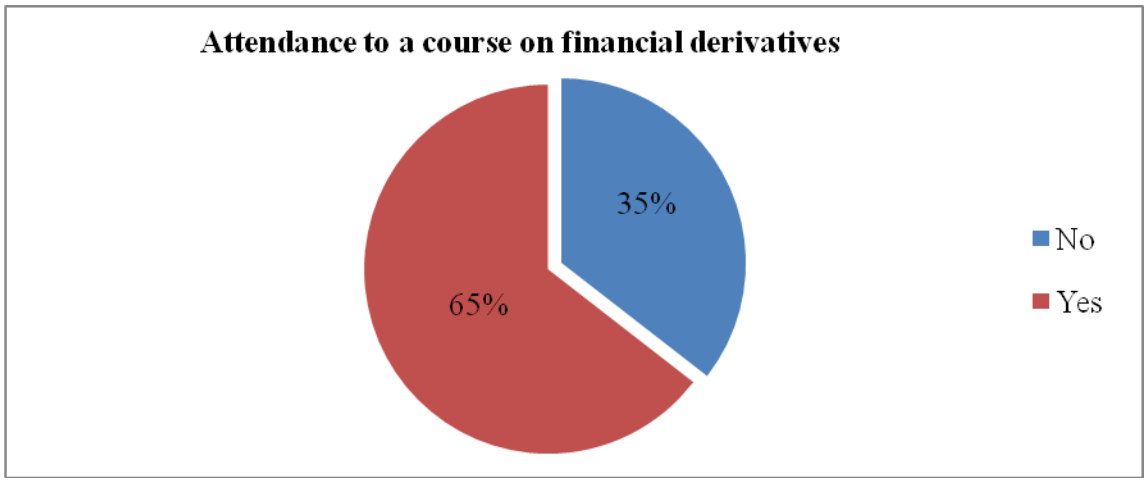



**Figure 4.2: Attendance to a course on financial derivatives(Researcher, 2012)**

### 4.2.5 Duration with which the respondents had worked with their organization

The findings indicate that majority (48.4%) of the respondents had between 0 to 5 years as well as 48.4% of whom had between 6 to 10 years while 3.2% had worked with their organizations for a period of between 11 and 15 years. This implies that most of the investment/financial advisors/analysts were young in their organizations. (Table 4.3)

**Table 4.3: Duration with which the respondents had worked with organization**

| Duration | Frequency | Percent |
|---|---|---|
| 0-5 years | 15 | 48.4 |
| 6-10 years | 15 | 48.4 |
| 11-15 years | 1 | 3.2 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.2.6 Position of the respondent in the organization

Most (26%) of the respondents were financial analyst, 19% were investment analyst, 19% were product development officers, 13%were compliance officers, 13% were policy analyst while 10% of the respondents were economic analyst. (Table 4.4)

**Table 4.4: Position of the respondents in the organizations**

| | Frequency | Percent |
|---|---|---|
| Compliance officer | 4 | 12.9 |
| Economic analyst | 3 | 9.7 |
| Financial analyst | 8 | 25.8 |
| Investment analyst | 6 | 19.4 |
| Policy analyst | 4 | 12.9 |
| Product development Officer | 6 | 19.4 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.3 How the macro economic and structural policy influence derivatives market

#### 4.3.1 Government spending on financial infrastructure is inadequate for successful derivatives markets

Results indicate that most (65%) of the respondents agreed with the statement that Government spending on financial infrastructure is inadequate for successful derivatives markets, 19% strongly agreed, 13% neither agreed nor disagreed while 3% of the respondents disagreed with the statement that government spending on financial infrastructure is inadequate for successful derivatives markets. This could mean that the support from the government is still inadequate for any successful derivatives and that the government may need to improve on its spending on financial infrastructure in order to have successful derivatives markets (Figure 4.3).

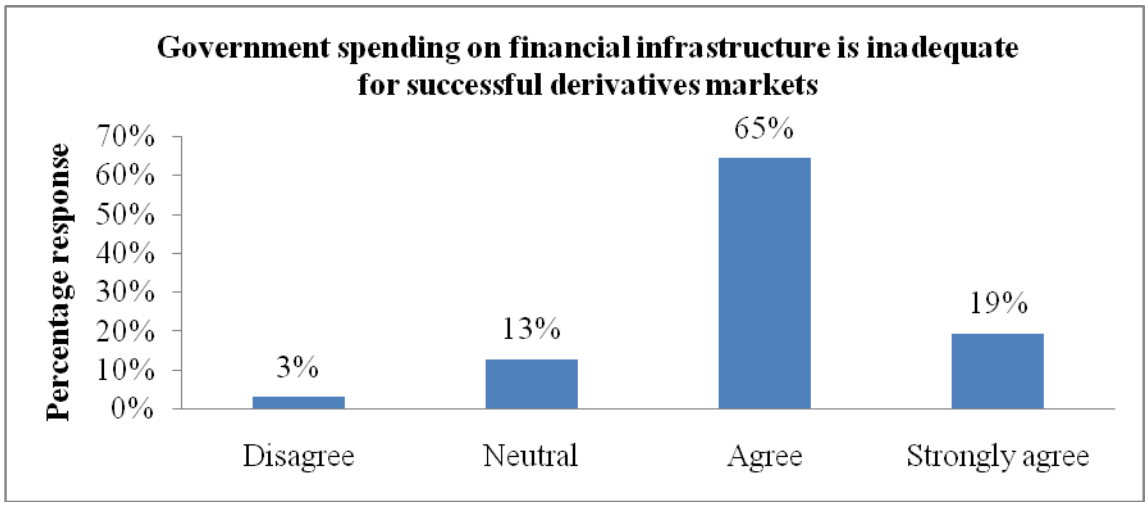



**Figure 4.3: Government spending on financial infrastructure is inadequate for successful derivatives markets (Researcher, 2012)**

### 4.3.2 Taxation on derivatives will hamper progress of derivatives markets

The findings indicate that most (42%) of the respondents agreed and 39% strongly agreed with the statement that taxation on derivatives will hamper progress of derivatives markets. However 7% of the respondents neither agreed nor disagreed, 7% disagreed while 7% strongly disagreed with the statement that taxation on derivatives will hamper progress of derivatives markets. This could mean that there is need to either avoid or minimize taxation of the derivatives markets as much as possible so that the derivatives markets could progress (Figure 4.4).

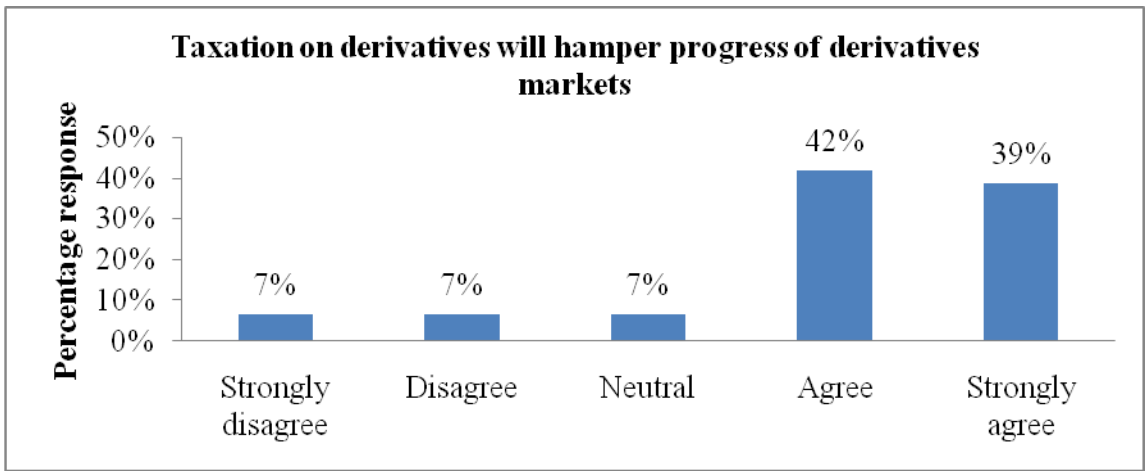



**Figure 4.4: Taxation on derivatives will hamper progress of derivatives markets (Researcher, 2012)**

### 4.3.3 Derivatives can diminish the ultimate control that the monetary policy has over the levels of inflation

About 48% of the respondents disagreed and 19% strongly disagreed with the statement that derivatives can diminish the ultimate control that the monetary policy has over the levels of inflation. However, approximately 13% of the respondents neither agreed nor disagreed, 13% agreed while 7% of the respondents strongly agreed with the statement that derivatives can diminish the ultimate control that the monetary policy has over the levels of inflation. This implies that derivatives cannot diminish the ultimate control that the monetary policy has over the levels of inflation (Table 4.4)

**Table 4.5: Derivatives can diminish the ultimate control that the monetary policy has over the levels of inflation**

| | Frequency | Percent |
|---|---|---|
| Strongly disagree | 6 | 19.4 |
| Disagree | 15 | 48.4 |
| Neutral | 4 | 12.9 |
| Agree | 4 | 12.9 |
| Strongly agree | 2 | 6.5 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.3.4 Shallow financial systems limit fiscal, monetary and exchange rate policy choices

These findings indicate that most (52%) of the respondents agreed, 42% strongly agreed while 6% neither agreed nor disagreed with the statement that shallow financial systems limit fiscal, monetary and exchange rate policy choices. This indicates that indeed shallow financial systems limit fiscal, monetary and exchange rate policy choices (Figure 4.5)

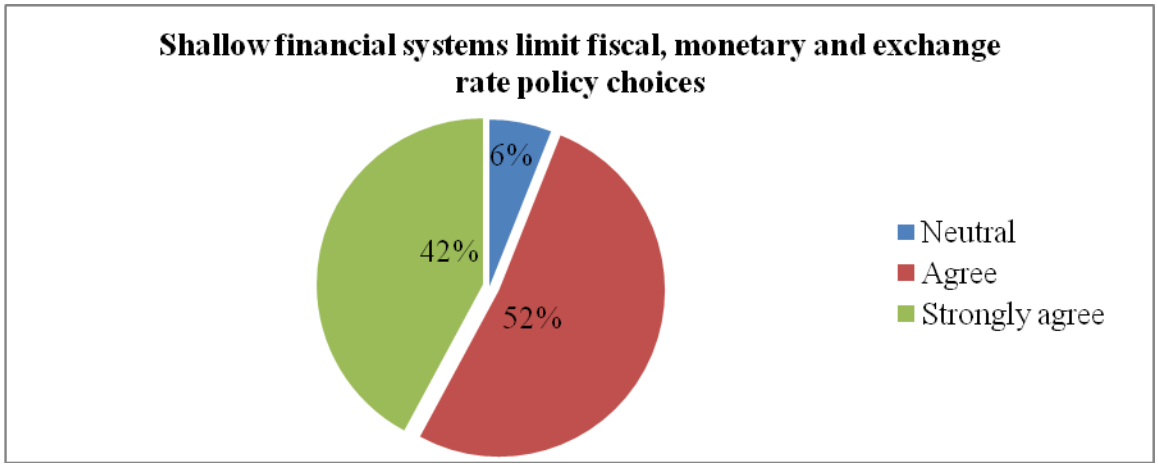



**Figure 4.5: Shallow financial systems limit fiscal, monetary and exchange rate policy choices (Researcher, 2012)**

### 4.3.5 Intervention by the government on the exchange rate will hamper success of currency derivatives

From the study findings, most (42%) of the respondents agreed with the statement that Government intervention on the exchange rate will hamper the success of currency derivatives, 36% of the respondents strongly agreed, 19% of the respondents neither

agreed nor disagreed while 3% disagreed with the statement that government intervention on the exchange rate will hamper success of currency derivatives. This indicates that majority of the respondents were of the opinion that indeed the intervention by the government on the exchange rate will hamper the success of currency derivatives (Table 4.5)

**Table 4.6: Government intervention on the exchange rate will hamper success of currency derivatives**

| | Frequency | Percent |
|---|---|---|
| Disagree | 1 | 3.2 |
| Neutral | 6 | 19.4 |
| Agree | 13 | 41.9 |
| Strongly agree | 11 | 35.5 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.3.6 Trading on derivatives will improve the GDP of the country

From the finding of the study (48%) of the respondents strongly agreed and 48% agreed with the statement that trading on derivatives will improve the GDP of the country. Only about 4% of the respondents could neither agree nor disagree with that statement that trading on derivatives will improve the GDP of the country. This means that trading of derivatives would tremendously improve the country's GDP (Figure 4.6).

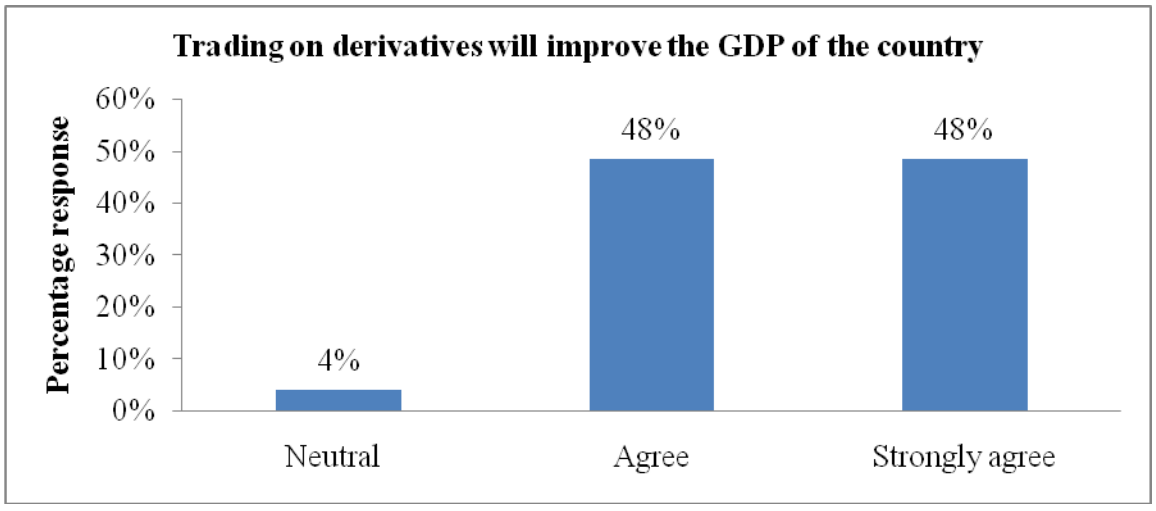



**Figure 4.6: Trading on derivatives will improve the GDP of the country(Researcher, 2012)**

### 4.3.7 High levels of foreign exchange reserves will greatly enhance derivatives trading

Majority (45%) of the respondents indicated that they strongly agreed, 36% agreed while 19% neither agreed nor disagreed with the statement that high levels of foreign exchange reserves will greatly enhance derivatives trading. This means that there is need to enhance high levels of foreign reserves since it would greatly improve derivatives trading (Figure 4.7)

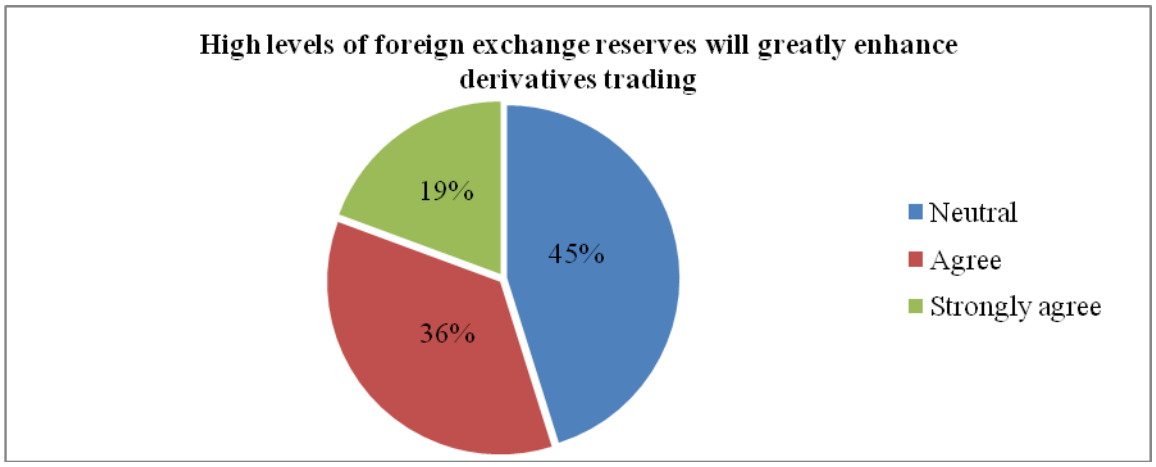



**Figure 4.7: High levels of foreign exchange reserves will greatly enhance derivatives trading (Researcher, 2012)**

### 4.3.8 Derivatives are a consequence of increased volatility in interest rates and exchange rates

The study findings indicated that most (65%) of the respondents agreed, 26% strongly agreed, 7% neither agreed nor disagreed while 3% strongly disagreed with the statement that derivatives are a consequence of increased volatility in interest rates and exchange rates. This means that derivatives are indeed a consequence of increased volatility in the interest rates and exchange rates (Table 4.6).

**Table 4.7: Derivatives are a consequence of increased volatility in interest rates and exchange rates**

| | Frequency | Percent |
|---|---|---|
| Strongly disagree | 1 | 3.2 |
| Neutral | 2 | 6.5 |
| Agree | 20 | 64.5 |
| Strongly agree | 8 | 25.8 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.3.9 Derivatives cause increased volatility in interest rates and exchange rates

About 48% of the respondents disagreed while 16% of the respondents strongly disagreed with the statement that derivatives cause increased volatility in interest rates and exchange rates. However, 26% of the respondents agreed, 7% neither agreed nor disagreed while 3% strongly agreed with the statement that derivatives cause increased volatility in interest rates and exchange rates. This means that indeed derivatives do not cause volatility in interest rates and exchange rates (Figure 4.8)

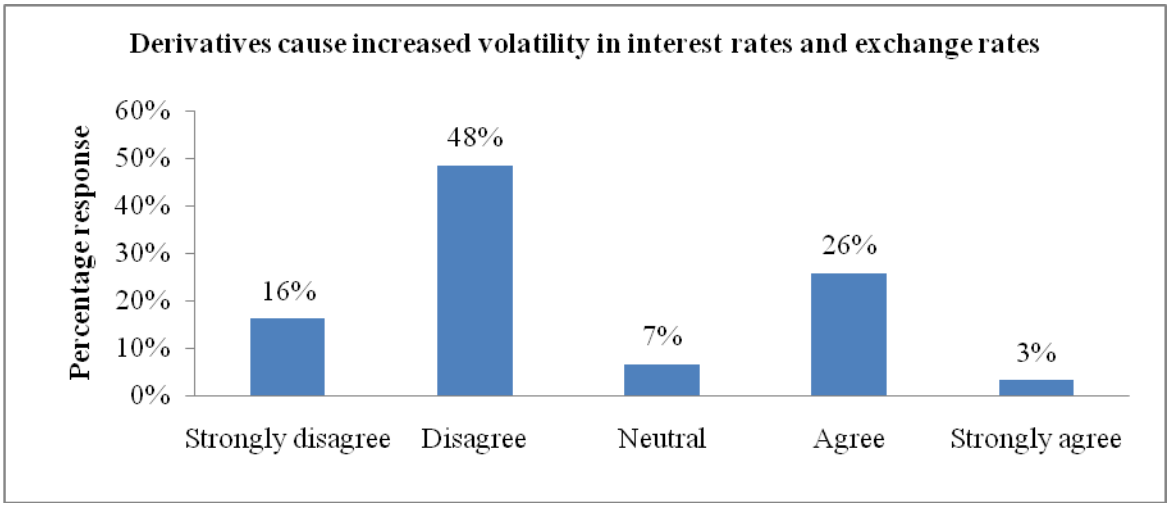



**Figure 4.8: Derivatives cause increased volatility in interest rates and exchange rates(Researcher, 2012)**

### 4.3.10 Derivatives will facilitate cross border capital flow

Results indicate that majority (65%) of the respondents agreed while 26% strongly agreed with the statement that derivatives will facilitate cross border capital flow. However, 3% of the respondents disagreed while 7% neither agreed nor disagreed with the statement that derivatives will facilitate cross border capital flow. This indicates that derivatives has the capacity to facilitate cross border capital flow (Figure 4.9)

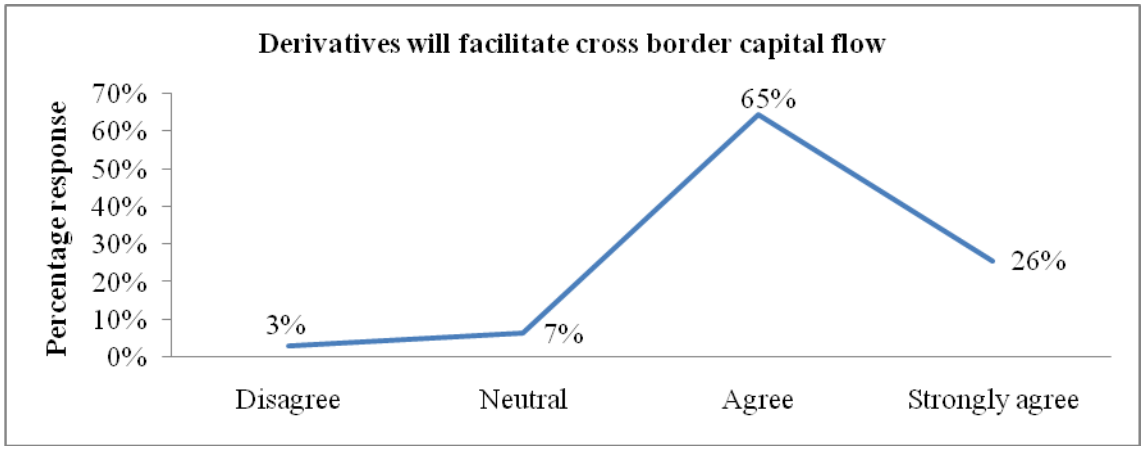



**Figure 4.9: Derivatives will facilitate cross border capital flow (Researcher, 2012)**

### 4.3.11 The GDP level will greatly determine success of the derivatives markets

The study findings indicate that most (71%) of the respondents agreed while 16% strongly agreed with the statement that the country's GDP level will greatly determine success of the derivatives markets. However, 7% of the respondents neither agreed nor disagreed, 3% disagreed while 3% strongly disagreed with the statement that the GDP level will greatly determine success of the derivatives markets. This means that the better the country's GDP the greater the success of the derivatives markets (Table 4.7).

**Table 4.8: The GDP level will greatly determine success of the derivatives markets**

| | Frequency | Percent |
|---|---|---|
| Strongly disagree | 1 | 3.2 |
| Disagree | 1 | 3.2 |
| Neutral | 2 | 6.5 |
| Agree | 22 | 71.0 |
| Strongly agree | 5 | 16.1 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.3.12 Mean scores of factors influencing macro economic and structural policies

Majority of the respondents largely agreed that derivatives would influence the macro economic and structural policies. Only a few of the respondents disagreed that the derivatives can diminish the ultimate control that the monetary policy has over the levels of inflation mean of 2.39 as well as derivatives cause increased volatility in interest rates and exchange rates (mean of 2.52) (Table 4.9).

**Table 4.9: Mean scores of factors influencing macro economic and structural policies**

| | Mean | Std. Deviation |
|---|---|---|
| Derivatives can diminish the ultimate control that the monetary policy has over the levels of inflation | 2.39 | 1.145 |
| Derivatives cause increased volatility in interest rates and exchange rates | 2.52 | 1.151 |
| High levels of foreign exchange reserves will greatly enhance derivatives trading | 3.74 | 0.773 |
| The GDP level will greatly determine success of the derivatives markets. | 3.94 | 0.814 |
| Government spending on financial infrastructure is inadequate for successful derivatives markets | 4.00 | 0.683 |
| Taxation on derivatives will hamper progress of derivatives markets | 4.00 | 1.155 |
| Intervention by the government on the exchange rate will hamper success of currency derivatives | 4.10 | 0.831 |
| Derivatives are a consequence of increased volatility in interest rates and exchange rates | 4.10 | 0.790 |
| Derivatives will facilitate cross border capital flows | 4.13 | 0.670 |
| Shallow financial systems limit fiscal, monetary, and exchange rate policy choices. | 4.35 | 0.608 |
| Trading on derivatives will improve the GDP of the country | 4.45 | 0.568 |

## 4.4 How the legal and regulatory framework influence development of derivatives markets

### 4.4.1 Customer protection regulation

The findings indicate that majority (45%) of the respondents perceived the customer protection regulation in line with legal and regulatory framework as adequate while 23% of the respondents perceived the customer protection regulation as very adequate. However, 26% of the respondents perceived customer protection regulation as inadequate while 7% of the respondents perceived the customer protection regulations as very adequate. This means that the legal and regulatory framework influence development of derivatives markets through customer protection regulations (Figure 4.10).

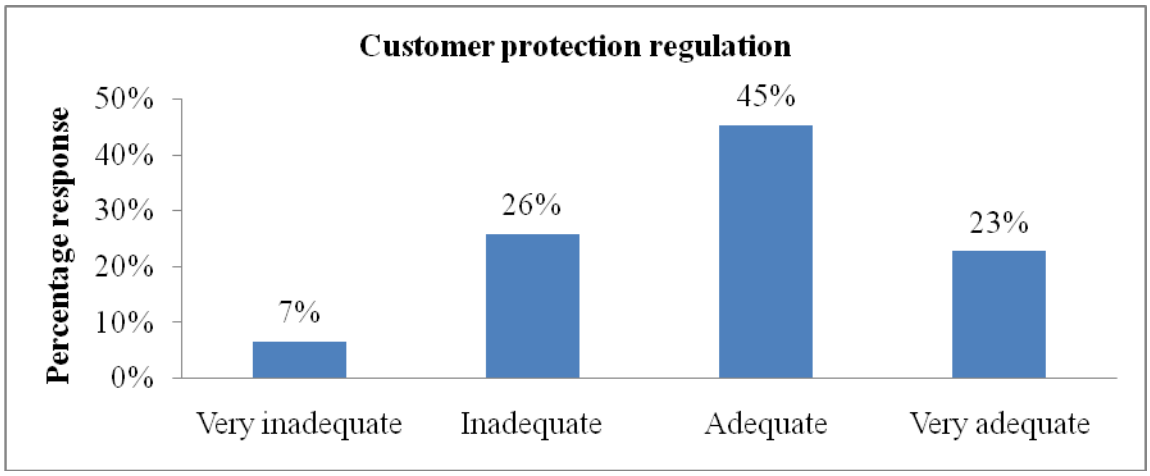



**Figure 4.10: Customer protection regulation (Researcher, 2012)**

### 4.4.2 Trading and clearing rules

Majority (74%) of the respondents perceived trading and clearing rules as adequate with 19% of the respondents perceiving the trading and clearing rules as very adequate. However, 7% of the respondents perceived the trading and clearing rules as inadequate. This implies that the legal and regulatory framework influence development of derivatives markets through trading and clearing rules (Table 4.10).

**Table 4.10: Trading and clearing rules**

| | **Frequency** | **Percent** |
|---|---|---|
| Inadequate | 2 | 6.5 |
| Adequate | 23 | 74.2 |
| Very adequate | 6 | 19.4 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.4.3 Licensing of market dealers

The study findings indicate that most (74%) of the respondents perceived the licensing of market dealers as adequate while 19% of the respondents perceived the licensing of market dealers as very adequate. However, about 7% of the respondents perceived the licensing of market dealers as inadequate. This implies that the legal and regulatory framework influence development of derivatives markets through licensing of market dealers (Figure 4.11)

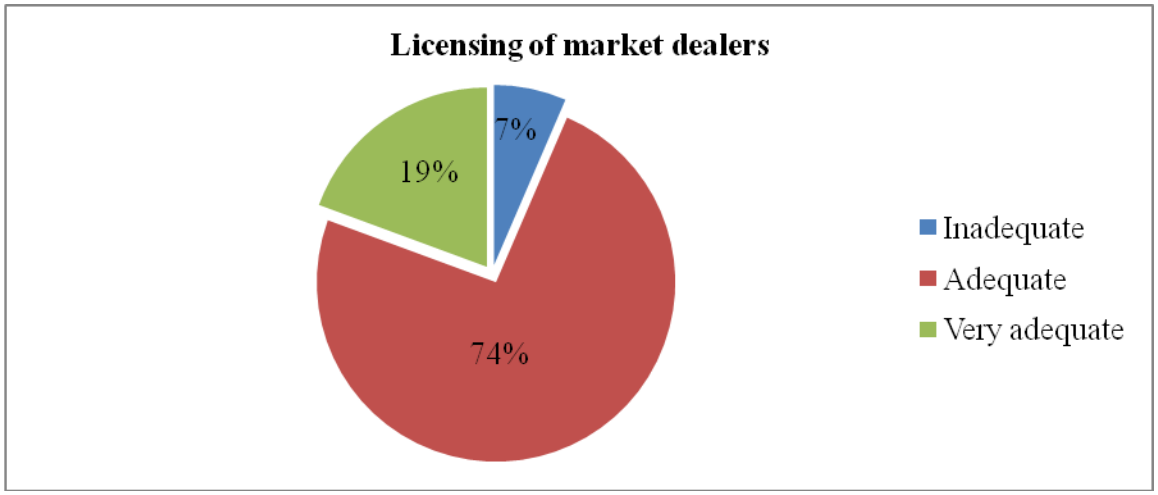



**Figure 4.11: Licensing of market dealers (Researcher, 2012)**

### 4.4.4 Reporting of market dealers

The study findings indicate that majority (68%) of the respondents perceived the reporting of market dealers as adequate while 16% of the respondents perceived the reporting of market dealers as very adequate. However, 16% of the respondents perceived that reporting of market dealers as inadequate. This means that the measures put in place for reporting of market dealers are good for development of derivatives markets (Figure 4.12).

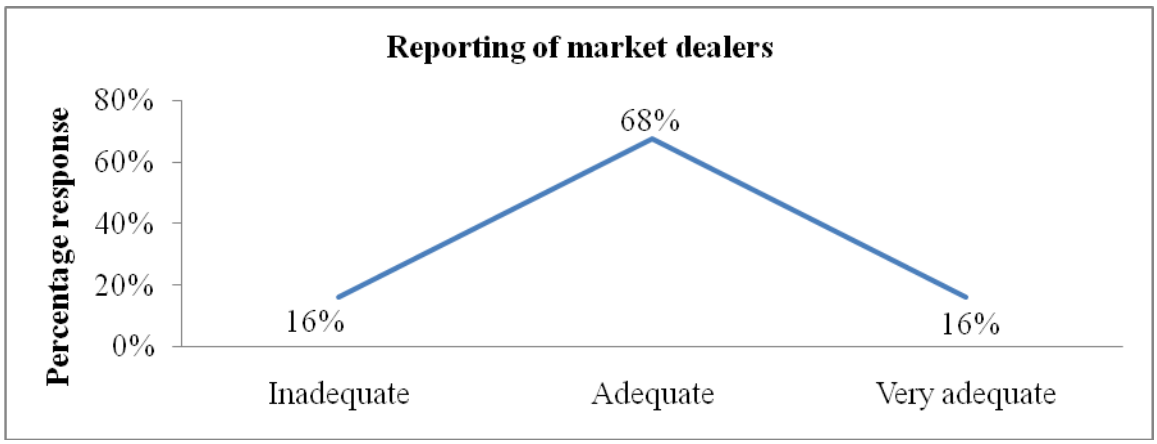



**Figure 4.12: Reporting of market dealers (Researcher, 2012)**

### 4.4.5 Registration of financial institutions

About 65% of the respondents perceived the registration of financial institutions as adequate while 13% of the respondents perceived the registration of financial institutions as very adequate. However, 23% of the respondents perceived the registration of financial institutions as inadequate. This means that the registration of financial institutions in place is good for development of derivatives markets (Figure 4.13).

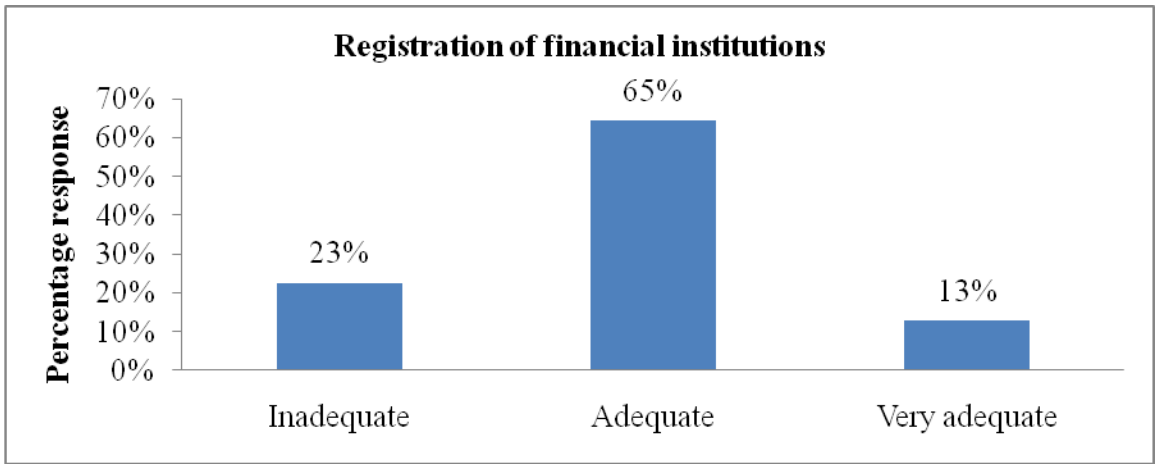



**Figure 4.13: Registration of financial institutions (Researcher, 2012)**

### 4.4.6 Collateral deposits

The study findings indicate that a majority (55%) of the respondents perceived collateral deposits as adequate while 10 percent perceived the collateral deposits as very adequate. However, 29% of the respondents perceived the collateral deposits as inadequate while 6% perceived the collateral deposits as very inadequate. This means that the collateral

deposits requirement will be adequate for development of derivatives markets (Table 4.11).

**Table 4.11: Collateral deposits**

| | Frequency | Percent |
|---|---|---|
| Very inadequate | 2 | 6.4 |
| Inadequate | 9 | 29.0 |
| Adequate | 17 | 54.8 |
| Very adequate | 3 | 9.7 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.4.7 Capital requirements

About 68% of the respondents were of the opinion that capital requirements were adequate with 19% of the respondents perceiving the capital requirements as very adequate. However, 10% of the respondents perceived the capital requirements as inadequate while 3% of the respondents perceived the capital requirements as very inadequate. This means that the capital requirements in place are good for development of derivatives markets (Figure 4.15)

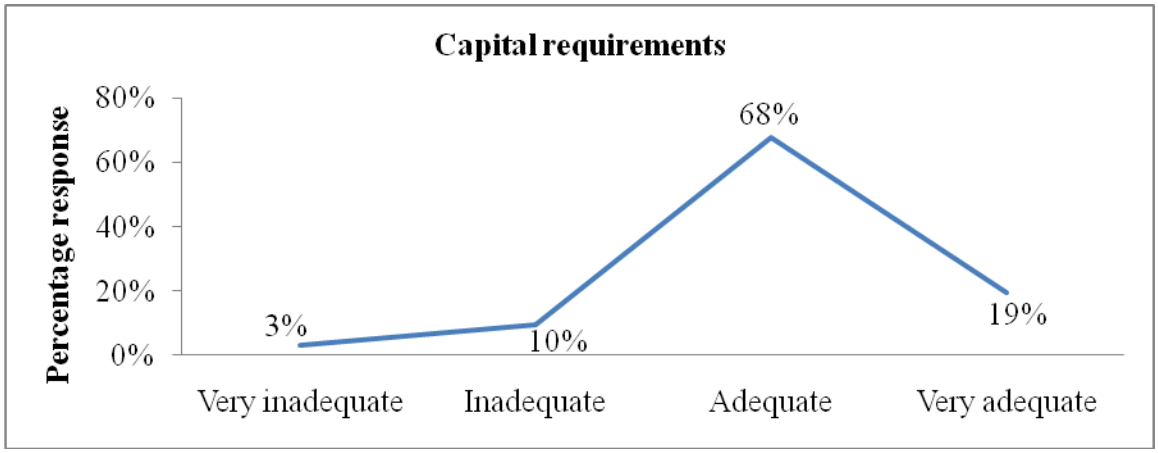



**Figure 4.14: Capital requirements (Researcher, 2012)**

### 4.4.8 The law should require the reporting of derivatives transactions as a condition for their legal enforceability

Majority (48%) of the respondents strongly agree that the law should require the reporting of derivatives transactions as a condition for their legal enforceability while 45% of the respondents agreed with the statement that the law should require the

reporting of derivatives transactions as a condition for their legal enforceability. However, about 7% of the respondents disagreed with the statement that the law should require the reporting of derivatives transactions as a condition for their legal enforceability. This means that the law should require the reporting of derivatives transactions as a condition for their legal enforceability (Figure 4.15)

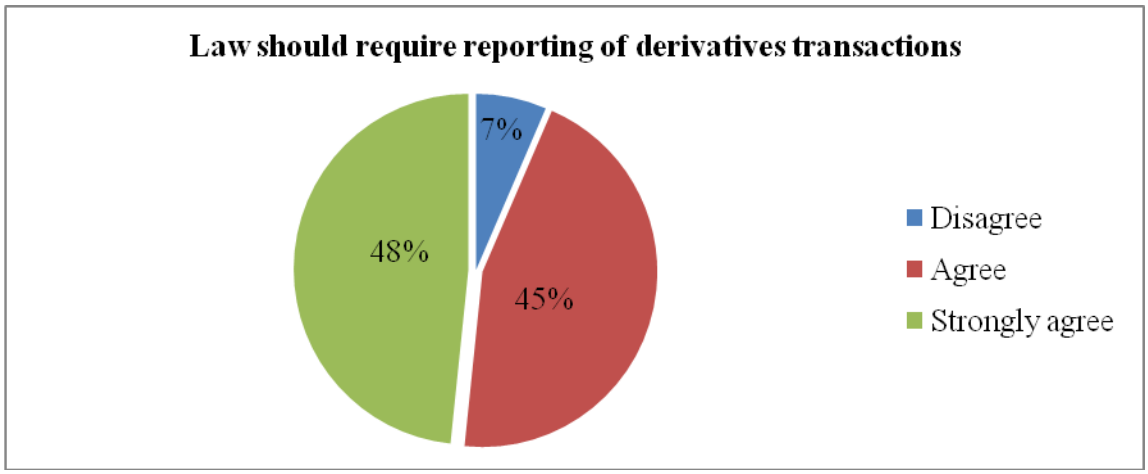



**Figure 4.15: The law should require the reporting of derivatives transactions as a condition for their legal enforceability (Researcher, 2012)**

### 4.4.9 Clearing house privileges laws are very important for derivatives trading and should be given the first priority

Majority (52%) of the respondents agreed while 22% strongly agreed with the statement that clearing house privileges laws are very important for derivatives trading and should be given the first priority. However, 16% of the respondents disagreed while 10% neither agreed nor disagreed with the statement that clearing house privileges laws are very important for derivatives trading and should be given the first priority. This implies that indeed the clearing house privileges laws are very important for derivatives trading and should be given the first priority (Table 4.12).

**Table 4.12: Clearing house privileges laws are very important for derivatives trading and should be given the first priority**

| | Frequency | Percent |
|---|---|---|
| Disagree | 5 | 16.1 |
| Neutral | 3 | 9.7 |
| Agree | 16 | 51.6 |
| Strongly agree | 7 | 22.4 |

| | | |
|---|---|---|
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.4.10 Government regulation of derivatives market in Kenya should be preferred to self-regulation by the markets

The study findings indicate that 42% of the respondents agreed while 36% strongly agreed with the statement that government regulation of derivatives market in Kenya should be preferred to self-regulation by the markets. However, 13% of the respondents neither agreed nor disagreed with the statement that government regulation of derivatives market in Kenya should be preferred to self-regulation by the markets. This means that indeed the government regulation of derivatives market in Kenya should be preferred to self-regulation by the markets (Figure 4.16)

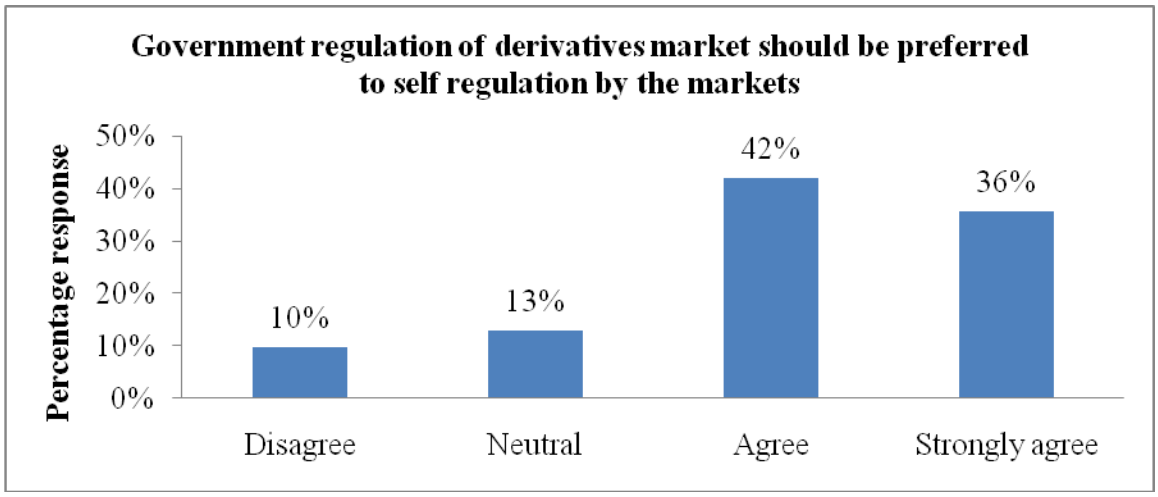



**Figure 4.16: Government regulation of derivatives market in Kenya should be preferred to self regulation by the markets (Researcher, 2012)**

### 4.4.11 Legal and regulatory framework

Most of the factors on legal and regulatory framework showed weaker mean scores (Table 4.13)

**Table4. 13: Legal and regulatory framework**

| Factors | Mean | Std. Deviation |
|---|---|---|
| Collateral deposits | 2.68 | 0.748 |
| Customer protection regulation | 2.84 | 0.860 |
| Registration of financial institutions | 2.90 | 0.597 |
| Reporting of market dealers | 3.00 | 0.577 |
| Capital requirements | 3.03 | 0.657 |
| Trading and clearing rules | 3.13 | 0.499 |
| Licensing of market dealers | 3.13 | 0.499 |
| **Total** | **3.81** | **0.980** |

### 4.5 To identify the most suited derivatives instrument for the Kenyan market

#### 4.5.1 There will be a scarce supply of derivatives instrument for hedging in the local market

The study findings indicate that most (42%) of the respondents agreed while 7% of the respondents strongly agreed with the statement that there will be a scarce supply of derivatives instrument for hedging in the local market. However, 32% of the respondents disagreed, 16% neither agreed nor disagreed while 3% strongly disagreed. This implies that indeed there will be a likely scarce supply of derivatives instrument for hedging in the local market (Table 4.14).

**Table 4.14: There will be a scarce supply of derivatives instrument for hedging in the local market**

| | Frequency | Percent |
|---|---|---|
| Strongly disagree | 1 | 3.2 |
| Disagree | 10 | 32.3 |
| Neutral | 5 | 16.1 |
| Agree | 13 | 41.9 |
| Strongly agree | 2 | 6.5 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.5.2 The demand for derivatives contracts will be very low

The findings indicate that 39% of the respondents agreed while 3% strongly agreed with the statement that the demand for derivatives contracts will be very low while. However, 36% of the respondents disagreed, 19% neither agreed nor disagreed while 3% strongly disagreed with the statement that the demand for derivatives contracts will be very low. This shows a slight inclination towards agreeing with the statement that the demand for derivatives contracts will be very low (Figure 4.17)

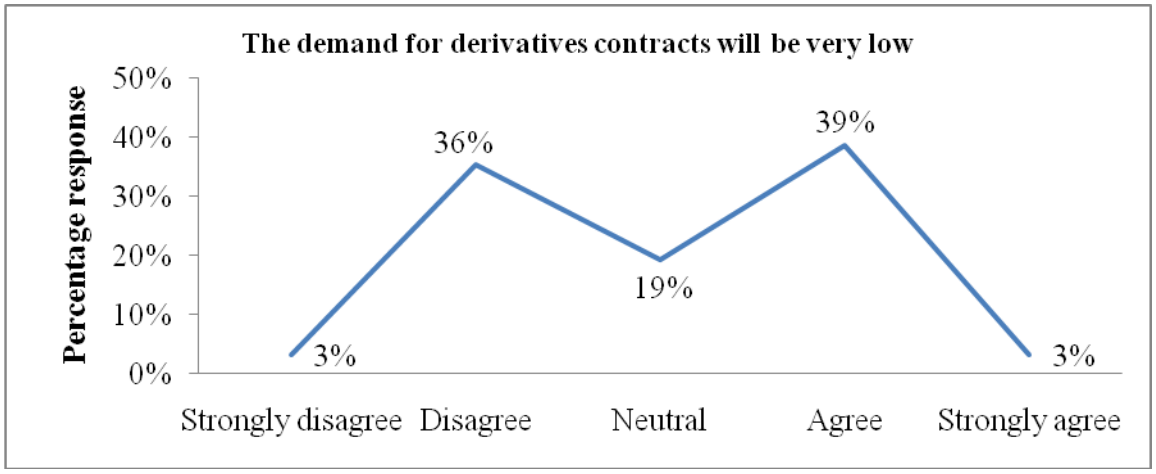



**Figure 4.17:The demand for derivatives contracts will be very low (Researcher, 2012)**

### 4.5.3 Derivative contracts likely to dominate trading in Kenya in terms of success of the contract

The study findings portray a high likelihood that all the contracts will dominate trading in terms of success of currency with a mean of 4.33. Futures portrayed the highest level of likelihood with a mean of 4.67 followed by forward with a mean of 4.50. In terms of equity, the results portray a weak likelihood of the contracts dominating trading with a mean of 2.81. Futures portrayed the highest mean at 3.60. In line with interest rates, there was relatively a high level of the contracts dominating trading at a mean score of 3.95 with forward taking lead with a mean score of 4.40. In terms of credit, there was a weak likelihood of the contracts dominating trading at a mean score of 2.56 with forward taking lead with a mean score of 3.20. Lastly, in terms of commodity, there was a weak likelihood of the contracts dominating trading at a mean score of 2.75 with swaps taking lead with a mean score of 4.00 (Table 4.15)

**Table 4.15: Derivative contracts likely to dominate trading in Kenya in terms of success of the contract**

| Underlying | Contracts | Mean | Std. Deviation |
|---|---|---|---|
| Currency | Options | 3.75 | 1.50 |
| | Futures | 4.67 | 0.52 |
| | Swaps | 4.20 | 1.30 |
| | Forward | 4.50 | 0.55 |
| | **Total** | **4.33** | **0.97** |
| Equity | Options | 2.33 | 0.58 |
| | Futures | 3.60 | 0.55 |
| | Swaps | 2.75 | 0.50 |
| | Forward | 2.25 | 0.96 |
| | **Total** | **2.81** | **0.83** |
| Interest rates | Options | 3.75 | 1.50 |
| | Futures | 3.83 | 1.17 |
| | Swaps | 3.83 | 0.75 |
| | Forward | 4.40 | 0.55 |
| | **Total** | **3.95** | **0.97** |
| Credit | Options | 2.00 | 0.00 |
| | Futures | 2.25 | 0.96 |
| | Swaps | 2.60 | 0.89 |
| | Forward | 3.20 | 0.84 |
| | **Total** | **2.56** | **0.86** |
| Commodity | Options | 1.33 | 0.58 |
| | Futures | 2.60 | 1.34 |
| | Swaps | 4.00 | 0.82 |
| | Forward | | |
| | **Total** | **2.75** | **1.42** |

Source (Researcher, 2012)

### 4.6: The role of liquidity in derivatives markets

#### 4.6.1 Rating the current level of efficiency in the capital markets in Kenya

About 65% of the respondents rated the current level of efficiency in the capital markets in Kenya as moderate with 19% of the respondents rating it as high while 16% of the

respondents rated the current efficiency in the capital markets as low. This means that the efficiency is not as good as it would be expected and thus the need for emphasis to be put on the capital markets in order to improve its efficiency (Figure 4.18).

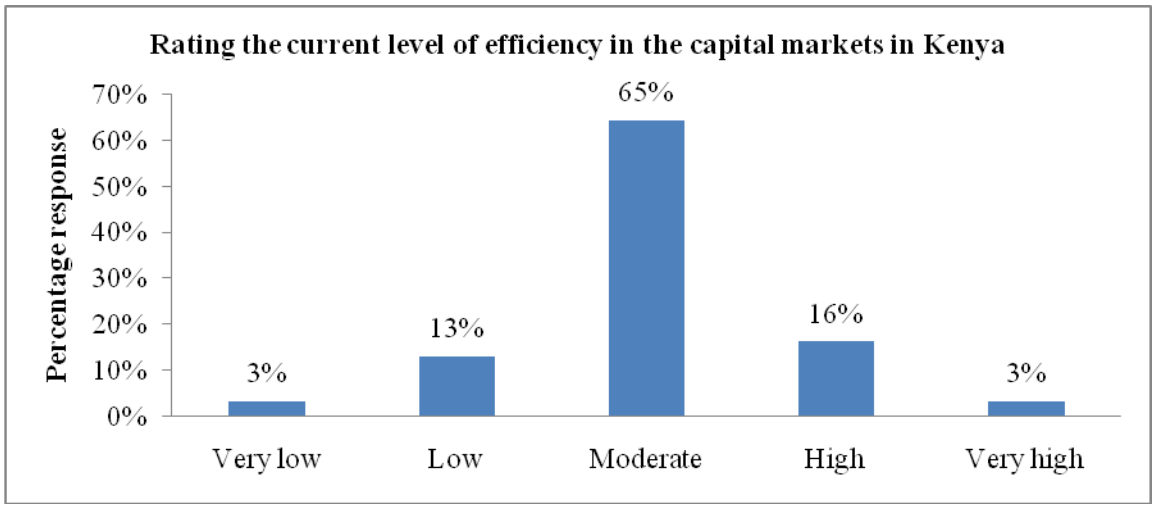



**Figure 4.18: Rating the current level of efficiency in the capital markets in Kenya (Researcher, 2012)**

### 4.6.2 The current level of efficiency in the capital markets is a result of the level of liquidity

Majority (68%) of the respondents agreed, 7% of the respondents strongly agreed that the current level of efficiency in the capital markets is a result of the level of liquidity. About 16% of the respondents neither agreed nor disagreed. However, 7% of the respondents disagreed while 3% strongly disagreed with the statement that the current level of efficiency in the capital markets is a result of the level of liquidity. This means that indeed the current level of efficiency in the capital markets is as a result of the level of liquidity (Table 4.16).

**Table 4.16: The current level of efficiency in the capital markets is a result of the level of liquidity**

| | Frequency | Percent |
|---|---|---|
| Strongly disagree | 1 | 3.2 |
| Disagree | 2 | 6.5 |
| Neutral | 5 | 16.1 |
| Agree | 21 | 67.7 |
| Strongly agree | 2 | 6.5 |

| | | |
|---|---|---|
| **Total** | **31** | **100.0** |

### 4.6.3 Liquidity in the underlying markets is inadequate to sustain derivatives trading in Kenya

The findings indicate that majority (42%) of the respondents agreed with the statement that liquidity in the underlying markets is inadequate to sustain derivatives trading in Kenya. 16% of the respondent were neutral, 39% of the respondents disagreed while only 3% strongly disagreed with the statement that liquidity in the underlying markets is inadequate to sustain derivatives trading in Kenya. This implies that that liquidity in the underlying markets is inadequate to sustain derivatives trading in Kenya (Table 4.17)

**Table 4.17: Liquidity in the underlying markets is inadequate to sustain derivatives trading in Kenya**

| | **Frequency** | **Percent** |
|---|---|---|
| Strongly disagree | 1 | 3.2 |
| Disagree | 12 | 38.7 |
| Neutral | 5 | 16.1 |
| Agree | 13 | 41.9 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.6.4 Derivatives trading will enhance market turnover of the underlying markets

Most (84%) of the respondents strongly agreed with the statement that derivatives trading will enhance market turnover of the underlying markets while 16% agreed with the statement that derivatives trading will enhance market turnover of the underlying markets. This indicates that the market turnovers of the underlying markets will be greatly enhanced by the trading of derivatives (Figure 4.19).

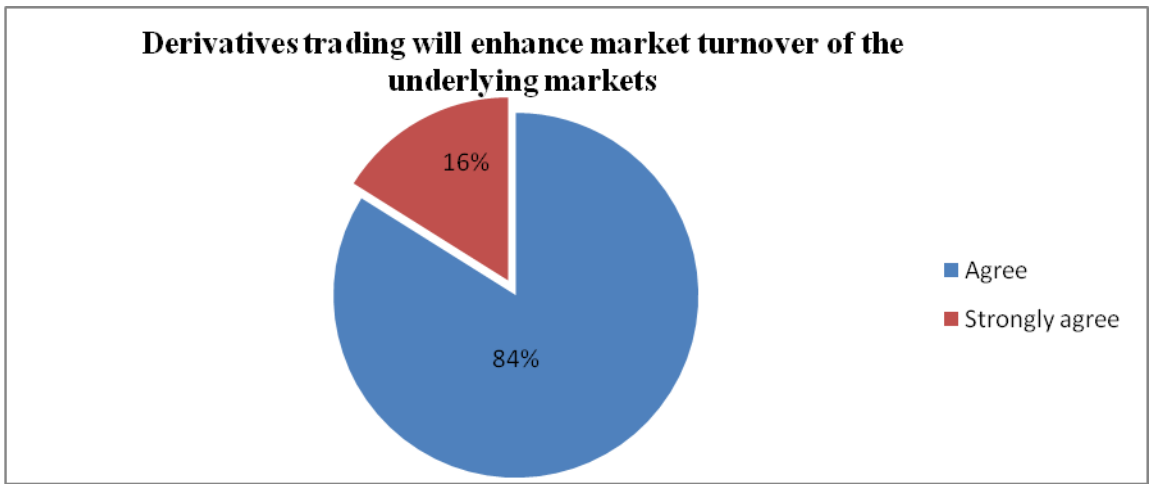



**Figure 4.19: Derivatives trading will enhance market turnover the underlying markets (Researcher, 2012)**

### 4.6.5 Trading in the derivatives markets will be greatly influenced by local institutional investors

The study findings indicate that 77% of the respondents agreed while at the same time 23% strongly agreed with the statement that trading in the derivatives markets will be greatly influenced by local institutional investors. This means that local institutional investors will greatly influence the trading of derivatives markets and thus the need to strengthen the local institutions (Table 4.18).

**Table 4.18: Trading in the derivatives markets will be greatly influenced by local institutional investors**

| | Frequency | Percent |
|---|---|---|
| Agree | 24 | 77.4 |
| Strongly agree | 7 | 22.6 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.6.6 Trading in the derivatives markets will be greatly influenced by local retail investors

About 61% of the respondents agreed while at the same time 23% of the respondents strongly agreed with the statement that trading in the derivatives markets will be greatly influenced by local retail investors. However, 13% of the respondents were neutral where they neither agreed nor disagreed while 3% if the respondents disagreed with the

statement that trading in the derivatives markets will be greatly influenced by local retail investors. This indicates that the local retail investors would greatly influence the trading of derivatives markets (Figure 4.20).

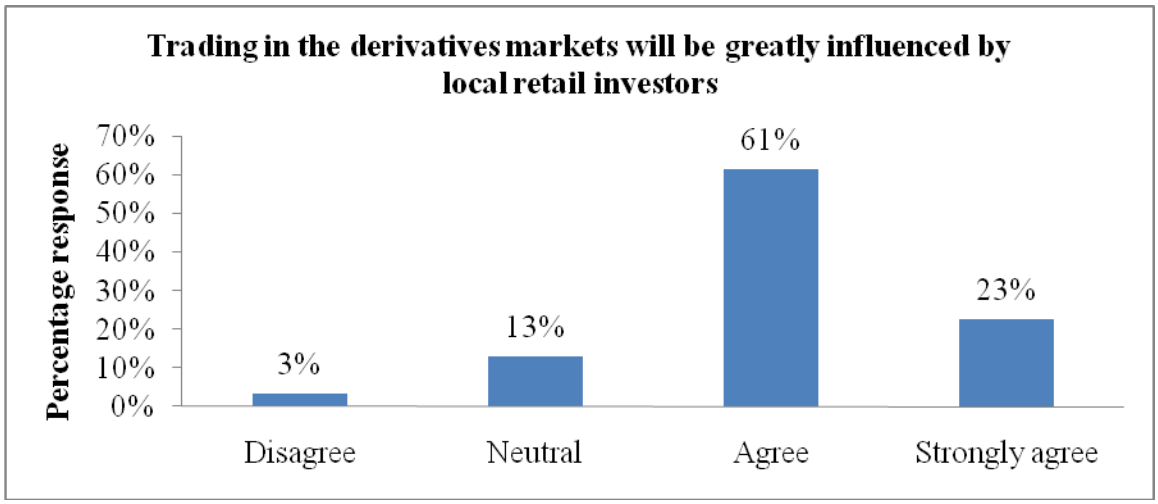



**Figure 4.20: Trading in the derivatives markets will be greatly influenced by local retail investors Source (Researcher, 2012)**

### 4.6.7 Trading in the derivatives markets will be greatly influenced by overseas institutional investors

The study findings indicate that approximately 61% of the respondents agreed with 19% of the respondents strongly agreeing that the trading in the derivatives markets will be greatly influenced by overseas institutional investors. However, 19% of the respondents could neither agree nor disagree with the statement that trading in the derivatives markets will be greatly influenced by overseas institutional investors. This indicates that the overseas institutional investors has a great role in influencing the trading of derivatives markets (Table 4.19)

**Table 4.19: Trading in the derivatives markets will be greatly influenced by overseas institutional investors**

| | **Frequency** | **Percent** |
|---|---|---|
| Neutral | 6 | 19.4 |
| Agree | 19 | 61.3 |
| Strongly agree | 6 | 19.4 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.6.8 Trading in the derivatives markets will be greatly influenced by overseas retail investors

Majority (55%) of the respondents agreed while 13% strongly agreed with the statement that trading in the derivatives markets will be greatly influenced by overseas retail investors. However, 29% of the respondents could neither agree nor disagree while 3% of the respondents disagreed with the statement that trading in the derivatives markets will be greatly influenced by overseas retail investors. This indicates that the trading of derivatives would greatly be influenced by the overseas retail investors (Figure 4.21)

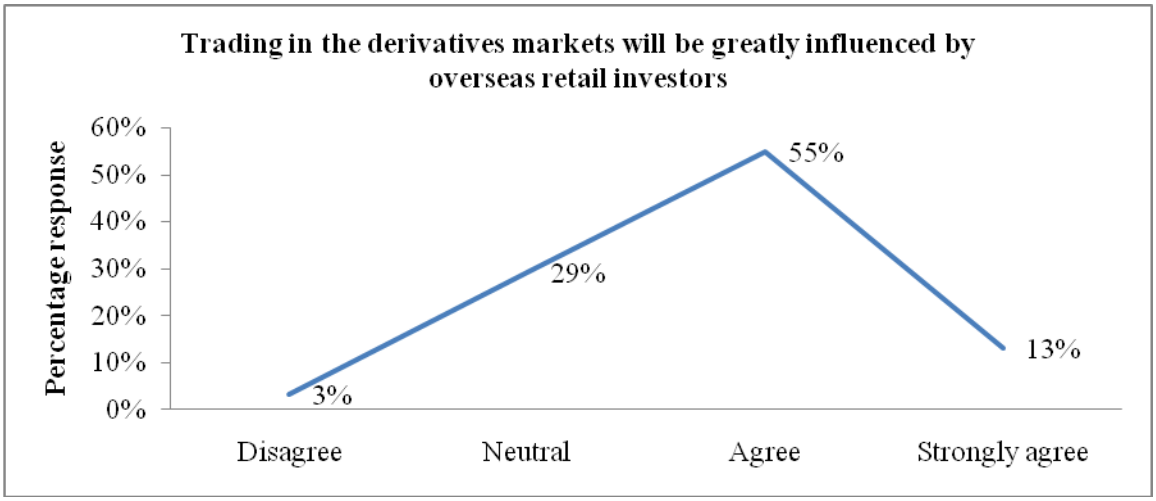



**Figure 4.21: Trading in the derivatives markets will be greatly influenced by overseas retail investors Source (Researcher, 2012)**

### 4.6.9 Policy makers should conduct seminars regarding the use of derivatives before commencement to strengthen knowledge and understanding of the derivatives markets

About 87% of the respondents strongly agreed with 7% of the respondents agreeing with the statement that Policy makers should conduct seminars all regarding the use of derivatives before commencement to strengthen knowledge and understanding of the derivatives markets. However, approximately 3% of the respondents disagreed while 3% of the respondents strongly disagreed with the statement that policy makers should conduct seminars all regarding the use of derivatives before commencement to strengthen knowledge and understanding of the derivatives markets. This indicates that seminars

regarding use of derivatives should be conducted prior to the commencement to strengthen knowledge and understanding of the derivatives markets (Table 4.20).

**Table 4.20: Policy makers should conduct seminars to strengthen knowledge and understanding of the derivatives markets**

| | Frequency | Percent |
|---|---|---|
| Strongly disagree | 1 | 3.2 |
| Disagree | 1 | 3.2 |
| Agree | 2 | 6.5 |
| Strongly agree | 27 | 87.1 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.6.10 The success of development of derivatives market in Kenya will largely be influenced by political environment

The study findings indicate that majority (77%) of the respondents strongly agreed while 23% agreed with the statement that the success of development of derivatives market in Kenya will largely be influenced by political environment. This indicates that indeed political environment will largely influence the success of development of derivatives markets in Kenya (Figure 4.22).

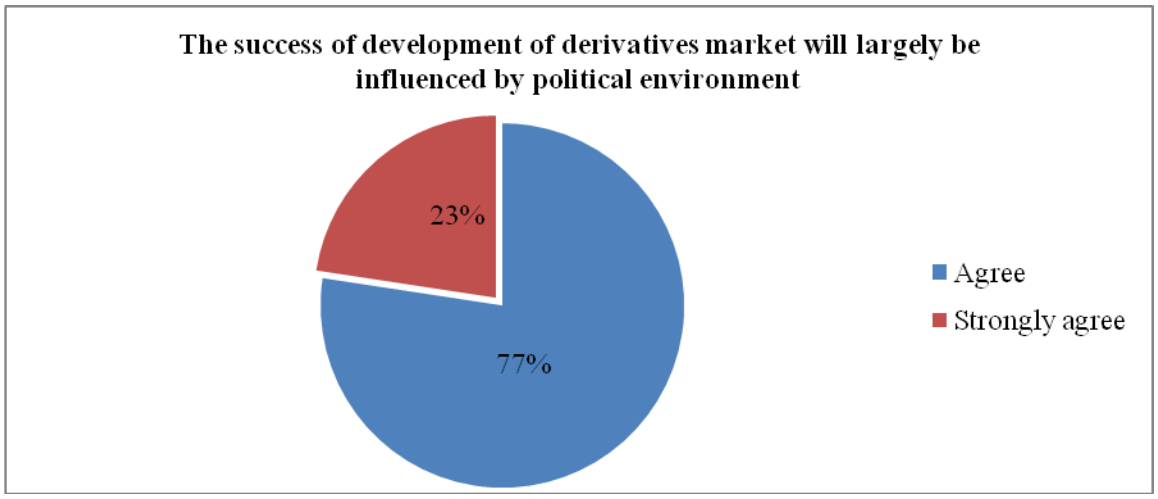



**Figure 4.22: The success of development of derivatives market in Kenya will largely be influenced by political environment Source (Researcher, 2012)**

### 4.6.11 The success of development of derivatives market in Kenya will largely be influenced by knowledge of derivatives

About 52% of the respondents strongly agreed while 45% agreed with the statement that the success of development of derivatives market in Kenya will largely be influenced by knowledge of derivatives. However, 3% of the respondents neither agreed nor disagreed with the statement that the success of development of derivatives market in Kenya will largely be influenced by knowledge of derivatives. This indicates that knowledge on derivatives will largely influence the success of the development of the derivatives markets. (Table 4.21)

**Table 4.21: The success of development of derivatives market in Kenya will largely be influenced by knowledge of derivatives**

| | **Frequency** | **Percent** |
|---|---|---|
| Neutral | 1 | 3.2 |
| Agree | 14 | 45.2 |
| Strongly agree | 16 | 51.6 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.6.12 The success of development of derivatives market in Kenya will largely be influenced by participants attitude

Most (52%) of the respondents agreed with 45% of the respondents strongly agreeing with the statement that the success of development of derivatives market in Kenya will largely be influenced by participants' attitude. However, 3% of the respondents neither agreed nor disagreed that the success of development of derivatives market in Kenya will largely be influenced by participants' attitude. This indicates that participant's attitude will largely influence the success of development of derivatives markets (Figure 4.23).

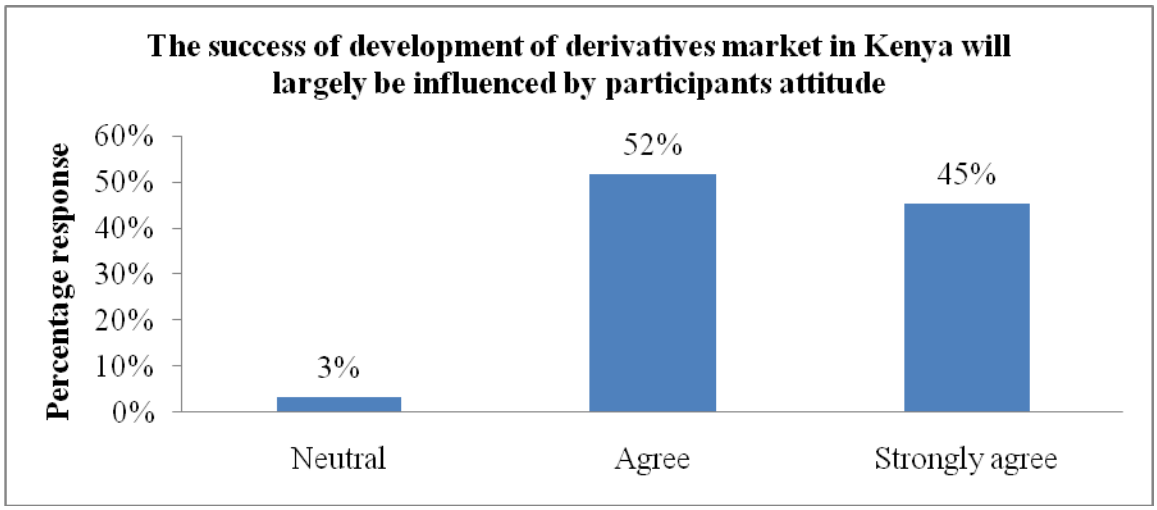



**Figure 4.23: The success of development of derivatives market in Kenya will largely be influenced by participants' attitude Source (Researcher, 2012)**

### 4.6.13 The success of development of derivatives market in Kenya will largely be influenced by financial infrastructure

About 55% of the respondents strongly agreed with 42% agreeing with the statement that the success of development of derivatives market in Kenya will largely be influenced by financial infrastructure. However, only 3% of the respondents neither agreed nor disagreed with the statement that the success of development of derivatives market in Kenya will largely be influenced by financial infrastructure (Table 4.22).

**Table 4.22: The success of development of derivatives market in Kenya will largely be influenced by financial infrastructure**

| | **Frequency** | **Percent** |
|---|---|---|
| Neutral | 1 | 3.2 |
| Agree | 13 | 41.9 |
| Strongly agree | 17 | 54.8 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.6.14 The success of development of derivatives market in Kenya will largely be influenced by foreign competition

Majority (65%) of the respondents agreed while 7% of the respondents strongly agreed that the success of development of derivatives market in Kenya will largely be influenced by foreign competition. However, 26% of the respondents did neither agree nor disagree

while 3% disagreed that the success of development of derivatives market in Kenya will largely be influenced by foreign competition. This indicates that indeed the foreign competition will greatly influence development of derivatives markets in Kenya (Figure 4.24).

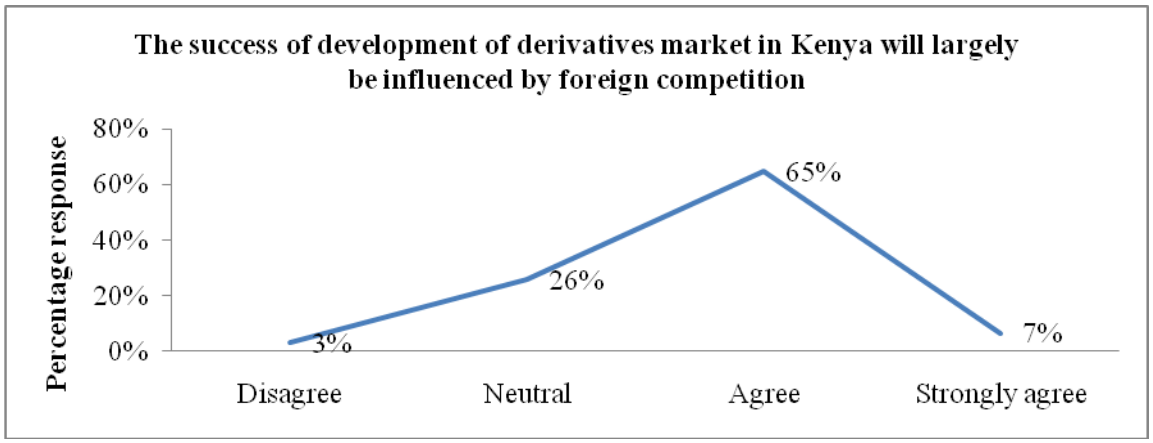



**Figure 4.24: The success of development of derivatives market in Kenya will largely be influenced by foreign competition Source (Researcher, 2012)**

### 4.6.15 Rating the support received from the central government in the development of derivatives markets

Majority (61%) of the respondents rated the support received from the central government in the development of derivatives markets as fair, 26% of the respondents rated it as good, 10% of the respondents rated it as not supportive while only 3% rated the support received from the central government in the development of derivatives markets as great. This implies that there is need for the government to increase their support in the development of derivatives markets (Table 4.23).

**Table 4.23: Support received from the central government in the development of derivatives markets**

| | Frequency | Percent |
|---|---|---|
| Not supportive | 3 | 9.7 |
| Fair | 19 | 61.3 |
| Good | 8 | 25.8 |
| Great | 1 | 3.2 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.6.16 The main reason for trading on derivatives

Most (84%) of the respondents were of the opinion that the main reason for trading on derivatives was hedging while 16% identified speculation as the main reason for trading on derivatives (Table 4.24).

**Table 4.24: The main reason for trading on derivatives**

| | Frequency | Percent |
|---|---|---|
| Hedging | 26 | 83.9 |
| Speculation | 5 | 16.1 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

### 4.6.17 The awareness level about derivatives instruments by investors

Majority (45%) of the respondents identified the awareness levels about derivatives instruments by investors as very low, 32% of the respondents identified it as low, 10% of the respondents as moderate, 7% of the respondents identified it as high while 7% of the respondents indicated the awareness level about derivatives instruments by investors as very high. This indicates that there is need for creation of awareness in line with the derivatives instruments to prospective investors (Figure 4.25).

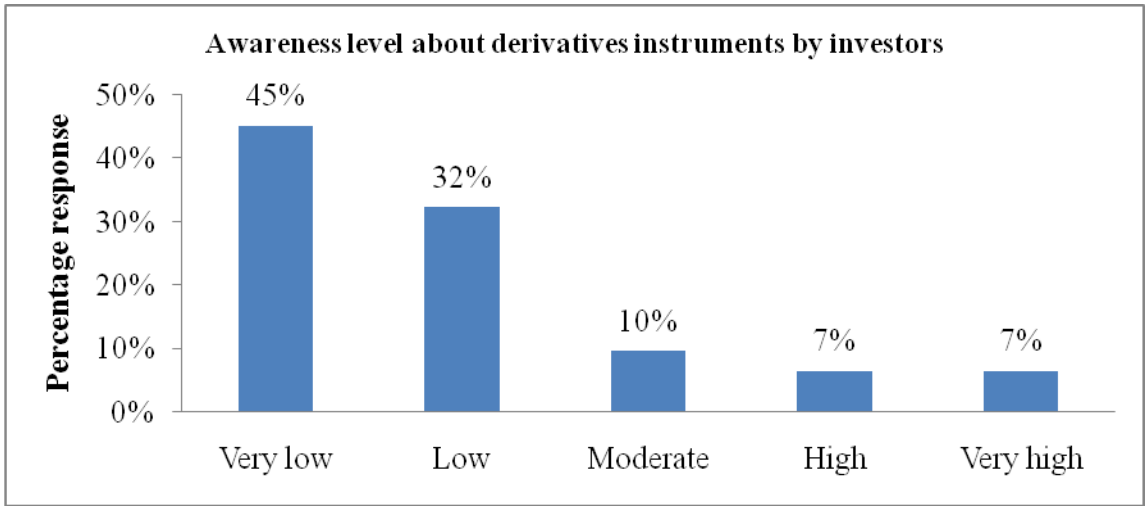



**Figure 4.25: The awareness level about derivatives instruments by investors Source (Researcher, 2012)**

## 4.7 Impact of derivative markets in the Kenyan economy

### 4.7.1 Derivatives markets will lead to increased transparency in the way of doing business through increased information disclosure

The study findings indicated that 55% of the respondents agreed while 13% of the respondents strongly agreed that the derivatives markets will lead to increased transparency in the way of doing business through increased information disclosure. However, 19% of the respondents neither agreed nor disagreed while 13% of the respondents disagreed with the statement that the derivatives markets will lead to increased transparency in the way of doing business through increased information disclosure (Table 4.25).

**Table 4.25: Derivatives markets will lead to increased transparency in the way of doing business through increased information disclosure**

| | **Frequency** | **Percent** |
|---|---|---|
| Disagree | 4 | 12.9 |
| Neutral | 6 | 19.4 |
| Agree | 17 | 54.8 |
| Strongly agree | 4 | 12.9 |
| **Total** | **31** | **100.0** |

Source (Researcher, 2012)

# CHAPTER FIVE

# SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

## 5.1: Introduction

This chapter presents the summary of the study findings, conclusion, recommendations and suggestions for further research.

## 5.2: Summary

The main purpose of this study was to identify the factors influencing the development of derivatives markets in Kenya. Based on the study's objectives, the findings were summarized below.

### 5.2.1: Background to the study

The findings indicate that majority (65%) of the respondents were male with most (64%) of the respondents being aged between 30 and 39 years. Most of the (52%) respondents were degree holders with a majority (65%) of the respondents having attended a course on financial derivatives. The findings indicate that majority (48.4%) of the respondents had between 0 to 5 years as well as 48.4% of who had between 6 to 10 years having worked with their organizations. Most (26%) of the respondents were financial analyst.

### 5.2.2 How the macro economic and structural policy framework influence derivatives market

Results indicate that most (84%) of the respondents agreed with the statement that Government spending on financial infrastructure is inadequate for successful derivatives markets, majority (81%) of the respondents agreed that taxation on derivatives will hamper progress of derivatives markets. About 67% of the respondents disagreed with the statement that derivatives can diminish the ultimate control that the monetary policy has over the levels of inflation. These findings indicate that most (94%) of the respondents agreed that shallow financial systems limit fiscal, monetary and exchange rate policy choices. From the study findings, most (78%) of the respondents agreed with the statement that Government intervention on the exchange rate will hamper the success

of currency derivatives, most (96%) of the respondents agreed with the statement that trading on derivatives will improve the GDP of the country. Majority (81%) of the respondents indicated that they agreed with the statement that high levels of foreign exchange reserves will greatly enhance derivatives trading. Most (91%) of the respondents agreed with the statement that derivatives are a consequence of increased volatility in interest rates and exchange rates. About 64% of the respondents disagreed with the statement that derivatives cause increased volatility in interest rates and exchange rates. Majority (91%) of the respondents agreed with the statement that derivatives will facilitate cross border capital flow. Most (87%) of the respondents agreed with the statement that the country's GDP level will greatly determine success of the derivatives markets.

### 5.2.3 How the legal and regulatory frameworks influence development of derivatives market

The findings indicate that majority (68%) of the respondents perceived the customer protection regulation in line with legal and regulatory framework as adequate. Majority (93%) of the respondents perceived trading and clearing rules as adequate. The study findings indicate that most (93%) of the respondents perceived the licensing of market dealers as adequate. The study findings also indicate that majority (84%) of the respondents perceived the reporting of market dealers as adequate. About 78% of the respondents perceived the registration of financial institutions as adequate. The study findings indicate that a majority (65%) of the respondents perceived collateral deposits as adequate. About 87% of the respondents were of the opinion that capital requirements were adequate. Majority (93%) of the respondents agreed that the law should require the reporting of derivatives transactions as a condition for their legal enforceability. Majority (74%) of the respondents agreed with the statement that clearing house privileges laws are very important for derivatives trading and should be given the first priority. The study findings indicated that 78% of the respondents agreed with the statement that government regulation of derivatives market in Kenya should be preferred to self regulation by the markets.

### 5.2.4 The most suited derivatives instruments for the Kenyan market

The study findings indicate that most (49%) of the respondents agreed with the statement that there will be a scarce supply of derivatives instrument for hedging in the local market. The findings also indicate that 42% of the respondents agreed with the statement that the demand for derivatives contracts will be very low. The study findings portray a high likelihood that all the contracts will dominate trading in terms of success are currency derivatives with a mean of 4.33: With currency futures portraying the highest level of likelihood with a mean of 4.67 followed by forward with a mean of 4.50. In terms of equity, the results portray a weak likelihood of the contracts dominating trading with a mean of 2.81. Equity futures portrayed the highest mean at 3.60. In line with interest rates, there was relatively a high level of the contracts dominating trading at a mean score of 3.95 with forward interest rate contracts taking lead with a mean score of 4.40. In terms of credit, there was a weak likelihood of the contracts dominating trading at a mean score of 2.56 with forward taking lead with a mean score of 3.20. Lastly, in terms of commodity, there was a weak likelihood of the contracts dominating trading at a mean score of 2.75 with commodity swaps taking lead with a mean score of 4.00 out of a possible 5.

### 5.2.5 Roles played by liquidity in derivatives markets

About 65% of the respondents rated the current level of efficiency in the capital markets in Kenya as moderate. Majority (75%) of the respondents agreed that the current level of efficiency in the capital markets is a result of the level of liquidity. The findings indicate that majority (45%) of the respondents agreed that liquidity in the underlying markets is inadequate to sustain derivatives trading in Kenya. Most (84%) of the respondents agreed with the statement that derivatives trading will enhance market turnover of the underlying markets. The study findings indicate that all 100% of the respondents agreed with the statement that trading in the derivatives markets will be greatly influenced by local institutional investors. About 74% of the respondents agreed with the statement that trading in the derivatives markets will be greatly influenced by local retail investors.

Approximately 80% of the respondents agreed that the trading in the derivatives markets will be greatly influenced by overseas institutional investors.

Majority (68%) of the respondents agreed with the statement that trading in the derivatives markets will be greatly influenced by overseas retail investors. About 94% of the respondents agreed with the statement that policy makers should conduct seminars all regarding the use of derivatives before commencement to strengthen knowledge and understanding of the derivatives markets. All (100%) of the respondents agreed with the statement that political environment will greatly influence the success of development of derivatives market in Kenya. About 97% of the respondents believe that the success of development of derivatives market in Kenya be influenced by knowledge of derivatives. Also 97% of the respondents agreed with the statement that the success of development of derivatives market in Kenya will largely be influenced by participants' attitude. About 97% of the respondents agreed with the statement that the success of development of derivatives market in Kenya will largely be influenced by financial infrastructure.

Majority (72%) of the respondents agreed that the success of development of derivatives market in Kenya will largely be influenced by foreign competition. Approximately (61%) of the respondents rated the support received from the central government in the development of derivatives markets as fair, 26% of the respondents rated it as good, 10% of the respondents rated it as not supportive while only 3% rated the support received from the central government in the development of derivatives markets as great. Most (84%) of the respondents were of the opinion that the main reason for trading on derivatives would be hedging. Finally 77% of the respondents identified the awareness levels about derivatives instruments by investors as low.

### 5.2.6 Impact of derivative markets in the Kenyan economy

The study findings indicated that 68% of the respondents agreed that the derivatives markets will lead to increased transparency in the way of doing business through increased information disclosure. It also indicated that the derivatives markets are likely

to lead to improved GDP of the country with 96% of the respondents agreeing with the statement that trading on derivatives will improve the GDP of the country. Also 84% of the respondents agreed that derivatives trading will enhance market turnover of the underlying markets. Finally 91%of the respondents believe that derivatives will facilitate cross border capital flow and therefore there development will be beneficial for the Kenyan economy.

### 5.3 Conclusion

The first objective of this study was to evaluate how the macro economic and structural policy influences derivatives market. From the finding it can be concluded that the Government spending on financial infrastructure in Kenya is inadequate for successful derivatives markets and taxation on derivatives will hamper progress of derivatives markets in Kenya. More over the study concludes that Derivatives cannot diminish the ultimate control that the monetary policy has over the levels of inflation though shallow financial systems limit fiscal, monetary and exchange rate policy choices. It can also be concluded that the government intervention on the exchange rate will hamper the success of currency derivatives and that trading on derivatives will improve the GDP of the country; however, country's GDP level will greatly determine success of the derivatives markets. On the other hand, high levels of foreign exchange reserves will greatly enhance derivatives trading since they are a consequence of increased volatility in interest rates and exchange rates. Derivatives do not cause increased volatility in interest rates and exchange rates but instead will facilitate cross border capital flow.

The second objective was to determine how the legal and regulatory framework influences development of derivatives market. From the finding it can be concluded that in line with legal and regulatory framework is adequate, trading and clearing rules were adequate, reporting of market dealers was adequate and capital requirements were adequate. On the other hand there was some hesitation on the adequacy of customer protection regulation, licensing of market dealers, registration of financial institutions and collateral deposits requirements on the part of some respondents which means some substantial effort should be put in these areas. It can also be concluded that the law

should require the reporting of derivatives transactions as a condition for their legal enforceability and that clearing house privileges laws are very important for derivatives trading and should be given the first priority. At the same time government regulation of derivatives market in Kenya should be preferred to self regulation by the markets.

The third objective of the study was to identify the most suited derivatives instrument for the Kenyan market. From the study findings, it can be concluded that there will be a scarce supply of derivatives instrument for hedging in the local market since the demand for derivatives contracts will be very low. The study findings portray a high likelihood that all the contracts will dominate trading in terms of success of currency followed by forward. In terms of equity, the results portray a weak likelihood of the contracts dominating trading. Futures contracts portrayed the highest likelihood of dominating in trading. In line with interest rates, there was relatively a high level of the contracts dominating trading with forward taking lead. In terms of credit, there was a weak likelihood of the contracts dominating trading at with forward taking lead. Lastly, in terms of commodity, there was a weak likelihood of the contracts dominating trading with commodity swaps taking lead.

The fourth objective of the study was to assess the role of liquidity to a well-functioning derivatives market. From the research findings it can be concluded that the current level of efficiency in the capital markets in Kenya was moderate, and the level of efficiency in the capital markets was attributed to a result of the level of liquidity. The liquidity in the underlying markets in Kenya is inadequate to sustain derivatives trading in Kenya. Further from the study it can be concluded that derivatives trading will enhance market turnover of the underlying markets. The trading in the derivatives markets will be influenced by local institutional investors, local retail investors, overseas institutional investors as well as overseas retail investors.

The main reason for trading on derivatives in Kenya would be hedging. The support received from the central government in the development of derivatives markets could rated as fair. Also Policy makers should conduct seminars all regarding the use of

derivatives before commencement to strengthen knowledge and understanding of the derivatives markets since the awareness levels on derivatives by investors was rated as low. Further the success of derivatives markets in Kenya will largely be influenced by political environment, knowledge of derivatives, participants' attitude, financial infrastructure and foreign competition.

Objective five was to find out the impact of derivative markets in the Kenyan economy. From the study findings, it can be concluded that the derivatives markets will lead to increased transparency in the way of doing business through increased information disclosure this may by extension lead to more job creation and thus reducing the levels of unemployment. Also more financial knowledge will be acquired as people try to understand the derivatives and thus more employable youth and also increased courses in the learning institutions on derivatives to cope with the training needs. Lead to improved balance of payment (BOP) through facilitated cross border flows thus a higher GDP of the county and thus growth of the economy.

### 5.4 Recommendations

In order to improve on the derivatives markets in Kenya, the study recommends the following**:**

- There is need for government to increase its intervention through increased spending on financial infrastructure, regulation of the taxation of derivatives markets and put in place measures that improve the GDP of the country. This will enable efficient hedging on currency and interest rates on foreign obligations. Also improve BOP through cross border flows and create a thriving efficient derivative markets in Kenya.
- The CMA should put in place measures that will enhance confidence on investors in the derivatives markets especially on customer protection, collateral deposit requirements and on the licensing of market dealers and financial institutions. There is need for reporting of derivatives transactions as a condition for their legal enforceability and that clearing house privileges laws are very important for derivatives trading and should be given the first priority. At the same time

government regulation of derivatives market in Kenya should be preferred to self regulation by the markets. This will lead to spillover of transparency and voluntary disclosure in other businesses activities.

- There is need to improve on liquidity in the current capital markets since it was found the current levels of liquidity in the NSE were inadequate to sustain derivatives trading in Kenya and also the fact that liquidity it influences the efficiency in markets. Further this will lead to efficiency even in the underlying markets.
- Policy makers should conduct seminars all regarding the use of derivatives before commencement to strengthen knowledge and understanding of the derivatives markets. These seminars should also be taken to schools to create awareness of the need for financial skills on the derivatives. This will lead to robust knowledge on derivatives and also create interest in the area.

### 5.4.1 Recommendations for further study

Once the derivatives markets are operational in Kenya, there is the need to conduct a study on the derivatives markets from the trading point of view on the various derivatives contracts.

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## APPENDIX I: LIST OF WORLD DERIVATIVES MARKETS

| Country | Exchange |
|---|---|
| United States | Chicago Board of Trade, Coffee, Sugar and Cocoa Exchange, Iowa Electronic Markets, Kansas City Board of Trade, Mid-American Commodity Exchange, New York Cotton Exchange, New York Mercantile Exchange, Twin Cities Board of Trade, Chicago Board Options Exchange (CBOE),Chicago Mercantile Exchange (CME), Chicago Climate Exchange, New York Board of Trade (NYBOT), TradeSports [unregulated]', Kansas City Board of Trade (KCBT), Minneapolis Grain Exchange (MGEX), OneChicago [Single-stock futures (SSF's) and Futures on ETFs],U.S. Futures Exchange (USFE), HedgeStreet |
| Great Britain | London International Financial Futures and Options Exchange LIFFE, The London Metal Exchange (LME), International Petroleum Exchange (IPE), European energy exchange ( trading both oil and natural gas products)Intercontinental Exchange (ICE Futures), NYMEX Europe, Eurex The European Derivatives Market |
| Japan | Tokyo International Financial Futures Exchange (Tiffe), Central Japan Commodity Exchange (C-COM), Kansai Commodities Exchange (KEX), Osaka Securities Exchange (OSE), Tokyo Commodity Exchange (TOCOM), Tokyo Stock Exchange (TSE), Tokyo Grain Exchange (TGE), Tokyo Financial Exchange (TFX) |
| China | Dalian Commodity Exchange (DCE), Shanghai Futures Exchange (SHFE), Zhengzhou Commodity Exchange (ZCE), China Financial Futures Exchange (CFFEX) |
| India | National Stock Exchange of India (NSE), Bombay Stock Exchange (BSE), Multi Commodity Exchange of India (MCX), National Multi Commodity Exchange of India (NMCE), National Commodity and Derivatives Exchange (NCDEX) |
| Germany | Deutsche Terminbörse (DTB), Bremen Cotton Exchange, Copenhagen Stock Exchange |
| United Arab Emirates: | Dubai International Financial Exchange (DIFX), Dubai Gold & Commodities Exchange (DGCX), Dubai Mercantile Exchange (DME) |
| Argentina | Bolsa de Comercio de Santa Fe |
| Brazil | Brazilian Mercantile and Futures Exchange (BM&F), Maringá Mercantile and Futures Exchange |
| South Africa | South African Futures Exchange (SAFEX) |
| France | France Futures and Options Exchange (MATIF) |
| Turkey | Turkish Derivatives Exchange |
| Switzerland | Swiss Options & Financial Futures Exchange (SOFFEX) |
| Australia | Sydney Futures Exchange Ltd. |
| Hong Kong | Hong Kong Futures Exchange (HKFE) |
| Singapore | Singapore International Monetary Exchange (SIMEX) |
| New Zealand | New Zealand Futures & Options Exchange |
| Mexico | Mexican Derivatives Exchange (MexDer) |

Source of information;**http://www.site-by-site.com/futex_world.htm and http://csanad.hubpages.com**

**APPENDIX II: LIST OF STOCK BROKER FIRMS**

| | Name of firm | Location | Email |
|---|---|---|---|
| 1 | Dyer & Blair Investment Bank Ltd | Pension Towers, 10th floor | shares@dyerandblair.com |
| 2 | Suntra Investment Bank Ltd | Nation Centre,7th Floor | info@suntra.co.ke |
| 3 | Kingdom Securities Ltd | Co-operative Bank House,5th Floor | info@kingdomsecurities.co.ke |
| 4 | Sterling Capital Ltd | Barclays Plaza, 5th Floor | info@sterlingstocks.com |
| 5 | NIC Securities Limited | Ground Floor, NIC House, Masaba Road, | info@nic-capital.com |
| 6 | Discount Securities Ltd. (Under Statutory | Nairobi | discount@dsl.co.ke |
| 7 | Genghis Capital Ltd | Prudential Building, 5th Floor, | info@gencap.co.ke |
| 8 | Francis Drummond & Company Limited | Hughes Building, 2nd floor | info@drummond.co.ke |
| 9 | NgenyeKariuki& Co. Ltd. ( Under Statutory | Corner House, 8th floor | ngenyekari@wananchi.com |
| 10 | Old Mutual Securities Ltd | IPS Building, 6th Floor, | info@reliablesecurities.co.ke |
| 11 | CFC Stanbic Financial Services | CFC Stanbic House, | csfs@stanbic.com |
| 12 | Afrika Investment Bank Ltd | Finance House, 9th Floor | info@afrikainvestmentbank.com |
| 13 | ABC Capital Ltd | IPS Building, 5th floor | headoffice@abccapital.co.ke |
| 14 | Apex Africa Capital Ltd, | Rehani House, 4th Floor | invest@apexafrica.com |
| 15 | Faida Investment Bank Ltd | Windsor House, 1st floor, | info@faidastocks.com |
| 16 | Standard Investment Bank Ltd | ICEA Building, 16th floor, | info@sib.co.ke |
| 17 | Kestrel Capital (EA) Limited | ICEA Building, 5th floor | info@kestrelcapital.com |
| 18 | African Alliance Kenya Investment Bank Ltd, | Trans-national Plaza, 1st Floor | securities@africanalliance.co.ke |
| 19 | Renaissance Capital (Kenya) Ltd | Purshottam Place ,6th Floor, Westland , | info@rencap.com |

## APPENDIX III: COVER LETTER

**Kenyatta University**
Graduate school of Business Administration
P.O Box 43844 - 00100
**Nairobi**

Dear Sir/ Madam
**REF: Post Graduate Research Questionnaire**

I am undertaking a project on; "An investigation into factors influencing development of derivatives markets in Kenya."

You have been identified as one of the people who will participate in responding to the questionnaire

that I am using to carry out research for my masters degree. In this regard I kindly request you to fill the questionnaire.

The response of the questions therein and any information will be purely for academic research purpose.

Your assistance and support will be highly appreciated. Thank you in advance.

Yours sincerely,

Pauline Mbungu

**APPENDIX IV: QUESTIONNAIRE**

**Instructions: Please tick appropriately**

Please fill in the questionnaire provided by ticking appropriately or filling in as directed.

**SECTION A**

1. Tick where appropriate

   a. Age (years)

   20 – 29 ( ) 30 – 39 ( ) 40– 49 ( ) 50 and above ( )

   b. Sex

   Male ( ) Female ( )

2. Please indicate your highest education level completed

   College diploma ( ) Bachelors degree ( ) Post graduate degree ( )

3. Have you attended any course on financial derivatives?

   Yes ( ) No ( )

4. How long have you worked for your organization? (years)

   0 -5 years ( ) 6 -10 years( ) 11 -15 years( ) 16 years and above ( )

5. What is the nature of your occupation?

Please state ……..

## SECTION B

**6.** Macro economic and structural policies

Kindly give your opinion on the following statements on derivatives markets. Tick in the appropriate box on each of the statements.

| Statement | Strongly agree | Agree | neutral | disagree | Strongly disagree |
|---|---|---|---|---|---|
| Government spending on financial infrastructure is inadequate for successful derivatives markets | | | | | |
| Taxation on derivatives will hamper progress of derivatives markets | | | | | |
| Derivatives can diminish the ultimate control that the monetary policy has over the levels of inflation | | | | | |
| Shallow financial systems limit fiscal, monetary, and exchange rate policy choices. | | | | | |
| Intervention by the government on the exchange rate will hamper success of currency derivatives | | | | | |
| Trading on derivatives will improve the GDP of the country | | | | | |
| High levels of foreign exchange reserves will greatly enhance derivatives trading | | | | | |
| Derivatives are a consequence of increased volatility in interest rates and exchange rates | | | | | |
| Derivatives cause increased volatility in interest rates and exchange rates | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Derivatives will facilitate cross border capital flows | | | | | |
| The GDP level will greatly determine success of the derivatives markets. | | | | | |

7. Legal and regulatory framework

   a. How adequate do you think the following regulatory issues are addressed as per the current trading status at the NSE in Kenya.

| Factor | Very adequate | Adequate | Inadequate | Very inadequate |
|---|---|---|---|---|
| Customer protection regulation | | | | |
| Trading and clearing rules | | | | |
| Licensing of market dealers | | | | |
| Reporting of market dealers | | | | |
| Registration of financial institutions | | | | |
| Collateral deposits | | | | |
| Capital requirements | | | | |

   b. The law should require the reporting of derivatives transactions as a condition for their legal enforceability.

| Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|---|---|---|---|
| | | | | |

   c. Clearing house privileges laws are very important for derivatives trading and should be given the first priority

| Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|---|---|---|---|
| | | | | |

   d. Government regulation of derivatives market in Kenya should be preferred to self regulation by the markets.

| Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|---|---|---|---|
| | | | | |

8. Derivatives instruments

   a. There will be a scarce supply of derivatives instruments for hedging in the local market

| Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| | | | | |

b. The demand for derivatives contracts will be very low

| Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|---|---|---|---|
| | | | | |

c. Which of the following derivative contracts in your opinion will likely dominate trading in Kenya in terms of success of the contract? (Rate 5 - most successful 1- least successful)

| **Contract** / **Underlying** | Options | Futures | Swaps | Forward |
|---|---|---|---|---|
| Currency | | | | |
| Equity | | | | |
| Interest rates | | | | |
| Credit | | | | |
| Commodity | | | | |

d. Are you aware of any over the counter derivatives trading in Kenya? If aware please give the nature of the derivatives.

……

……

9. Liquidity in the underlying market

a. How do you rate the current level of efficiency in the capital markets in Kenya?

| Very high | High | Moderate | Low | Very Low |
|---|---|---|---|---|
| | | | | |

b. The current level of efficiency in the capital markets is a result of the level of liquidity.

| Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|---|---|---|---|
| | | | | |

c. Liquidity in the underlying markets is inadequate to sustain derivatives trading in Kenya.

| Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|---|---|---|---|
| | | | | |

d. Derivatives trading will enhance market turnover the underlying markets

| Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|---|---|---|---|
| | | | | |

e. Trading in the derivatives markets will be greatly influenced by;

| Variables | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|---|---|---|---|---|
| Local institutional investors | | | | | |
| Local retail investors | | | | | |
| overseas institutional investors | | | | | |
| overseas retail investors | | | | | |

10. Policy makers should conduct seminars all regarding the use of derivatives before commencement to strengthen knowledge and understanding of the derivatives markets.

| Strongly agree | Agree | Neutral | Disagree | Strongly agree |
|---|---|---|---|---|
| | | | | |

11. The success of development of derivatives market in Kenya will largely be influenced by;

| Variables | Strongly agree | agree | Neutral | disagree | Strongly disagree |
|---|---|---|---|---|---|
| Political environment | | | | | |
| Knowledge of derivatives | | | | | |
| Participants attitude | | | | | |
| Financial infrastructure | | | | | |
| Foreign competition | | | | | |

12. In your opinion, how would you rate the support received from the central government in the development of derivatives markets?

| Great | Good | fair | Not supportive |
|---|---|---|---|
| | | | |

13. What do you think will be the main reason for trading on derivatives?

| Hedging | Speculative | Arbitrage |
|---|---|---|

| | | |
|---|---|---|
| | | |

14. In your opinion what is the awareness level about derivatives instruments by investors?

| Very high | High | Moderate | Low | Very low |
|---|---|---|---|---|
| | | | | |

15. Derivatives markets will lead to increased transparency in the way of doing business through increased information disclosure.

| Strongly agree | Agree | Neutral | Disagree | Strongly Disagree |
|---|---|---|---|---|
| | | | | |

16. What is your overall opinion on derivatives market in Kenya?

……

……

**APPENDIX V: RESEARCH BUDGET**

| **Item** | **Quantity** | **price per Unit** | **Budget(ksh)** |
|---|---|---|---|
| Stationery | 6 | 400 | 2,400 |
| Printing | 500 | 6 | 3,000 |
| Transport | | | 1,000 |
| Telephone costs | | | 2,000 |
| Miscellaneous | | | 5,000 |
| Sub total | | | 13,400 |
| **Final Project** | | | |
| Stationery | 10 | 400 | 4,000 |
| Printing | 1000 | 5 | 5,000 |
| Transport | | | 2,000 |
| Data Collection | | | 25,000 |
| Telephone Costs | | | 2,000 |
| Miscellaneous | | | 5,000 |
| sub total | | | 43,000 |
| **Grand total** | | | **56,400** |

N/B: The above Budget will be financed by the researcher

**APPENDIX VI: RESEARCH TIME SCHEDULE (WEEKS)**

| ACTIVITY | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Data collection | | | | |
| Data editing and coding | | | | |
| Data entry | | | | |
| Data analysis | | | | |
| Report writing | | | | |
| Submission | | | | |