THE IMPACT OF INTEREST RATES ON THE DEVELOPMENT AND GROWTH OF THE CAPITAL MARKET IN KENYA

BY

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DECLARATION

This research study is my own original work. It has not been presented in any learning institution for an academic award.

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DEDICATION

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LIST OF ABBREVIATIONS AND ACRONYMS

APT - Arbitrage Pricing Theory

CAPM- Capital Asset Pricing Model

CBK - Central bank of Kenya

CBR - Central Bank Rate

CMA - Capital Markets Authority

CPI - Consumer Price Index

EPS - Earnings Per Share

GDP - Gross Domestic Product

NSE - Nairobi Securities exchange

ROE - Return on Equity

ROI - Return on Investment

ABSTRACT

Studies on the relationship between interest rates and their effects on various sectors of the economy have most often concentrated on the banking sector and to a lesser extent reach out on borrowing of the non-bank sectors, generally leaving the development of the capital markets out as a third crucial wellspring of outside fund, venture and a specialist of financial development. The capital markets assume critical parts in the financial development of a nation. The part of obligation in advancing financial and capital market development in Kenya has been the subject of much open deliberation among business analysts, advancement authorities and specialists. Notwithstanding this, there has just been a couple of exact studies that researched the effects of interest rates on the development of the capital market in Kenya. This gap is filled by giving experimental confirmation in the study to set up the relationship between the unpredictability of interest rates and the capital market development which is also taken to be market capitalization in the study. The current study investigates the causal effects of interest rates on the development of the capital markets in Kenya utilizing information that ranges from the year 2006 to the year 2015 and setting up through causal study if a change in one of the variables causes any changes in the other variable. The time arrangement information is on market capitalization, cash supply, genuine GDP and changes in loan fees. The outcomes demonstrate that the rates of interest significantly affect the rate of development and growth of the capital market in Kenya. The results of the study infer that Kenya could improve its capital market development by viably and deliberately stimulating the directions taken by interest rates. This study concludes that the supply-driving theory of capital market development wins in Kenya amid the period under study from 2006 to 2015. It is suggested along these lines that the administrative power ought to start strategies that would improve the control of the instability of the loan fees and in addition the forecast of the adjustments in the rates. The administration and other administrative bodies, for example, the Central bank and the capital market power ought to likewise be more proactive in their reconnaissance part keeping in mind the end goal to check sharp practices which undermine trustworthiness and disintegrate financial specialists' certainty.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Stock markets play a major role in financial intermediation in both developing and developed nations (Hafer and Hein, 2007). It profits and offers cash-flows to some listed firms by combining reserves drawn from various investors and then commits the funds to grow in business by giving financial specialists elective venture roads to put their surplus assets. The share trading system, thusly, makes it workable for the economy to guarantee long haul duties in genuine capital (Ologunde, Elumilade, and Asaolu, 2006.) The expanding significance of budgetary markets over the world has fortified the general conviction that it is a vital component of monetary development. Accordingly, the accentuation has stayed on financial development and securities exchange advancement. Being a critical part of the economic development of a nation, capital markets assume key parts in the development of the country's business and trade thus influencing the entire economy to an expansive degree. This accumulation of funds is the basis that the modern markets, government counselors and the central bank of any nation maintain a close eye of perception on the exercises of the market (Nazir, Nawaz, and Gilani, 2010).

Interest rate as a specific financial parameter indicates the value of money and significantly influences any actions on money and capital markets (North &Caes, 2012). Interest rate on money market is the main parameter representing a minimum yield in comparing various yields on investments on money and at the same time capital markets. Investor's decision on investments on money and capital markets will be always based on the interest rate prevailing in the money market (Hirsch, 2012). As per Pandey (1999), financing costs are a crucial instrument of money

related arrangement and are therefore considered when managing a portion of the key determinants of the development of the economy, for example, venture and swelling among others.

The central bank to a large extent has a tendency to reduce the rates of interests and influence the uptake of loans as they so wish to expand the use of loans in a nation's economy and the other way around. Notwithstanding, the low costs of financing of loans has some high degree of economic strategy that could be dangerous and may lead to the formation of an economic increase filled with a lot of speculations on the development of the share trading system (Mirakhor and Lillanueva, 1990).

Both hypothesis and exact writings hold that the development of a nation and its capital market are specifically identified with the economy, which comprises of different factors like GDP, remote direct speculation, settlements, swelling, loan cost, cash supply, swapping scale and numerous others (Mirakhor and Lillanueva, 1990). These factors are the foundation of any economy. The developments in the stock costs are influenced by changes in basics of the economy and the assumptions about future prospects of these essentials. Prior empirical studies from developed economies have shed light on the effect of various economic parameters on the performance of the capital market but few of these have focused specific on the effect of the interest rates on the growth of the capital market (Darrat and Dickens, 1999).

The Keynesian theory on interest will be the basis of this study. Keynes states that “interest rate fluctuations have an adverse impact on the national economy at large and mainly on the growth, modifications and development of its markets. Keynesians contend that the administration needs to

effectively intervene on the interest rates and the uncertainties in the sector in order to settle the economy (Asimakopulos, 1991). Something else, the instability created by eccentric changes in the financing costs will be exceptionally harming to venture and subsequently long haul monetary development and the advancement of the capital market. This is combated by Taylors rule which takes into account interest rates and inflation and either the rate of economic growth or unemployment to get the optimum stability level. Monetarists believe that the rate of interests is greatly influenced by how fast the supply of money grows or shrinks (Asimakopulos, 1991). They consider fiscal policy an ineffective way of controlling interest rate fluctuations.

1.1.1 Interest Rates

These are the financing costs charged when taking loans from lenders and are or paid when returning the cash. They are a fee for the use of another's cash. Interests are usually charged when cash is being acquired, and paid when the money is being refunded to the original owner. Haron (2004), states that interest rate levels and unpredictability are utilized to evaluate the effect of financial advancement on the development and growth of the national economy.

Darrat and Dickens, (1999), contend that the loan fee environment is imperative in the execution and the profits of any given venture. The CBK through the financial arrangement and the bank rate has an exceptionally solid bearing on the execution of numerous divisions (Naik, 2013). At the point when interest rates are high, that implies less individuals and organizations can stand to get credit. This brings down the measure of credit accessible to reserve buys, moderating buyer request. In the meantime, it urges more individuals to spare (on the off chance that they can) in light of the fact that they get more on their reserve funds rate (Darrat and Dickens, 1999). This

reduction in the liquidity as a rule backs the economy off and the development of the capital market. Low interest rates have the inverse impact on both the economy and the development of the stock market.

Interest rate movements in the money markets are immediately reflected in capital market prices. Hafer& Hein(2007) express that if the cost of capital market instruments speaks to dependably the present estimation of reduced future money streams, whereby the loan fee is dependably in the denominator, then the patterns in financing costs are continually moving the other way as the costs of shares and altered wage securities, i.e. with rising financing costs the speculators will expect likewise higher yields on his ventures, which thusly will be reflected in falling costs of the stocks, and the other way around (Zacks, 2012). In addition, in view of long-term securities on the capital market, this price movement is greater than in short-term securities, which makes them more risky for the investor. The question remains, if each interest rate change causes the same impact on capital market and whether the prices of the instruments respond with the same level of sensitivity. The developed stock markets show that variations in interim interest rates are replicated with higher sensitivity in the prices of stocks, whereas the prices of stocks most often do not respond at all to these changes. It is logical, since the prices of shares, based on companies' prosperity, record a long-term growth tendency (Yartey and Adjasi, 2007).

1.1.2 The Growth of the Capital Market

The significance of the securities market as an effective channel of financial and economic intermediation has been all around perceived by academicians, specialists together with strategy creators as an essential determinant of the monetary development of a nation, both created and creating (Smith, 2003).

The advancement of the capital market is a vital part of financial area improvement and it supplements the part of the managing an account framework in monetary advancement. In particular, capital markets help with value revelation, liquidity arrangement, lessening in exchange expenses, and hazard exchange (McNeel, 2005). Securities exchanges give showcase liquidity that empowers usage of long haul ventures with long haul adjustments subsequently advancing a nation's financial development try. Besides, effective capital markets not just profit assets to speculators, they additionally encourage inflow of remote financial assets into the household economy (Yartey and Adjasi, 2007).Contemporary economies of creating nations are changing because of fast changes on the planet economy.

The development of the capital market is a vital part of money related area improvement in the economy (Shahbaz, Ahmed and Ali, 2008). The development of the capital markets can be measured by its value disclosure, liquidity arrangement, decrease in exchanges expenses and hazard exchange decided utilizing measures, for example, the arrival on value (ROE) and the arrival on speculation (ROI).

According to Shaw (1973), the span of the share market is a typical list frequently utilized, as a measure of securities exchange size is the market capitalization. Showcase capitalization measures up to the aggregate estimation of every single recorded share (Zuravicky, 2005). As far as financial criticalness, the supposition is that market estimate and the capacity to assemble capital and differentiate hazard are decidedly corresponded. Kemboi&Tarus, (2012) state that “Liquidity is utilized to allude to the capacity of financial specialists to purchase and offer securities effectively”. It is an essential marker of securities exchange advancement and development since it means how the market helped in enhancing the designation of capital and accordingly improving the possibilities of long haul financial development (McNeel, 2005). This is conceivable through

the capacity of the financial specialists to rapidly and economically change their portfolio along these lines decreasing the danger of their speculation and encouraging interests in tasks that are more beneficial however with a long development period.

The turnover proportion is utilized as a record of correlation for market liquidity rating and level of exchange expenses. This proportion measures up to the aggregate estimation of shares exchanged on money markets isolated by the capitalization of the market (McNeel, 2005). It is additionally a measure of the estimation of securities exchanges in respect to the extent of the securities advertise. Focus is an element that measures the level of mastery of the market by a couple endeavors. The criticalness of focus as a measure of execution of securities exchange is a result of the unfavorable impact; this might thus have a further impact on liquidity and the effectiveness of the market (Shahbaz, Ahmed and Ali, 2008). Market capitalization is represented by the 10 biggest stocks frequently measures the level of market focus. The quantity of recorded organizations is the normal number of recorded organizations in the securities.

1.1.3 Interest Rates and the Growth of Capital Markets

Changes in macroeconomic variables, for example, financing costs have an assorted impact over the monetary range, in spite of the fact that the late developments in macroeconomic basics are inadequate in developing economic markets like Kenya. As indicated by the Economic Survey 2013, (GoK, 2013), execution of the securities exchange enhanced amid the year 2012. This is the period when the NSE 20 Share Index ascended by 29.0 for each shilling to about 4,133 up from the record of 3,205 in December 2011. Amid similar period yearly swelling diminished from 14.0 for every share in 2011 to 9.4 for every penny in 2012 (Central Bank of Kenya, 2012). The year 2011/2012 was particularly portrayed by bullish outside financial specialist investment in the value showcase averaging 45% of the aggregate turnover because of cash deterioration.

Notwithstanding, amid the second quarter of 2012, the market encountered a bounce back of sorts generally because of facilitating of inflationary and loan fee weights (Capital Markets Authority, 2012).

The existing theoretical knowledge on financial improvement and development recognizes three central channels through which capital markets and monetary development might be connected (Pagano&Jappelli, 1993). To begin with, capital market improvement expands the extent of funds that is channeled to speculations. Second, capital market advancement may change the reserve funds rate and henceforth, influence ventures. Third, capital market improvement expands the proficiency of capital assignment. As per Riman, and Daniel (2008), the capital markets of creating nations, for example, Kenya have seen clear change throughout the years, apparent by the expanded level of support of the private and open financial specialists at the floor of the stock trade and in different open offers of cited organizations (Ngugi, Amanja and Maana, 2010). The developing business sector has additionally pulled in and grasped the consideration and the enthusiasm of universal speculators, in this manner expanding capital inflow.

The capital market is a system of particular monetary foundations, arrangement of instruments, procedures and base that, in different ways, encourage the uniting of providers and clients of medium to long haul capital for interest in financial formative activities (North and Caes, 2012).

Osaze (2000) says that“thecapital market as the driver of any economy to development and improvement since it is crucial for the long haul development capital arrangement”. It is pivotal in the assembly of funds and diverting of such reserve funds to beneficial self-selling speculation. Mbat (2001) noticed that capital market is the market for dealings (i.e. loaning and acquiring) in longer-term loanable assets. Ekezie (2002) depicted it as a gathering through which long haul assets are made accessible by the surplus to the shortfall monetary units. Nyong (1997) saw the

stock exchange as an intricate establishment instilled with innate instrument through which long haul assets of the significant parts of the economy containing families, firms, and government are activated, bridled and made accessible to different areas of the economy (Caporale, Howells, &Soliman, 2004).

1.1.4 Nairobi Securities Exchange

The Nairobi Securities Exchange – formally Nairobi stock exchange is the body entrusted with the duty to administer posting, delisting and control of exchanging of money related securities, for example, the bonds and shares in Kenya. "The NSE 20-Share Index (NSE 20) is the long-standing benchmark record utilized for values exchanged on Kenya's Nairobi Securities Exchange (NSE) and speaks to the geometric mean of share costs of the NSE's 20 best stocks". The NSE 20-Share Index was presented in 1964, one year after African locals were initially permitted to exchange on the NSE (Osoro, 2013). It was participated in February 2006 by the NSE All Share Index (NASI), went for mirroring the aggregate market estimation of all stocks exchanged on the NSE in one day instead of simply the value changes of the 20 best entertainers caught by the NSE 20.

Salami (2016) states that the individuals are chosen in view of a weighted market execution for a 12 month time stated as: Market Capitalization is 40%, offers exchanged are 30%, number of arrangements is 20% and turnover is 10%. Record is overhauled just toward the day's end. Organizations incorporated into the system include "Nation Media Group, Mumias Sugar, Express Kenya, CMC Holdings, Rea vipingo, Kenya Airways, Sasini Tea, Barclays bank of Kenya, Safaricom, Equity Bank, Standard Chartered Bank, Kenya Commercial Bank, Bamburi Cement, Kengen, British American Tobacco, Centum Investment Company, Kenya Power Company Limited, East African Breweries, Athi River Mining and the EA Cables".

This list primarily focuses on price and interest rate changes amongst those 20 companies. Osoro (2013), notes that there have been complaints about the computation of the NSE 20 SHARE Index. The feeling has been that it is not reflective of the market performance. He adds that this is partly because the index is equally weighted. Assigning equal weights to companies with huge differences in their market capitalization is obviously unrealistic. Nevertheless, it has not been eliminated as a way of measuring performance and so it will be used in this research paper.

1.2 Research Problem

The financial sector and the stock market are a significant part of economic advancement. The debt, the intensity and width of the financial players has for the most part been found to advance economic development in a country. Most academic scholars have always believed that well-working capital markets increase monetary effectiveness, speculation and development (Oriwo, 2012).

Smith (2003), described Kenya's capital market as both tight and shallow. Both the stock and private securities exchange have seen a rise of under 1% of development financing in spite of the expect to accomplish a yearly development of 10% by 2030 with an investment rate of 30% to be financed essentially through local assets (Ochieng and Oriwo, 2012). There has been critical concentration on the capital market with, for instance, the institutional advancement of the stock market and presentation of new instruments in the system of trading stocks. It has been expected that these processes will encourage the activity of sufficient assets and allotment of these assets proficiently to accomplish development goals (Ngugi, Amanja and Maana, 2010). Be that as it may, this goal has barely been accomplished.

Many studies in the developing markets demonstrate a relationship between macroeconomic factors and securities exchange execution. Scholars such as Naik (2013) explored the connections

between the Indian capital market development list and trade rates. Osamuonyi and Evbayiro-Osagie (2012) examined the relationship between macroeconomic factors and the Nigerian capital market file. Ochieng and Oriwo (2012) considered the connection between full scale monetary factors and securities exchange execution in Kenya. Except for Ochieng and Oriwo (2012), the majority of the past studies in the Kenyan setting concentrate on the economic and monetary performance and their relationship with the development of the stock exchange. The study by Ochieng and Oriwo in 2012 cannot give much trustworthiness to strategy because of the way that the time of study is not sufficiently long to build up a dependable pattern; the study likewise utilized information for the whole share file, which incorporates even non performing firms in the NSE. Based on this existing deficiency of studies along these lines, the present study tries to decide the impact of financing costs on the development of the capital market in Kenya a contextual investigation of the NSE. The interest rates (I/R) have been measured by the 91-Day Treasury Bill rates on the share market, utilizing ten year month to month information for the time of 2006 to 2015 The present study is based on the preface of the past discoveries from both developing the developed nations.

1.3 Objective of the Study

This research study aimed at examining the effect of interest rates (I/R) on the growth of the capital market in Kenya, a case of the Nairobi Securities Exchange.

1.4 Value of the Study

The expected outcomes of this investigation shall be significant to various parties in the identified ways. The management of the capital markets will be able to know the sensitivity of the volatility of the interest rates on the activities at the NSE. As a result of getting to know this importance, they will be able to put in place carefully thought out policies hand in hand with the other financial

players in Kenya to help drive growth of the markets and the economy at large using the interest rate policies. Investors in securities on the stock market are interested in knowing how their investments are affected by the existing interest rates such that they can predict returns of their investments.

The discoveries of this examination will be of basic significance in the insightful talk on the points concerning the significance of the capital market and securities trade advertise in the economies of the world. It thusly implies future specialists will import the discoveries of this exploration and utilize them to progress related research contentions.

CHAPTER TWO: THE LITERATURE REVIEW

2.1 Introduction

The main purpose of this literature review is to identify and examine what has been done by other scholars and researchers in relation to the impacts of the interest rates (I/R) on the development and growth of the capital market in Kenya: a case of Nairobi Securities Exchange. This chapter is broken down into the following sections: Review of past studies, theoretical review, empirical review, summary and knowledge gap of the study. The chapter further enumerates all other general issues in the field that are deemed necessary in the understanding the existing connection between interest rates on one hand and the growth and development of the capital markets in Kenya.

2.2 Theoretical Review

The review of available literature attempts to establish whether there is a correlation between interest rates as the independent variable of the study on one hand and the growth of capital markets on the other hand as the dependent variable.

2.2.1 Keynesian Economic Theory

Keynes (1930), in his Treatise on Money, contended for the significance of the monetary parameters, for example, interest rates in the advancement development of both the financial markets and the economy. Keynes says that “credit is the asphalt along which generation ventures, and the money related markets, on the off chance that they knew their obligation, would give the vehicle offices to only the degree that is required all together that the profitable forces of the economy can be utilized at their full limit.” Keynesian financial matters concentrates on quick results in economic theories.

Intrigue and trade rates are money related costs for credit and remote monetary forms, separately (Osaze, 1985). They both influence asset designation, creation levels, costs and benefit. At last, changes in these reflect in share costs – a pointer of market execution. For example, bringing down of financing cost on request and reserve funds stores will enhance profits to contributing for the trade in respect to putting resources into store cash banks (DMBs) holding variables, for example, hazard, exchange costs, and so on steady. This will in this manner increment the request and share cost of influenced values on the trade in this way influencing its execution (Mirakhor and Lillanueva, 1990). The wonder of dollarization (putting resources into dollars) additionally gets to be inescapable in an environment of constant swapping scale deterioration. This redirects assets that could be put on the trade into non-working resources, (for example, dollars). Genuine conversion scale devaluation could likewise bring about capital flight along these lines denying the local economy of its investable money related assets.

Asimakopulos (1991), states that most arrangements concentrate on the transient needs and how monetary approaches can make moment redresses to the share trading system and the economy. Likewise, the legislature is viewed as the main constrain to end financial and financial downturns through money related or monetary approaches, and giving total request to build the level of monetary yield, encouraged through a stable monetary framework that can goad proceeded with development of the share trading system. Keynes later in 1930s strengthened an option structure that incorporates coordinate government control of venture and propelled that money related developing can happen because of an extension in government use (Keynes, 1930). Since higher interest rates bring down private venture, an expansion in government consumption advances speculations and diminishes private speculations simultaneously. This hypothesis is extremely

instrumental in directing this study towards understanding the relationship between the changes of interest rates and the improvement and development of the capital markets in Kenya.

2.2.2 McKinnon and Shaw theory

McKinnon-Shaw (1973) speculations on money and advancement scrutinized the overwhelming neo-traditional financial hypotheses and the Keynesian counter contentions. The neo-established money related development models propose that high-positive loan fee directly affect reserve funds and speculation. Inside this school of thought, cash is viewed as a substitute for physical resources and gainful speculations. McKinnon (1973) progresses a contention for a reciprocal relationship amongst money related and physical resources rather than the substitutability hypothesis by the neoclassical in a study of the Keynesian hypothesis.

The hypothesis places that the apparent financing cost ought to be officially settled (Asimakopulos, 1991). They propel that developing economies are divided; subsequently there is a more noteworthy probability of having speculations that are less gainful. “Capital aggregation is debilitated by the way that for a high swelling rate, ostensible financing costs are set too low and in this way genuine loan costs could be negative” (Mirakhor and Lillanueva, 1990). As capital supply of saving money division is constrained and banks have just concentrated credit exercises, individuals need to fund their speculation extends without anyone else's input or need to go to the casual part where loan costs are regularly usurious.

2.2.3 Fisher Theory

Fisher (1930) said that the ostensible interest rates ought to completely expect developments in the condition of the execution of the economy and the key factors worried to yield the balance genuine financing cost. The normal genuine interest rates are controlled by genuine components, for

example, the efficiency of capital and time inclination of purchasers, and are free of the other financial factors.

Irving Fisher's hypothesis of interest rates relates the existing interest rates “I” to the rate of expansion π and the prevailing interest rates r. The genuine interest rates r is the financing cost after modification for expansion. It is the financing cost that banks need to must will to advance out their assets. On a fundamental level, the Fisher theory could be stretched out to any benefit, for example, regular stock, and other dangerous securities and the development of the stock exchange. The experimental relationship between change in financing costs and the regular stocks was initially examined by Bodie (1976), Jaffe &Mandelker (1976) and Nelson (1976). Although the utilizing distinctive observational methodologies is factual, these creators all finished up for a critical negative relationship between the intermediaries of expansion and the execution of money markets.

2.3 Determinants of Growth of Stock Markets

Stock markets have experienced significant improvements especially during the past 30 years, fostered economic growth and become one of the important leading indicators for the economies (Naik, 2013). Economic growth, saving rate, banking sector development, trade openness, foreign direct investments, institutional quality and stock market liquidity have been identified to be some of the major determinants behind every securities market development. The securities exchanges in developing markets have seen impressive improvement since the mid-1990s (Ioannides, Katrakilidis and Lake (2005). The market capitalization of developing business sector nations has dramatically increased over the previous decade. The development of the stock exchange is a multi-dimensional idea. It is generally measured by securities exchange estimate, liquidity,

instability, fixation, combination with world capital markets, and the legitimate lead (direction and supervision) in the market.

2.3.1Size of the Stock Market

Capitalization measures the span of the share trading system and equivalents the estimation of recorded residential shares on household trades isolated by GDP (Smith, 2003). Albeit expansive markets don't really work adequately and duties may misshape motivations to list on the trade, numerous onlookers utilize capitalization as a pointer of market advancement (Pagano and Jappelli, 1993).

The scope of the capital market can tell the success of the entire securities market and thus its growth. Most investors that want to venture into the securities market are risk averse and thus would want to invest in a growing and profitable market (Naik, 2013). These factors can therefore tell the growth of the market.

2.3.2 Interest Rates

Interest rates are the percent charged, or paid, for the utilization of cash. It is charged when the cash is being acquired, and paid when it is being refunded (McNeel, 2005). The interest rates that the money lender charges is a percent of the aggregate sum credited. Investment is contrarily identified with loan fees, which are the cost of obtaining and the reward to loaning. Speculation is contrarily identified with interest rates for two fundamental reasons (Hafer and Hein, 2007). The stock market is a standout amongst the most lively speculation showcase and is in this way influenced by the adjustments in the cost of obtaining because of loan cost changes.

In the event that interest rates rise, the open door cost of venture rises. A rise in interest rates builds the arrival on assets stored in an enthusiasm bearing record, or from making an advance,

which decreases the appeal of venture in respect to loaning. Thus, venture choices might be deferred until interest rates come back to lower levels (Darrat and Dickens, 1999). Furthermore, if interest rates rise, firms may expect that clients will lessen their spending, and the advantage of the issuance of the cash would be lost. Contributing to grow requires that shoppers at any rate keep up their present spending (Naik, 2013). Along these lines, an anticipated fall is probably going to demoralize firms from contributing and drive them to defer their speculation choices Interest rates variance influences the request and supply of aggregate venture plans.

Decline in interest rate leads to revival of economy and increased investment in new venture. The result is demand for mutual funds. Although the scenario may have changed in terms of single digits Treasury bills trend has changed within 2 years from upward to downward, and currently reverting to upward trend. According to Nazir, Nawaz, & Gilani (2010), interest rates and returns are determined by yield to maturity, holding period, realized return and paper return. Holding period refer to the relevant time over which one wishes to measure return (interest) on investment vehicle. Realized return relates to return received by investor during the period. Paper return has to do with capital gain return that has been achieved, but not yet realized from the sale of investment vehicle.

2.3.3 Debt and Risk

Mehwish, (2013) states that “risk is the inconstancy in the earnings of an organization which improves the probability of liquidation and the cost of obligation”. Risk can be separated into two parts. Working danger is the inconstancy in income because of nature in which the firm works and is unavoidable risk (Roman and Daniel, 2012). Financial risk is the inconstancy in the profit after intrigue and expense that is because of the utilization of money related influence. Money related risk influences the shareholder's esteem in shifting the Earnings per Share (EPS) and rate of Return

on Equity (ROE). This risk emerges as an aftereffect of settled installments identified with obligation, specifically intrigue and main installments, that must be paid paying little mind to whether the business is making benefits or not.

As per Brealey and Myers (2003), in many years in a business' life there is a crevice between the money that the organization needs and the money it can produce inside for its operations and this is known as the financing hole. To make up this hole, organizations must offer new value or acquire.

2.3.4 Liquidity Indicators

Liquidity is the capacity of continuously changing resource from one frame into another (Ivanovic 1997). It is the simplicity of exchanging a security (Ioannides, Katrakilidis and Lake (2005) "that just makes it one of the key components whereupon the financial specialist will choose whether or not to contribute, imperative is brisk execution of requests and capacity to change over in real money at most reduced expenses". Offering an illiquid stock rapidly can be troublesome or even outlandish without tolerating the lower cost (Hirsch, 2012).

There are two related measures of market liquidity. To begin with, turnover rises to the estimation of the exchanges of local shares on household trades isolated by the estimation of recorded local shares. Turnover measures the volume of household values exchanged on local trades in respect to the extent of the market (Roman and Daniel, 2012). High turnover is regularly utilized as a marker of low exchanges costs. Critically, an extensive securities exchange is not really a fluid market: a huge but rather inert market will have vast capitalization yet little turnover. The second measure of market liquidity is esteem exchanged, which approaches the estimation of the exchanges of residential shares on local trades isolated by GDP (Hirsch, 2012). While not an immediate measure

of exchanging expenses or the instability connected with exchanging on a specific trade, hypothetical models of securities exchange liquidity and monetary development specifically spur esteem exchanged (Levine 1991; Bencivenga et al. 1995).

2.4 Review of Empirical Studies

There are several empirical studies related to factors relating interest rates and the growth of the capital markets. Empirical evidence linking the two factors have, however, been uncertain despite the fact that the degree of confirmation is supportive of a positive correlations between the development and growth of the capital market and the interest rates charged.

2.4.1 Global Studies

Caporale and Jung (1997) test for a causal interconnections between both expected and surprising interest rate uncertainties and genuine stock costs, and find that that a positive relationship exists between them. As they finish up, the negative impacts of interest rate variances on stock costs don't vanish in the wake of controlling for yield stuns which then influences the development of this organizations. This is as opposed to Fama's view.

Saunders and Schumacher (2000) in a study in six European nations and the US utilizing information from 614 banks for the period 1988 to 1995 discovered that the administrative necessities and interest rate instability affected the development and improvement of monetary foundations over these nations.

Al-Qenae (2002) in their study on the impacts of stock returns (smaller scale financial variable), swelling and loan fees (large scale monetary factors) on the share trading system record discovered that the full scale financial elements have a negative and noteworthy effect on stock costs. In their

work on the Nigerian capital market, Udegbunam and Erik (2001) noticed that swelling was conversely connected to money markets value conduct.

Ioannides, Katrakilidis (2002) explored the relationship between securities exchange returns and financing costs for Greece over the period 1985 to 2000. There were contentions that securities exchange can fence variances in the interest rates. This study endeavored to examine the three sorts of relationship whether the share trading system had been a protected place for financial specialists in Greece. There was a long run negative relationship from vacillations in loan fees to securities exchange returns over the primary sub-time frame which consequently influenced the development and advancement of the share trading system. The discoveries were reliable with Fama (1981).

Mehwish (2013) led a study on the determinants of Stock Market Performance in Pakistan. The information was broke down quantitatively through relapse investigation utilizing E–views. Utilizing period arrangement information for the period somewhere around 1988 and 2008, the study built up that there is a negative relationship between genuine financing costs and securities exchange development and execution.

2.4.2 Local Studies

Olweny and Omondi (2011) examined the impacts of macroeconomic components on stock return unpredictability in the NSE. Their discoveries demonstrated that macroeconomic elements; outside trade rates, interest rates and swelling rates influenced the instability of securities exchange returns at the NSE. They found that values returns are symmetric however leptokurtic and in this way not ordinarily disseminated. The outcomes demonstrated that remote conversion standard, financing cost and expansion rate influenced stock return instability.

Utilizing secondary information for the period 2005 and 2009 from NSE; Aduda, Masila, and Onsongo (2012) examined the determinants of securities exchange development and improvement. The relapse comes about observed that, large scale financial components, for example, securities exchange liquidity, loan costs, institutional quality, salary per capita, local investment funds and bank advancement are vital determinants of securities exchange improvement in the Nairobi Stock Exchange (Aduda, Masila, and Onsongo, 2012). The relapse examination reported no relationship between securities exchange improvement and Macro-financial dependability - swelling and private capital streams.

Songole (2012) inspected the relationship between chose macroeconomic factors and stock return at the Nairobi securities trade. The study concentrated on interest rates (IR), Consumer Price Index (CPI), advertise loan fee, Industrial Production Index (IPI) and Foreign Exchange Rate (FEX) utilizing month to month information for a nine-year time frame between January 2003 and December 2011. The study presumed that market interest rates, customer value record and swapping scale have a negative association with stock return, while mechanical generation file displayed a positive relationship.

Kemboi and Taurus (2012) inspected the share trading system macroeconomic determinants for the period 2000-2009, utilizing quarterly optional information. The theory on the presence of a co-integrated relationship between securities exchange improvement and macroeconomic determinants were tried utilizing Johansen-Julius co-integration strategy. The outcomes demonstrated that macroeconomic variables like loan fees and securities exchange liquidity are imperative in the improvement of the Nairobi Securities Market. These outcomes showed that macroeconomic strength is not a critical indicator of advancement of the securities advertise.

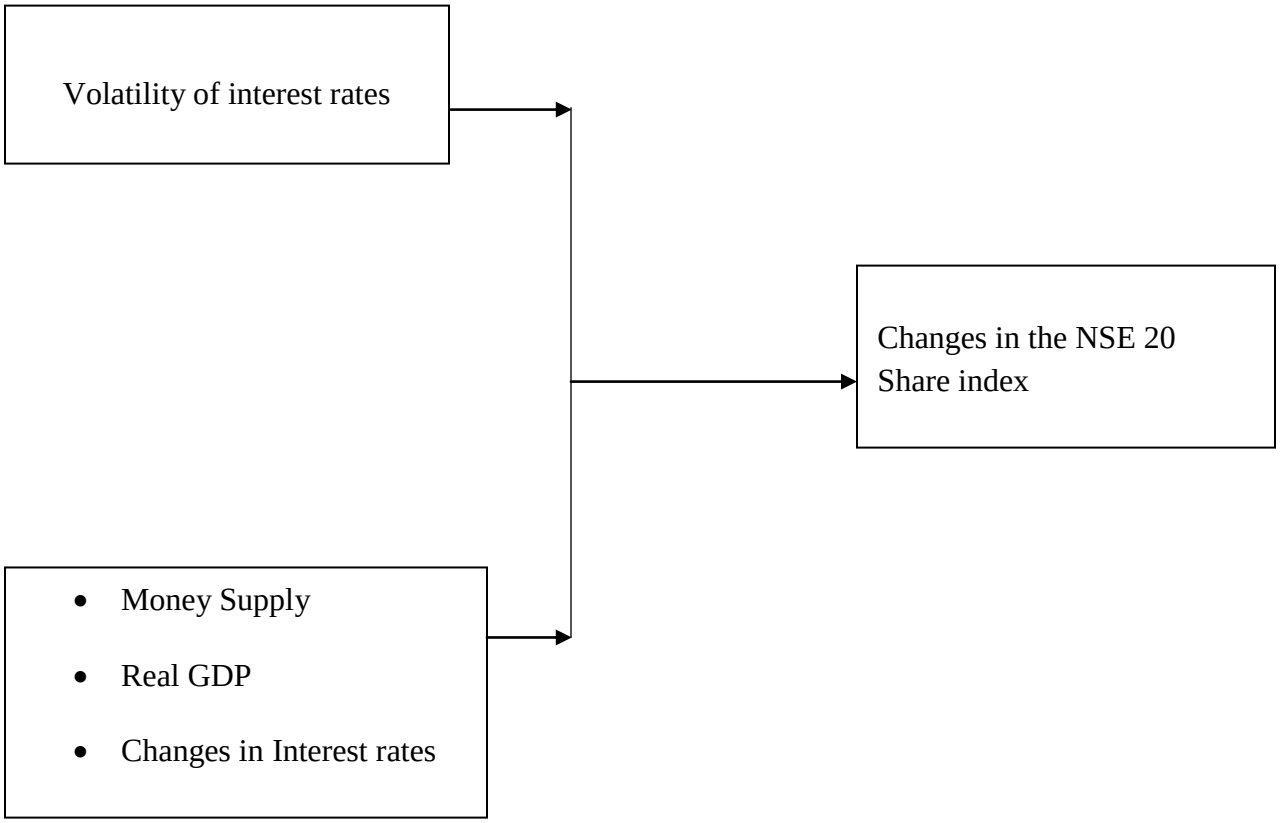
2.5 Conceptual Framework

The conceptual structure is a diagrammatic presentation of the relationship between the variables of the study factors and shows the link between the dependent and the independent factors. In this study, in view of an intensive survey of the existing literature on the subject, the models and ideas utilized are displayed in Figure 2.1. It depends on the two fundamental builds of this study which are interest rates and the development of the capital markets. This is on account of the present study looks to assess the impacts of financing costs on the development of the capital market in Kenya: A Case of Nairobi Securities Exchange.

In light of the current empirical study, the development of the capital markets is the dependent variable and is conceptualized as combined in this study in that it depends on a progression of elements of the interest rates which incorporate the unpredictability of the rates of interests, hypotheses and other monetary factors.

Figure 2.1: The Conceptual Framework of the Study

Independent Variable (Interest rates) **Dependent Variable (Growth of Stock market)**



2.6 Summary of Literature Review

Empirical literatures by different authors reveal that some authors have established a significant connection between interest rates and the growth of capital market, while others have established otherwise. Interest rates have been observed to have diverse impact on the growth of capital markets. High interest rates are likely to curb business investments and innovation in the market. Both locally and universally made studies have led to diverse conclusions (Ioannides,Katrakilidis, & Lake, 2005). While a few philosophers built up a weak relationship, others found a solid relationship between the factors. Once again, a few authors built up connections just over the long

period, while others set up both long-run and short-run relationship (Aduda, Masila, and Onsongo, 2012).

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section of the research shows the strategy and method utilized to lead to logical research. The plan of a study characterizes the kind of the study to be finished.

3.2 Research Design

Research design shows the way a study is arranged and directed. It involves picking the subjects that will be a piece of the study. It shows strategies and methodologies for gathering information for the subject and the systems. The fundamental question of an exploration outline is to improve the legitimacy (degree to which the outcomes got from the investigation of the information really speak to the marvel under study) (Mugenda and Mugenda, 2003).

While doing the study, the analyst utilized a case study form of investigation. This case study explores the present status and nature of the marvels. Hashimzade and Thornton (2013) characterizes a contextual investigation as essentially an inside and out investigation of a specific circumstance instead of a clearing factual overview. It is a strategy used to limit down an exceptionally expansive field of research into one effortlessly researchable theme. While it won't answer a question totally, it gave a few signs and permitted promote elaboration and speculation creation on a subject. The contextual analysis investigate plan is additionally helpful for testing whether logical speculations and models really work in this present reality.

3.3Data Collection

Data collection is the way toward social gathering and measuring data keeping in mind the end goal to have the capacity to answer addresses that provoked the endeavor of the exploration

(Kothari, 2000). Secondary data was obtained from Nairobi Securities Exchange. Secondary time series of the research data were utilized for the investigation. The data from which analysis was conducted and inferences drawn were collected from the NSE. Data collected was essential and of high quality. Secondary data is the form information that has previously been collected and recorded by other individuals (Walliman, 2011).

For the case of the current study, the data was obtained for an estimated period of 10 years, spanning between years 2006 – 2015. Specifically, the study used the NSE 20-Share Index from the stock exchange as the dependent variable to measure the growth and the development of the stock market.

3.4 Data Analysis Techniques

The data to be obtained from the research instruments will be analyzed using Statistical Package for Social Science (SPSS). Quantitative analysis involves the use of means, relative frequencies, mode, median and standard deviation Kothari (2000). The data was first analyzed for various univariate sample descriptive statistics. Bivariate correlation techniques were then utilized to test for measures of association between variables. The suggestion of the study was tested using correlation analysis. The results of the analysis was organized in tables and graphs and then used to answer the study questions.

3.5.1 Analytical Model

For the current investigation, the unit of analysis was the Nairobi Securities Exchange 20 share Index obtained from the Nairobi Securities Exchange. Other variables were the variables of the changes in interest rates.

The study analytical model is depicted by the regression model:

$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \mu i$

Where; Y – growth in the Nairobi Securities Exchange 20 Share index

X1 – Changes in interest rates, measured as average annual interest rate

X2 - Money Supply, measured as average yearly base of money (M3); which are the sum of money in circulation in the economy, and the reserve balances composed of the deposits by both banks and other deposit taking organizations that they have place in the Federal Reserve.

X3 - Real GDP, measured as average annual Real Output per Capita; the Real Gross Domestic Product (GDP) per head factoring in inflation and deflations.

β – The factor shows the link between the independent variable (X) on one hand and the dependent or Gradient/Slope (X). The regression will also show the amount of the relative changes in Y following a given unit change in X.

Whereas μí denotes the distributed error term

3.5.2 Test of Significance

The study sought to find out the causal effects of interest rates (I/R) on the growth of the capital markets in the country: a case of Nairobi securities exchange. The researcher used inferential statistics such as the Pearson Product Moment correlation coefficient R 2 and the coefficient of determination R of the data set as well as p-value and F-test statistics (Kothari, 2000).

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This part covers information investigation, elucidation and dialog of the exploration discoveries. The information is broken down and exhibited as tables and diagrams. This section builds up the impact of loan costs on the development and the growth of the capital market in Kenya. The study was led on 10 year time frame where auxiliary information for the period 2006 to 2015 was utilized as a part of the examination.

4.2 The Rate of Response

The researcher was first interested in knowing the response rate of the data investigated. The researcher managed a response rate of 100% since all the data for the respective years were found and used in the analysis.

4.3 Capital Market Growth in Kenya

The prevailing interest rates were examined by establishing the average fluctuations of the lending rates in the market. Capital market growth in Kenya was measured by the yearly market capitalization expressed as a given percentage (%) of the country's Gross Domestic Product (GDP) as reflected in the table 4.1 as follows:-

Table 4.1: Market Capitalization and GDP Figures

Year Market	GDP at market prices (Ksh. Millions)	Yearly Market capitalization (Ksh. Millions)	Market Capitalization as A percentage of GDP
2015	4,050,848.4	966,532.43	23.86
2014	3,833,876.00	2,300,000	59.99
2013	3,639,938.00	1,921,000	52.78
2012	3,444,066.00	1,272,000	36.93
2011	3,294,026.20	868,000	28.70
2010	3,104,303.10	1,167,000	45.77
2009	2,366,984.20	832,000	35.15
2008	2,107,589.40	854,000	40.52
2007	1,825,960.00	851,000	46.61
2006	1,622,434.00	792,000	48.82

Source: Kenya National Bureau of Statistics, Facts and Figures for GDP & NSE for Market capitalization

Figure 4.1 Trends in the Growth of GDP

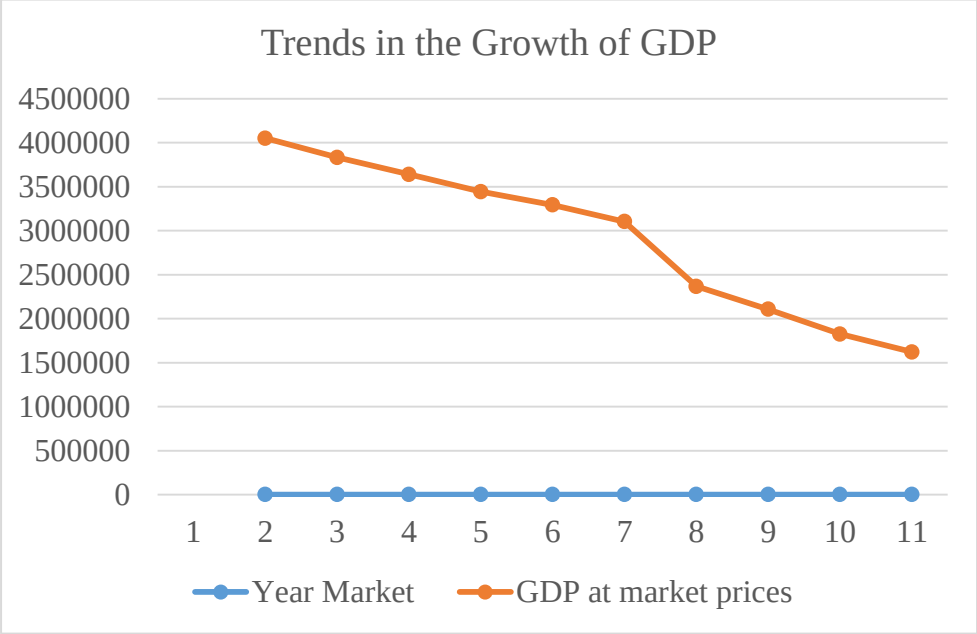


Figure 4.2 Yearly Market Capitalization (Ksh. Millions)

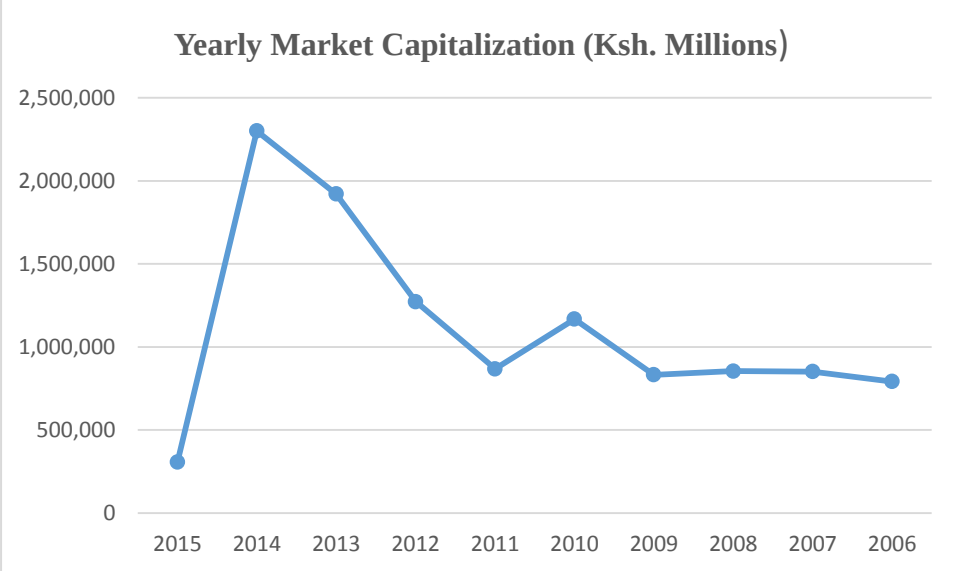


Table 4.2: Descriptive Data

	Minimum	Maximum	Mean	Std. Deviation
GDP rate	1.5	6.90	4.5100	1.76601
Interest rates	13.90	20.27	16.4620	2.75756

The study revealed that the mean of the country gross domestic product for the last 10 years was 4.51 whereas interest rates had an average of 16.4620.

4. 4 Correlation Analysis

The study utilized correlations of factors to set up the relationship between the rates of interests charged and the development of the capital market. The Pearson Correlation investigation was utilized to accomplish the conclusion of the study at 95%, with ($\alpha = 0.05$) certainty level.

Table 4.3 demonstrates that at the stated rate of 95% certainty, there was a huge, noteworthy and negative relationship between the stability of the rates of interests charged and the development of the capital markets in Kenya. There was a great, noteworthy and positive connection between the volatility of interest rates and the rate of growth of the capital market in Kenya after 2009 and 2010. These findings are reflected in the table 4.3

Table 4.3: Correlation Between the Rates of Interest and the Growth of the capital market in Kenya

Test		Growth of the capital market									
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Interest rate volatility	Pearson correlation	-.780	.685	.923	.698	-.873	-.948	.720	.914	-.686	-.862
	Sig. (2-tailed)	.020	.038	.047	.002	.027	.032	.003	.046	.018	.026
	N	10	10	10	10	10	10	10	10	10	10

4.5 Regression Models and Analysis

In finding out the relationship between the dependent variable (growth of the capital market) and independent variable (interest rates), the study used multiple regression analysis:

Ln (Growth of the capital market) = $\beta 0 + \beta 1$* Interest rates + $\beta 2$*GDP + $\beta 3$*Supply of money + ε

Where $\beta 0$ implies that the regression constant placed as the y-intercept, $\beta 1$ to $\beta 3$ represent the regression coefficients respectively and ε is the expected error term usually found in the study activity. To completely determine the existing relationship between the variables, the regression model was further utilized as the intervening variables (the GDP in this case) were introduced into the equations.

With a specific goal to decide the exactness of the regression equation, the study utilized correlations coefficient between the independent factors (Interest rates) and the dependent variables (the growth and development of the capital market). Coefficient of determination then set up the quality of the relationship between the two factors. From the determination coefficients shown in Table 4.3, it can be noticed that there is a linear relationship amongst the factors of the study given by the Pearson correlation of 0.807. The determination coefficient estimation of 0.651 and 0.576 when moderated demonstrates that the independent factor (interest rates) could represent 57.6% of the instabilities in the development of the capital market and thus shows that it plays a key role in that effect.

Analysis of Variance (ANOVA) was utilized to make simultaneous correlations between at least two means; in this way, testing whether a significant, less significant or negative significance existed between the factors used in the study. This helps in drawing out the importance of the regression model. The ANOVA outcome as shown in the Table 4.4 demonstrates that the regression model has an estimated margin of error of approximately 0.043. The findings demonstrates that the model has a likelihood of 4.3% of a deviating results from the expected which then focuses to the meaning of the regression model.

Table 4.4: Variance Analysis

	Summation of squares	Df	Averages of the Square	F	Sig.
Regression values	0.021	3	0.007	0.554	0.043b
Residual values	0.207	6	0.013		
Totals	0.228	9			

a. Predictors: The Volatility of the Interest rates, GDP and other economic factors (inflation)

b. Dependent Factors: the Growth of the capital market)

4.5 Discussion of Findings

The results on the Adjusted R squared from the investigation establishes that there exists a variation of 76.1% on the growth of the capital market in the country due to changes in money supply, real GDP and the volatility of interest rates. Also the study indicated that there exists a significantly positive relation between variables of the investigation. From the findings on the ANOVA the study found that that money supply, real GDP and the volatility of interest rates influence changes in the growth and the development of the capital market in the country.

From the regression analysis the investigation established that there exists a negative correlation between money supply, the real GDP and also the volatility of interest rates. Further, the study revealed that there was a significantly positive correlation between economic factors such as money supply, the fluctuations in the interest rates and growth and development of the capital

market in Kenya. The level of significance was 5% with the confidence level at 95%, thus changes in interest had the greatest effect on the growth of the capital market in Kenya, followed by money supply, followed by exchange rate while real GDP had the least effect to the growth and the development of the stock market in the country.

From the outcomes of the correlation analysis, it was found out that there was a strong positive and significant correlation between money supply and the volatility of interest rates. The outcomes of the current study agree with that of Darrat, and Dickens (1999), who argue that financial liberalization can lead to instability and question the ability of the financial markets to allocate credit efficiently. Furgang, (2011), explains that high liquidity preference requirement encourage the crowding out effect of the private sector and provides the government with the buffer of resources to finance her deficits. This affects the key companies listed in the securities exchange and thus the growth of the market.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

It helps the researcher to summarize the findings of the study undertaken, conclude and make recommendations that are based on the outcomes of the study. It therefore, presents a summary of findings from the data analysis and generates conclusions from questions that were answered by the respondents and presents the way forward on the improvement of the problem under investigation. The study aimed at examining the effects of the prevailing interest rates on the growth and development of the capital market in Kenya.

5.2 A Summary of the Outcomes

Based on the outcomes of the investigation, the researcher made the following summary.

The general goal of this study was to examine interest rates and the development of the capital market in Kenya for the period 2006 to 2015. Firstly, the outcomes from the information investigation strongly states that the interest rates showcase has encountered low instability however standing high over this period. In this manner, volatility in the interest rate market is predictable mostly in the short run. The evidence shown therefore strongly indicates that the interest rates are nonlinear.

Also the results of the examination support the supply-driving theory that improvement of the interest rates markets upgrades the development of the capital market in the nation. The examination constitutes a stage towards the joining of the total interest rates in the discourse on the relationship among finance/investment and growth of these factors in the market. The results are important in disclosing the presence of the existing causal relations between the fixed-income sector of finance (government) and the real sector of in the study (capital market development), a

path that has been to a great extent been neglected in advancing economic development in the country.

The findings also imply that growth of capital market in Kenya was contributed by the regulation of the interest rates majorly by the government. It is suggested thus that the supervisory authority should develop measures and policies that would inspire the regulation of the interest rates as well as to make it easier for individual investors and more companies to trade in the capital market in Kenya.

Finally, the study shows that it is quite obvious that there are regular examples in the development of the capital market in Kenya. Development and the general execution in the capital market show occasional examples with low investments around the fourth or simply last quarter of every year. High investment is experienced around the second quarter of the year. This has thus led to fluctuations in the interest rates which have significantly been reflected in the developments and the growth of the capital market in the country.

5.3 Conclusion

From the findings above, one can conclude that interest rates normally have a strong positive consequence on the growth and development of the capital market in the country. This paper has examined the impact of the volatility of interest rates on the development and growth of the capital market in Kenya. From the findings above, one would conclude that based on the evidence from a sample period of 2006 to 2015, the supply-leading theory of capital market growth was experienced in Kenya. The results from regression analysis above show the summary of the effects of the volatility of interest rates, money supply, and real GDP on the growth of the stock market in

Kenya. It can also be seen from the study that the capital market in Kenya is affected by external forces due to the players in the sector. It was found that the market has so many foreign investors.

5.4 Recommendations of the Study

From the outcomes of the investigation and the conclusions reached, the research recommends that the government needs to control the country's interest rates as it was found that higher lending rates negatively affect the growth of the capital market in the country. The study further recommends that there is need for the government to control the country's money supply, real GDP and the changes in interest rates through various fiscal policies as it was shown that an increase in any of the above factors negatively affects the growth and development of the capital market and the economy of the country at large.

In general, the evidence from the study suggests that policy makers in Kenya should encourage the public to invest more in the capital market to enhance the efficiency of the capital markets, both primary and secondary. This will in no doubt lead to the mobilization of more funds and have a significantly positive impact on capital market growth. Also, it is important that all stakeholders in the public and private sector as well as investors should engage and promote activities that will lead to the development of the capital market in the country. Thus efficient markets through availability of information to the public should be a priority.

The private sectors of economic development ought to be urged to put resources into the capital market through instructing and enlightening the general society, utilizing learned individuals and specialists or experts that are skilled in securities exchange dealings. The capital market ought to be made more liquid by enhancing the illiquidity status to make it more feasible for little and

individual financial specialists to contribute, and such enhancements can add to the country's economic development.

5.5 Limitations of the Study

This study was not without a number of limitations. In achieving its target, the study was constrained to 10 years' time frame beginning structure year 2006 to year 2015. The secondary information gathered from the Kenya National Bureau of measurement and Central bank of Kenya was likewise constrained to the level of exactness of the information so got. While the information was verifiable since it originated from the CBK and KNBS websites, it regardless could still be subjected to some errors.

The study was restricted to examining the impacts of interest rates on the development of the capital market in Kenya. It was additionally in view of a ten year period from the year 2006 to 2015. A more drawn out length of the study would have caught times of different parts of the interest rates and different components that influences its volatility, for example, A longer duration of the study would have captured periods of various aspects of the interest rates and other factors that affects its volatility such as the economic cycles like the booms, recessions, depression or even recovery. This may have most likely given a more extended time concentrate thus given a more extensive measurement to the issue.

5.6 Propositions for Further Studies

The key aim of the current research was to establish the effect interest rates on the growth of the capital market in Kenya. While this was done, it recommends a study to be done on the relationship or connection between the volatility of the interest rates and the specific instruments of the capital market such as bonds and stocks. Further it recommends that a study be done on

other factors such as the inflation rates, foreign exchange and the economic growth indicators and their effects on the growth of the stock exchange in Kenya. In addition there is also the need for a research to be done on the relationship between domestic borrowing and the growth and development of the capital market.

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Appendix I: Data Collection sheet

Appendix II: The Volatility of Interest Rates

Year	Quarter	Interest rate
2006	1	14.32
	2	14.33
	3	14.26
	4	14.18
2007	1	14.79
	2	14.09
	3	14.13
	4	14.57
2008	1	13.81
	2	13.71
	3	13.34
	4	14.74
2009	1	14.23
	2	14.48
	3	14.31
	4	14.47

2010	1	14.47
	2	14.42
	3	14.04
	4	13.80
2011	1	13.84
	2	13.78
	3	14.34
	4	17.92
2012	1	20.58
	2	20.88
	3	20.02
	4	19.60
2013	1	18.21
	2	16.56
	3	15.24
	4	16.52
2014	1	18.24
	2	16.10

	3	16.57
	4	14.68
2015	1	14.26
	2	15.86
	3	16.28
	4	18.20