EFFECT OF MACRO-ECONOMIC FACTORS ON THE PERFORMANCE OF THE EQUITY MARKET OF NAIROBI SECURITIES EXCHANGE

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A RESEARCH PROJECT REPORT SUBMITTED TO THE DEPARMENT OF BUSINESS AND ENTREPRENEURSHIP IN THE SCHOOL OF BUSINESS AND ECONOMICS IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTERS IN BUSINESS ADMINSTRATION OF SOUTH EASTERN KENYA UNIVERSITY

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DECLARATION

This Research project report is my original work and has not been presented for a degree in any other University

Antony Ndunda   Signature-------------------------- Date----------------------

D61/KIT/20510/2014

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DEDICATION

I dedicate this project to my lovely son Joel Ndunda and daughters Deborah Kavutha and Joan Mwende for their relentless efforts to seeing me through my education.

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ACRONYMS AND ABBREVIATIONS

ADB   African Development Bank

CBK   Central Bank of Kenya

CMA   Capital Market Authority

CPI   Consumer Price Index

CDSC   Central Depository and Settlement Corporation

FOREX   Foreign exchange rate

GDP   Gross Domestic Product

IMF   International Monetary Fund

IFC   International Finance Corporation

KBS   Kenya Bureau of Statistics

NSE   Nairobi Securities Exchange

NASI NSE   All Share Index

OECD   Organization for Economy and Development

DEFINITION OF TERMS

Nairobi Securities Exchange It's a form of market which provides services for security brokers and traders to buy or sell securities (stocks, bonds and other securities) (Osoro, 2013).

Performance This is output terms of the achievement of quantified objectives. For finance purposes these achievements are expressed in monetary terms (Auslander, 2008).

Equity Market It is a public entity for the trading of equity instruments (Mishkin 1998).

Macroeconomic factors These are factors that are pertinent to a broad economy at the national or regional level and affect a large population (World Bank, 2012).

Per capita It is a measure of the annual improvement in the standard of living of residents of a country. It is GDP divided by the population (Blanchard, 1997).

Inflation Is sustained or persistent increase in the general prices of goods and services in the long run (McMahon, 2010).

Gross Domestic Product Is the total market value (the amount that a product would trade for in the open market) of all goods and services produced within a specific a location over a particular time period (Callen, 2008).

Exchange Rate Is determined by the demand and supply of the foreign currency, trade balance, current account balance and capital account balance (Schiller, 2008).

ABSTRACT

The study sought to establish the effect of macroeconomic factors on the equity market performance of Nairobi Securities Exchange. The study was guided by an objective; to examine the effect of the selected macro-economic factors on equity market performance in Kenya. The selected macro-economic factors included inflation rate, exchange rate, money supply and real Gross Domestic Product. The study followed descriptive research design and used secondary data. The data spanned the period between 2005 and 2014. The data used for the analysis was the average annual figures and was obtained from; Nairobi Securities Exchange (equity market capitalization), Central Bank of Kenya (Inflation rate), Kenya National Bureau of Statistics (Average yearly GDP growth rate) and International Monitory Fund website (Money Supply M3). The data was analyzed using SPSS version 21. The study used equity market capitalization to measure equity market performance as well as Average annual inflation rate to measure inflation, Average annual exchange rate to measure Exchange rate, Average yearly monetary base (M3) to measure money supply and Average annual GDP growth rate to measure GDP. The study results established that Equity market capitalization (used to measure Equity market performance) as well as average annual inflation rate (used to measure inflation), money supply (used M3), and GDP growth rate deteriorated just before, during and immediately after the general elections. The regression analysis obtained Coefficient of determination (R), Correlation Coefficient (R-Square), P-Value and F-test statistics which were; 0.865, 0.748, 0.091 and 3.715 respectively. Since R was positive (0.865) the relationship between the Equity Market Performance and the macro-economic factors was positive. Since, R-Square was below 0.75 as it was (0.748) the relationship between NSE performances as measured by Equity market capitalization is weak. However, the study results established that the relationship between exchange rate as measured by average annual exchange rate and Equity Market Performance is inverse as the corresponding coefficient in the model was negative. Also, since P-Value (0.0061) was smaller than 0.05, the established model describing the relationship between the study variables is statistically significant. P-Values associated with variables GDP and exchange rate were all smaller than 0.05 depicting that they were individually statistically significant in predicting the Equity market performance whereas money supply and inflation rate were slightly above 0.05 hence statistically insignificant. The study concludes that there is a positive relationship between the selected macro-economic factors (Inflation rate, Exchange rate, money supply, and GDP) and Equity market performance. Further, the study concludes that the relationship between exchange rate and equity market performance is inverse.

CHAPTER ONE

INTRODUCTION

This chapter examines the background to the study, the research problem and the purpose of the study. The research objectives, research questions, justification of the study, and scope are also discussed. The limitations and delimitation of the study are also discussed.

1.1 Background of the Study

Equity Market is the market for the trading of equity instruments. The instruments traded on the equity markets are ordinary shares of companies, often listed on the stock exchange. Shares are units of ownership of companies. Ordinary Shares enable holders to have a claim in the assets of the company and any profit generated is shared by shareholders in relation to their shareholding (Mishkin 1998). Ordinary Shares entitle the holders with dividend income in the event that company generates profit from operations. In the event of loss, the same is shared among shareholders as well in relation to the shares held, usually determined as profit/loss per share (Osoro, 2013).

The income of equity shareholders may be retained by the firm or paid out as dividends. Equity earnings which are retained in firm tend to increase market value of equity shares & earnings distributed as dividend provide current income to equity shareholders. Ordinary shareholders carry risk that in the event of winding up the company, as residual claimant; they may end up losing their investments. Similarly, during the distribution of dividend, ordinary shareholders risks receipt of dividend as there must be sufficient profit to meet the priority payment of other investors, namely bondholders and preference shareholders before the distribution of dividend is effected to them.

Investing in shares provides the investors a lot of benefits which include; It is a saving mechanism, Shares can be pledged as collateral for a bank loan, Tax benefits on dividend income, Capital gain, Ownership and control, Possibility of bonus shares or right issue and Gaining voice in the company through the general meetings (Howels,2008).Over the long time ordinary shares by means of capital growth, yields higher returns than the other investment and this higher returns comes at a cost since ordinary shares entail risks (Mishikin, 2010).

Olweny and Kimani (2011) observed that equity markets encourage investors with surplus funds to invest them in additional financial instruments that better matches their liquidity preferences and risk appetite. In that respect, better savings mobilizations increases the savings rate, thereby stimulating investments and subsequently earning investment income to the owners of those funds.

Equity market performance is the assessment of an efficient market. A basic feature of an efficient capital market is constant liquidity, an easy mechanism for entry and exit by investors. This requires sufficient volume and size of transactions in the market (Yartey and Adjasi, 2007). The equity market forms a significant component of the financial sector of any economy. A well-functioning equity market is expected to lead to a lower cost of equity capital for firms and allow individuals to more effectively price and hedge risk. Equity markets can attract foreign portfolio capital and increase domestic resource mobilization, expanding the resources available for investment in developing countries.

There are several measures of the performance of the equity market. Among the main measures of equity market performance include; stock market indexing, equity market capitalization and stock turnover. Stock market indexing is one of the most widely used

measures of equity performance. The market index such as the NSE index is used to observe total returns for an aggregate market and these computed returns are to judge performance of individual portfolios .The assumption is that randomly selecting a large number of stocks from the total market should enable the investor to generate a rate of return comparable to the market (Simiyu, 1992).

Equity Market capitalization is another measure of equity market performance. This measure is used to measure market movements by measuring the total value of stock in a particular equity market by aggregating the market value of the quoted stocks (Maghyereh, 2002). Changes in equity market capitalization occur due to fluctuations in share prices or issuance of new share prices or issuance of new shares and bonus issues. Market turnover indicates inflows and outflows in the stock market and is based on the actively traded shares. A change occurs due to the actively traded shares and to fluctuations in share prices or number of shares traded in a given day (Opati, 2009).

Since Kenya is one of the emerging economies in Africa, its Equity market performance is highly dependent on the nature of the macroeconomic variables. These variables are considered to be causes of stock return volatility existing in NSE and may lead to equity market crisis (Odhiambo, 2012). According to the International Finance Corporation (IFC), all markets in the developing countries are treated as emerging. Kenya's capital market, the Nairobi securities Exchange Limited (NSE) is thus one of the emerging markets of the world. The market is characterized by; low trading volume, low turnover ratios, few listed companies, and inefficient information delivery (Nairobi Stock Exchange, 1997).

Equity market in Kenya is regulated by Capital Markets Authority (CMA, 2011) which provides surveillance for regulatory compliance. The authority has continuously lobbied the government to create conducive policy framework to facilitate growth of the economy and the private sector to enhance growth of the stock market (Ngugi, 2005).

The Equity market is also supported by the Central Depository and Settlement Corporation (CDSC) which provides clearing, delivery and settlement services for securities traded at the markets Exchange. It oversees the conduct of Central Depository Agents comprised of stockbrokers and investments banks which are members of NSE and Custodians (CDSC, 2004). These regulatory frameworks are aimed to sustain a robust stock market exchange that supports a cogent and efficient allocation of capital allowing price discovery to take place freely based on the market forces.

1.1.1 Macro Economic factors

According to the World Bank (2012) world development indicators report, a macro-economic factor is one that is pertinent to a broad economy at the regional or national level and affects a large population rather than a few select individuals. Examples of such factors include economic output, unemployment, inflation, savings and investment among others. The Kenya National Bureau of Statistics normally provides data on various economic development indicators, like inflation, informal sector employment, national savings rate, GDP growth rate, GDP per capita among others (Ariemba, Kiweu and Riro, 2015).

Tucker (2007) refers inflation as an increase in the general price level of goods and services in the economy. Inflation is an increase in the overall average level of prices and not an increase in any specific product. Sloman and Kevin (2007) explain that inflation

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may be either demand pull inflation or cost push inflation. Hendry (2006) agrees that inflation is the resultant of many excess demands and supplies in the economy. Tucker (2007) observed that there are many measures of inflation, because there are many different price indices relating to different sectors of the economy. Inflation is measured by the Average Yearly Inflation Rate (OECD, 2013).

The charge for exchanging currencies of one country for currency of another is the exchange rate. Exchange rate movements frequently focus on changes in credit market conditions, reflected by changes in interest rate differentials across countries, and changes in the monetary policies of central banks. The profit-maximizing investors in an efficient market will ensure that all the relevant information currently known about changes in macroeconomic variables are fully reflected in current equity prices, so that investors will not be able to earn abnormal profit through prediction of the future equity differentials across countries, and changes in the market movements (Chong and Koh, 2003). Inflation is determined by Average Yearly Exchange Rate.

Money is a collection of liquid assets that is generally accepted as a medium of exchange and for repayment of debt. In that role, it serves to economize on the use of scarce resources devoted to exchange, expands resources for production, facilitates trade, promotes specialization, and contributes to a society's welfare (Thornton, 2000). Money Supply is the total quantity of money in the economy at any given time. It is measured as average yearly monetary base (M3); the sum of currency in circulation, and reserve balances.

Majority of the studies have found that the current stock levels are positively related to future levels of real economic activity, as measured by Gross Domestic Product (GDP)

(Geske & Roll, 1983).The levels of Gross Domestic Product (GDP) will likely influence equity returns through its impact on corporate profitability. An increase in output may increase expected future cash and, hence, raise equity prices, while the opposite effect would be valid in a recession (Chen and Sharma, 2002).

Real Gross Domestic Product (real GDP) is a macroeconomic measure of the value of economic output adjusted for price changes. This adjustment transforms the money-value measure, nominal GDP, into an index for quantity of total output. It is the total value of all of the final goods and services that an economy produces during a given year. Real GDP is measured as average annual GDP growth Rate.

1.2 Statement of the problem

Garcia and Liu (1999) established that macroeconomic volatility does not affect equity market performance, while Maku and Atanda (2010) revealed that the equity market performance in Nigeria is mainly affected by macro-economic forces in the long-run in Nigeria. Ting et al. (2012) established that Kuala Lumpur Composite Index is consistently influenced by interest rate, money supply and consumer price index in the short run and long-run in Malaysia. Mehwish (2013) established that there is a negative relationship between real interest rate and stock market performance in Pakistan. Jahur et al. (2014) established macro-economic variables such as Consumer Price Index, Interest Rate have significant impact on the equity market performance in Bangladesh.

A regression analysis conducted by Aduda, Masila, and Onsongo (2012) reported that there is no relationship between equity market development and Macro-economic stability, inflation and private capital flows. Mongeri (2011) established that foreign

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exchange rates have a negative significant impact on stock market performance. Also, Songole (2012) established that market interest rate, consumer price index and exchange rate have a negative relationship with the NASI while inflation has a weak positive relationship with the NASI. Kimani and Mutuku (2013) showed that there is a negative relationship between inflation and equity market performance in Kenya. It is notable that there is lack of a consensus on the effect of macro-economic factors, on the performance of the equity market of Nairobi Securities Exchange; the researcher therefore intended to find out how the macro economic factors affect the performance of equity market of Nairobi Securities Exchange.

1.3 Research objectives

1.3.1 General objective

To examine the effect of the selected macro-economic factors on the performance of the Equity market of Nairobi securities Exchange.

1.3.2 Specific objectives

  i.   To ascertain the effect of inflation on the performance of equity market of Nairobi securities Exchange.

  ii.   To determine the effect of exchange rate on the performance of equity market of Nairobi securities Exchange.

  iii.   To assess the effect of money supply on the performance of equity market of Nairobi Securities Exchange.

iv.   To determine the effect of real GDP on the performance of equity market of Nairobi Securities Exchange.

1.4 Research Questions

i.   What is the effect of Inflation on the performance of equity market of Nairobi Securities Exchange?

ii.   What is the effect of exchange rate on the performance of equity market of Nairobi securities Exchange?

iii.   What is the effect of money supply on the performance of equity market of Nairobi securities Exchange?

iv.   What is the effect of real GDP on the performance of equity market of Nairobi Securities Exchange?

1.5 Justification of the study

The study findings will be of great benefit in formulation and implementation of policies related to share pricing as well as regulating of stock exchange trading. The government will also be informed on how to make policies, rules and regulations regarding trading rules that will help protect investors so as to encourage investments and spur economic growth. Firms and individuals (investors); the findings will assist them in understanding the factors that affect share prices and they will be better informed on how to gauge their investment options while banks and other financial institutions will be able to offer better financial advice and products to investors who seek funding to finance share purchases. In addition, scholars and researchers will find this study useful if they wish to use the findings as a basis for current and further research on the subject.

1.6 Scope of the study

Secondary data was used. Data was drawn from all the listed companies in the Nairobi Securities Exchange. The study also used annual reports that are available from their websites and in the CMA website. Data was obtained for a ten year period from 2005 to 2014.

1.7 Limitation and Delimitation of study

The project was limited to effects of macroeconomic factors on equity market of Nairobi Securities Exchange. This study relied on secondary sources and any original error may not be avoided. This was delimited by collecting data from reliable institutions like the central bank of Kenya, Nairobi Securities Exchange and the Kenya National Bureau of Statistics.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides literatures from past researchers and scholars on the macro economic factors on the performance of equity market. The chapter examines the concepts and theories on factors affecting stock market performance with major focus on macro-economic factors; Exchange rate, inflation rate, money supply, and real output – Real Gross Domestic Product. By considering literatures from diverse past authors, the chapter forms the theoretical and the conceptual framework of the study on the effect of macroeconomic factors on the performance of the equity market of Nairobi Securities Exchange.

2.2 Theoretical Review

Theoretical review is the theoretical foundation of a study. A theoretical research has its findings based on existing theories and hypothesis; there is no practical application in the research, while an empirical research has its findings based on the verification through experiments, experiences and observations. This study will be founded on both theory and empirical literatures. The theories upon which this study will be founded upon include.

2.2.1 Flow Oriented Model

This model was developed by Dornbusch and Fisher (1980). The model claims that changes in exchange rates alter the international competitiveness of a firm as well as the

balance of trade position, and thus exchange rate changes affect real income and output in a country. Share prices of companies are influenced by exchange rate changes and future cash flows of firms. This implies that exchange rate changes lead to stock price returns, and that they are positively correlated. The flow oriented model maintains that a causal relationship, which runs from the exchange rate to the stock prices. This simply means that exchange rate changes affect the competitiveness of firms as a result of its effect on input and output prices (Joseph, 2002).

It follows therefore that if exchange rate appreciates, exporters are likely to be affected negatively. In the same regard an appreciation of the currency is likely to cause goods and services to be dearer on the international market. This will therefore bring about a decline in exports, as they will be seen as expensive by buyers on the international market. It means that such goods will lose their competitiveness internationally. Consequently, their profits will drop and if profits decrease the firms will lose competitiveness on the domestic stock market. Their attractiveness on the domestic stock market will decrease and this will result in their stock prices decreasing in value.This model is relevant to the study since it relates to macroeconomic variables being studied that is exchange rates on the impact of equity market performance.

2.2.2 Market Efficiency Theory

Market efficiency theory suggests that a market is rational and provides correct pricing. That is, the current prices of securities are close to their fundamental values because of either the rational investors or the arbitragers buy and sell action of under-priced or overstocked priced stocks. On the other hand, observed market anomalies have a challenge for this argument. Fama (2000) presented a landmark paper on the efficient

market, which focused on comprehensive review of the theory and beyond the theory to empirical work. He defines market efficiency very clearly as a market in which prices always fully reflect all available information. Fama distinguished three nested information sets: past prices, publicly available information and all the information including private information.

Efficient market hypothesis is divided into three stages as the weak form, semi-strong form, and the strong form with respect to the availability of the above-mentioned three information sets. Weak form of efficiency claims that the current stocks prices already reflect all historical market data such as the past prices and trading volumes (Bodie et al, 2007) .The assertion of weak form of efficiency is very much consistent with the findings of researches on random walk hypothesis; that is, the price changes from one time to another are independent (Dixon et al, 1992).

Semi strong form of efficiency states that, in addition to the past prices, all publicly available information including fundamental data on the firm's product line, earnings forecast, dividend, stock splits announcements, quality of management, balance sheet composition, and patents held, accounting practices etc should be fully reflected in security prices. Thus, one cannot make superior profit by using the fundamental analysis in the market, which is efficient in the semi-strong form. Strong form of efficiency states that market prices reflect all information including the past prices and all publicly available information plus all private information. In such a market, prices would always be fair and any investor, even consider traders cannot beat the market. This theory is relevant to this study since it determines the influence of microeconomic factors on performance of equity markets in Kenya.

2.2.3 Keynesian Economic Theory

Keynes (1930), in his Treatise on Money, argued for the importance of the banking sector in economic growth. He suggested that bank credit "is the pavement along which production travels, and the bankers if they knew their duty, would provide the transport facilities to just the extent that is required in order that the productive powers of the community can be employed at their full capacity". Keynesian economics focuses on immediate results in economic theories.

Keynesian theory on inflation proposed that changes in money supply do not directly affect prices and that visible inflation is the result of economic pressures in the economy expressing themselves in prices. Keynesians argue that the government needs to actively intervene to stabilize the economy. Otherwise, the uncertainty caused by unpredictable fluctuations will be very damaging to investment and hence long term economic growth. If demand fluctuates, in the way Keynesians claim, and if the policy of having money supply or inflation rule is adhered to, interest rates must fluctuate. Targeting inflation alone may make it a poor indicator of an economy's state because the money supply will adapt to changes in the inflationary expectations.

Policies focus on the short-term needs and how economic policies can make instant corrections to a nation's economy. Also, the government is seen as the only force to end financial and economic downturns through monetary or fiscal policies, and providing aggregate demand to increase the level of economic output, facilitated through a stable financial system that can spur continued economic stability. Keynes later in 1930s supported an alternative structure that includes direct government control of investment and advanced that financial deepening can occur due to an expansion in government

expenditure. Since higher interest rates lower private investment, an increase in government expenditure promotes investments and reduces private investments concurrently.

2.2.4 The Monetarist Model

Hubbard and Obrien (2009) explain that The Monetarist model –also known as the Neo-Quantity Theory of Money Model-was developed beginning in the 1940s by Milton Friedman. Friedman argued that Keynesian approach overstates the amount of macroeconomic instability in the economy. He argued that the economy will ordinarily be at potential real GDP. He argued that most fluctuations in real output were caused by fluctuations in the money supply rather than fluctuation in consumption spending or investment spending. He argued that the severity of the great depression in the United States was caused by the Federal Reserve's allowing the quantity of money in the economy to fall by more than 25% between 1929 and 1933.

Hubbard and Obrien (2009) reports Friedman argument that the Federal reserves should change its practices and adopt a monetary growth rule which is a plan for increasing the quantity of money at a fixed rate. Friedman believed that adopting monetary growth rule would reduce fluctuations in real GDP, employment and inflation. The above theory is applicable to the effects of Money supply and GDP objectives of the study on the equity market performance of Nairobi Securities Exchange.

2.3 Empirical Review

The empirical review of literature presents a discussion of studies in line with the study objectives. Pyrczak and Bruce (2011) notes that empirical review helps in creating insight

on the available literature on the study area. This is usually crucial since it provides a better understanding of the subject matter while at the same time helping in avoiding a study that would result in duplication of the available material. This section thus presents a discussion of studies in line with the study objectives to facilitate in the identification of the research gap that the study will aim at bridging.

2.3.1 Inflation Rate and Equity market performance

Lee (2009) reevaluated whether the equity return and the inflation relates indeed due to inflation illusion by reexamining the hypothesis using longer sample period of the US and international data. The study observed the overpricing with high inflation in the pre-war period. This implies that although the mispricing component plays an important role in the equity market and inflation relation in both subsample periods. The observed relations in the pre-war and post-war periods are consistent with the relative importance of these shocks.

Mohammad (2011) used Multivariate Regression Model computed on Standard OLS formula and Granger causality test to model the impact of changes in selected microeconomic and macroeconomic variables on equity market performance in Bangladesh. He examined monthly data for all the variables under study covering the period from July 2002 to December 2009. The study found a negative relationship between equity market performance and inflation as well as foreign remittance while market Price/Earnings and growth in equity market capitalization have a positive influence on equity market returns. However, no unidirectional Granger Causality is found between equity returns and any of the independent variables and the lack of Granger Causality reveals the evidence of an informally inefficient market.

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Gallagher and Taylor (2002), found evidence that equity returns are negatively affected by both expected and unexpected inflation. These studies tend to explain the negative linkage among equity market performance and inflation to be linked to money demand and the quantity theory of money. Hondroyiannis and Papapetrou, 2005 studied the relationship between real stock returns and inflation in Greece. They observed that Price changes affect equity market returns through two channels. In channel 1, an increase in inflation negatively affects economic growth since it adversely affects investment and production. This creates uncertainty in the economy with negative impact on real economic activity. The result is a negative relationship between market returns and inflation.

Ritter and Warr (2002) support the inflation illusion hypothesis as they found that the bull market starting in 1982 was due in part to undervaluation of levered equities caused by mistakes in the use of nominal and real capitalization rates. Campbell and Vuolteenaho (2004) used data from the period between 1927 and 2002 finding evidence of inflation-induced mispricing further supporting the inflation illusion hypothesis.

2.3.2 Exchange rate and Equity market performance

Stavarek (2004) examined the nature of casual relation between equity prices and exchange rate in four old EU countries (Austria, France, Germany and the UK) and the four new members (Czech Republic, Hungary, Poland and Slovakia) and in the USA. The data varies for each county depending upon the availability. There were several tests used like Co integration analysis, vector error correction modeling standard Granger casualty test to find out the linkage between exchange rate and equity market performance and they concluded that there was no long run relationship existing in first analyzed period

covering from 1970 to 1992. In the period from 1993 to 2003 much stronger casualty found out in old EU members and USA because of their strong equity market and exchange rate development. Long run equilibrium does not exist in new EU members due to relative under development markets.

Nyamute (1998) studied the relationship between equity prices and other financial variables like money supply, interest rates, inflation rates and exchange rates in Kenya. He found a positive relationship between equity prices and exchange rates. However, his research performed data analysis on non-stationary series which may adversely affect the validity of the results. Also, Sifunjo and Mwasaru (2012) analyzed the casual relationship between NSE equity prices and foreign exchange rate using monthly data from November 1993 to May 1999. Johansen consideration procedure and error correction model were used for analysis.

The empirical results indicate that in Kenya, the movements in exchange rates exert significant influence on stock price determination in Kenya.

2.3.3 Money Supply and Equity market performance

Eric Sorensen (1982) studied the impact of money on equity prices with special attention to anticipated and unanticipated changes in money supply. Sorensen (1982) found that unanticipated changes in money supply have a larger impact on the stock market than anticipated changes, supporting the efficient market hypothesis.

Hamzah (2004) did study on relationship between equity market performance and money supply and found a positive dependence between money supply change and equity price evolution on Singapore Securities exchange. The causality between the money supply

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and Equity markets on emerging markets was investigated also by Brahmasrene, Jiranyakul (2007), specifically in their analysis of the Thai Equity market between 1992 and 2003, where they found positive relations between money supply and equity prices. Cagli, Halac and Taskin (2010) dealt with the relationship between money supply and Equity returns on Turkish market. These authors did not confirm any co-integration between these variables.

The effects of the changes in macroeconomic factors (including the money supply) on the development of Equity returns were discussed also by Shaoping (2008), who confirmed a very strong effect of the money supply on the development of Equity returns in the period between 2005-2007. As stated, he found a long-term and stable relationship between Equity market performance and monetary aggregate. Similarly, Equity market performance and money supply had a positive co-integration. The positive co-integration has thus resulted that the growth of money supply results in the rising prices of equity shares.

The issues of efficiency of the Equity market in Malaysia and co-integration between money supply and Equity performance were discussed by Habibullah, Baharumshah (1996), who defined a weak efficiency and non-existent cointegration between the money supply and equity performance on this market. However, in a later study, Habibullah (1998), found a causal relationship between the money supply and Equity returns. The positive relationship between macroeconomic indicators (including the money supply) is also demonstrated by Hanousek, Filler (2000) who confirmed a positive relationship between the money supply and equity market performance in the conditions of Central Europe in 1993-1996.

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2.3.4 Real Gross Domestic Product and Equity market performance

Wu *et al.* (2010) used the ratio of value of domestic shares listed on domestic exchanges to GDP to represent equity market capitalization and the value of the trade of domestic shares on domestic exchanges divided by the value of listed domestic shares as liquidity of stock market. His findings were that the short-run effect from Equity market development on real output was opposite to its long-run influence. According to their findings, liquidity of the equity market has a negative short-run effect on economic growth while Equity market capitalization and liquidity have positive long-run consequences on economic development.

Diebold and Yilmaz (2008) found a unidirectional influence from GDP volatility to Equity market volatility. Caporale and Spagnolo (2003) captured a positive influence on output growth volatility from the equity market volatility. In contrast, others have reported empirical evidence of a bidirectional relationship between equity market volatility and the volatility of GDP growth. For example, Leon and Filis (2008) used spectral analysis using GDP, investments and the stock market quarterly data from Greece, Leon and Filis (2008) posit that GDP shocks offset equity market volatilities; however, equity market volatility may give a rise to GDP volatilities.

2.4. Conceptual Framework

Mugenda and Mugenda (2003) said a conceptual framework is a graphical or diagrammatic representation of the relationship between variables in a study. It helps the researcher see the proposed relationship between the variables easily and quickly. In this study, the conceptual framework was based on independent variables which are Exchange rate, Inflation rate, money supply and Gross Domestic Product growth rate and

the dependent variable is Equity market performance of Nairobi Security Exchange. The following figure gives a brief summary on the relationship between macroeconomic variables and Equity market performance of Nairobi securities Exchange.

Independent Variables

Dependent Variable
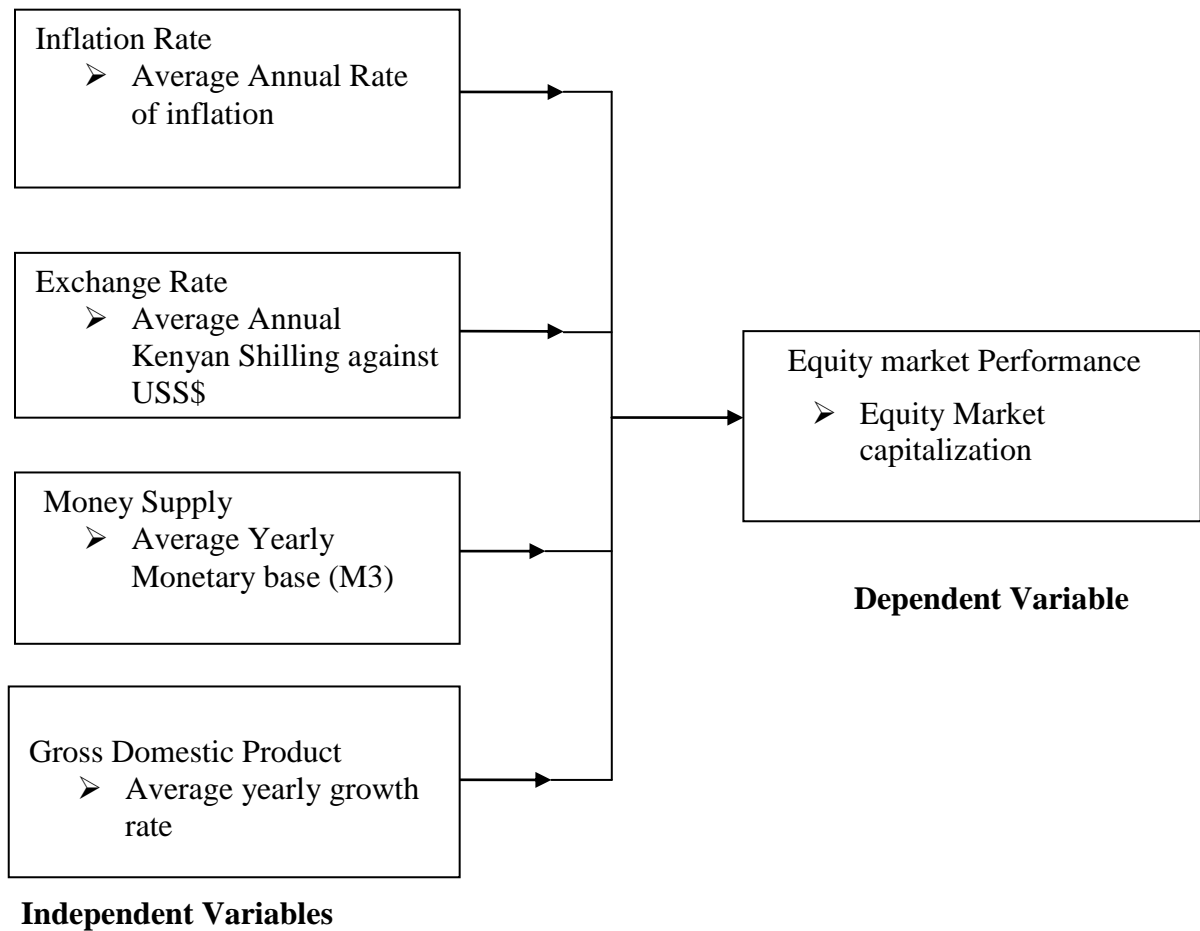
Source: Author (2016)

Figure 2.1: Conceptual framework

2.5 Literature Overview and Research Gaps

Garcia and Liu (1999) established that macroeconomic factors does not affect equity market performance, while Maku and Atanda (2010) revealed that the equity market performance in Nigeria is mainly affected by macro-economic forces in the long-run in Nigeria. Ting et al. (2012) established that Kuala Lumpur Composite Index is consistently influenced by interest rate, money supply and consumer price index in the short run and long-run in Malaysia. Mehwish (2013) established that there is a negative relationship between real interest rate and equity market performance in Pakistan.

Jahur et al. (2014) established macro-economic variables such as CPI, Interest Rate have significant impact on the stock market performance in Bangladesh. A regression analysis conducted by Aduda, Masila, and Onsongo (2012) reported that there is no relationship between stock market development and Macro-economic stability - inflation and private capital flows. Mongeri (2011) established that foreign exchange rates have a negative significant impact on equity market performance. Also, Songole (2012) established that market interest rate, consumer price index and exchange rate have a negative relationship with stock return.

Ochieng and Adhiambo (2012) established that 91 – day T-bill rate has a negative relationship with the NASI while inflation has a weak positive relationship with the NASI. Kimani and Mutuku (2013) showed that there is a negative relationship between inflation and stock market performance in Kenya.

Empirical literatures by different authors reveal that some authors have established a positive relationship between various macro-economic variables and equity market performance, while others have established otherwise. Studies conducted both locally

made different conclusions. While some authors established a weak relationship, others found a strong relationship. Yet again, some authors established relationships only in the long-run, while others established long-run and short-run relationship.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This Chapter outlines the manner in which the study will be conducted. The key components are the research design, location of the study, target population, sample size and sampling technique, research instrument, pilot study, validity, reliability, data collection techniques, data analysis, logistical and ethical considerations.

3.2 Researcher Design

Research design refers to a detailed outline on how the research will take place. It specifies the methods and procedures that will be used to collect and analyse data (Borg *et al.* 2007). The study followed a descriptive research design. Descriptive research design is a statistical method that quantitatively synthesizes the empirical evidence of a specific field of research. The study sought to examine the effect of the selected macro-economic factors on the performance of the Equity market of Nairobi securities Exchange.

Flick (2009) notes that descriptive research design has become widely accepted in the field of finance and economics since it is proving to be very useful in policy evaluations. According to Groves (2004) descriptive technique gives accurate information of persons, events or situations. Descriptive research design was used to describe the performance of the equity market in the previous years.

3.3 Sample size and sampling technique

According to the Nairobi Securities Exchange, there were 62 listed and trading companies as at 31december 2014 in Kenya. In this study, the population consisted of the firms which were listed as per the NSE, 2014. The sample of the study was selected from companies in the NSE from all sectors namely Agricultural, Automobiles and Accessories, Banking, Commercial and Services, Construction and Allied, Energy and Petroleum, Insurance, Investment, Manufacturing and allied and Telecommunication and Technology.

3.4 Sampling Frame

The study targeted the Equity market capitalization which is the summation of the market capitalization of all the listed companies in the Equity market Exchange.

3.5 Data Collection Procedures

Data collection is the process of gathering and measuring information in order to be able to answer questions that prompted the undertaking of the research (Flick, 2009). The instruments used were tabulation of parameters .The study used secondary data that was obtained from the Nairobi Securities Exchange, Kenya Bureau of Statistics (KBS), Central Bank of Kenya and World Bank through a data collection sheet. Secondary data is obtained for a period of 10 years, spanning between years 2005 – 2014. Secondary data refers to the information that has been collected by other individuals (Cooper and Schindler, 2006). The researcher obtained data to study the variables which included Inflation rate, Exchange rate, money supply and real output. For the purpose of the study, the secondary data was obtained from Kenya National Bureau of Statistics (KNBS) website, Central Bank of Kenya (money supply M3), International Monetary Fund IMF

website (Kenyan GPD Growth rate), and the Nairobi Securities Exchange (Equity market capitalization).The study used the Equity market capitalization as the dependent variable to measure the equity market performance.

3.6 Data Processing and Analysis

Mugenda and Mugenda (2003) argued that data must be cleaned, coded and properly analysed in order to obtain meaningful information. Secondary data gathered was organized in spreadsheets for the purpose of analysis. The data was then analysed using Statistical Package for Social Sciences (SPSS) version 21. The results of the analysis was organized in tables and graphs and then used to answer the study questions. Multiple regression was applied to the data on the effect of macroeconomic factors on the Equity market of Nairobi Security Exchange. This is a set of techniques for generating a predicted scores for one variable, in this case the dependent variable, from four predictor variables, in this case independent variables. The study adopted a model similar to that used by previous researchers in the area of macroeconomic factors affecting Equity market performance (Osoro, 2013; Aduda, 2012; Nyamute, 2012). The regression model was developed as follows;

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$$

Where; Y – Average Annual Nairobi Securities Exchange Equity market capitalization

a - Is a constant, intercept of the equation.

β_1 - β_4 is the regression coefficient of the independent variables

X_1 - Inflation rate, measured as average annual inflation rate

X_2- Exchange rate, measured as average annual exchange rate.

X_3 -Money Supply, measured as average yearly monetary base (M3); the sum of currency in circulation, and reserve balances.

X_4 - Real GDP, measured as average annual GDP growth rate.

β – Determines the relationship between the independent variable X and the dependent or Gradient/Slope of the regression measuring the amount of the change in Y associated with a unit change in X.

While ε – is the error term normally distributed about a mean of zero. For computation purposes it is assumed to be 0.

3.6.1 Operationalization of Variables

Constructs of each item of the variable was measured by scale as summarized in table 3.1.

Table 3.1 Measurement of variables

	Variables	Measures	Notation
Dependent Variables	Equity market Performance	Equity market capitalization	**EMC**
Independent Variables	Inflation	Average Annual inflation rate	**IR**
	Exchange rate	Average annual exchange rate(Ksh/USS$)	**ECH**
	Money supply	Average yearly Monetary Base	**M3**
	Gross Domestic Product	Average yearly GDP growth rate	**RP**

Source: Author (2016)

The findings of the data analysis are presented in tables and narratives comprised of means, standard deviations and variances. Inferences were made from particular data under each theme and conclusion was drawn from the findings (Cooper and Schindler,

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2003). Test of significance was done and the coefficient of determination (R^2) was used to check if macroeconomic factor has had an effect on Equity market performances. On the correlation of the study variables, the researcher conducted a Pearson Product Moment correlation.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.0 Introduction

This chapter provides the details as regards data analysis results and discussions of the study findings as set out in the research objective and research methodology. The study sought to establish the effect of macro-economic factors on the performance of Equity market of Nairobi Securities Exchange.

4.1 Descriptive Statistics

This section discusses the descriptive statistics of the data analyzed for the ten year duration. The descriptive statistics for the both dependent variable (Equity market capitalization) and the four independent variables show the results indicated in the summarized table below;

Table 4.1 Descriptive Statistics

	Equity market capitalization	Inflation rate	Exchange rate	Money supply M3	GDP growth rate %
Mean	1028.431	11.000	78.8525	1220880.70	4.4480
Median	1212.5050	9.6000	79.7000	1,110,919.00	5.0300
Std. Dev.	377.29967	6.2709	7.83368	535,490.297	2.5398
Variance	142355.00	39.324	61.449	2.867E+11	6.4510
Range	1131.3500	22.2	21.52	1392002.00	8.0000

The study results revealed that money supply varied mostly followed by Equity market capitalization, followed by Exchange rate, Followed by real GDP, followed by inflation rate, as shown by their corresponding standard deviations in table 4.1 above. Also, the data was not exactly normally distributed since their respective mean and median was not exactly the same, but the data was sufficiently appropriate for the purpose of the study.

4.2 Correlation Analysis

The study analysis conducted correlation analysis. Table 4.2 shows the correlation relationship between the study variables.

Table 4.2: Correlation Analysis

		EMC	IR	GDP	ECH Ksh/US$	M3
				Correlations		
EMC	Pearson Correlation	1	.052	-.101	.563*	.700*
	Sig. (1-tailed)		.443	.391	.045	.012
	N	10	10	10	10	10
IR	Pearson Correlation	.052	1	-.573*	-.464	-.444
	Sig. (1-tailed)	.443		.042	.088	.099
	N	10	10	10	10	10
GDP	Pearson Correlation	-.101	-.573*	1	.047	-.065
	Sig. (1-tailed)	.391	.042		.449	.429
	N	10	10	10	10	10
ECH Ksh/U SS$	Pearson Correlation	.563*	-.464	.047	1	.882**
	Sig. (1-tailed)	.045	.088	.449		.000
	N	10	10	10	10	10
M3	Pearson Correlation	.700*	-.444	-.065	.882**	1
	Sig. (1-tailed)	.012	.099	.429	.000	
	N	10	10	10	10	10

*. Correlation is significant at the 0.05 level (1-tailed).
**. Correlation is significant at the 0.01 level (1-tailed).

The correlation analysis revealed that the data sets were highly correlated with each other. For example, equity market capitalization was found to correlate much more with Money Supply as compared with the rest of the variables at 0.05 level of confidence. Also notable was that Equity market capitalization was highly correlated with both Average annual inflation, and real GDP. Also, Inflation was highly correlated with annual monetary base (M3), and average annual exchange rate. In general, the data sets were highly correlated meaning a change of one of the variable would result to a substantial change on the other variables which is expected for such macro-economic variables.

4.3 Regression Analysis

In order to establish whether there exists a relationship between Equity market performances, the researcher conducted a regression analysis where the Equity market capitalization was regressed against the four predictor variables; Inflation rate, Exchange rate, Money Supply (M3), and real GDP growth rate.

4.4. Model Summary Statistics

The study sought to establish the nature of the relationship (strength and the direction of the relationship) that exists between the study variables. The regression analysis results were as shown in table 4.3 below.

Table 4.3: Model Summary Statistics

Model	R	R Squared	Adjusted R Squared	Std. Error of the Estimate
1	.875[a]	.765	.557	253.99379

a. Predictors: (Constant), Annual monetary base (M3), Average annual GDP Growth rate, Average annual inflation rate, Annual Exchange rate Ksh/US$.

The table above provides the model summary results whereby it gives values of R, R^2, Adjusted R^2 and standard error. This shows how well the regression model fits the data analysed. The R^2 represents the correlational coefficient which measures the quality of dependent variables. The study results revealed that there is a positive relationship between the selected macro-economic variables and the Equity market capitalization as depicted by coefficient of determination (R) of 0.875, and Correlation Coefficient (R-Square) of 0.765. Therefore, the selected macroeconomic variables Inflation rate, Exchange rate, Money Supply (M3), and real GDP growth rate do command an influence equivalent to 76.5% only of the changes in the Equity market of the Nairobi Securities Exchange meaning that other variables apart from the above mentioned do influence Equity market capitalization. From the findings, the value of adjusted R^2 is 0.557 an indication that there was variation of 55.7% on equity market performance of Nairobi securities exchange due to changes in the independent variables; inflation rate, exchange rate, money supply and Gross domestic product, the other 44.3% is not explained by the model. This shows that equity market performance of Nairobi securities exchange in Kenya is affected much by these variables. However there are other factors that affect Equity market performance of Nairobi securities exchange.

4.4.1 Estimated Model Coefficients

The results of the analysis obtained the model coefficients and corresponding statistics as shown in table 4.4 below.

Table 4.4: Model Coefficients

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	68.439	1572.453		.044	.067	-4110.557	3973.679
	Inflation	44.974	20.411	.747	2.203	.079	-7.493	97.442
	Exchange	-9.253	23.589	-.192	-.392	.011	-69.890	51.384
	M3	.001	.000	1.228	2.395	.122	.000	.002
	GDP	61.832	45.701	.416	1.353	.034	-55.645	179.309

a. Dependent Variable: Equity market capitalization

The results of the analysis established that the relationship between Equity market capitalization and the predictor variables; inflation rate, Exchange rate, Money Supply (M3), and Real GDP can be expressed using the following regression model;

$$Y = 68.439+44.974X_1-9.253X_2+0.001X_3+61.832X_4 +\varepsilon.$$

Where; Y is the Equity market capitalization, X_1 is the Inflation rate, X_2 is the Exchange rate, X_3 is the Money supply M_3, and X_4 is the real GDP. From the regression model obtained above, holding all the other factors constant, Equity market capitalization would be 68.439. a unit increase in money supply would lead to an increase in Equity market capitalization by a significant factor of 0.001 and unit increase in GDP rate would lead to an increase in Equity market capitalization by a factor of 61.832. Further a negative relationship is observed between exchange rate and equity market capitalization, a unit

increase in exchange rate would lead to a decrease in equity market capitalization by an insignificant factor of 9.253.

Also, P-Values associated with variables GDP and exchange rate were all smaller than 0.05 depicting that they were individually statistically significant in predicting the Equity market performance whereas money supply and inflation rate were slightly above 0.05 hence statistically insignificant.

4.5 Variables summary

After data collection, the secondary data was tabulated, edited, processed and analysed. The following were the answers to the research questions. The answers were summarised from the different analysis done using SPSS version 21.

4.5.1 Inflation Rate and Equity market performance

From the findings of the study it was found that there was a positive contribution of inflation to the regression model with a factor of 44.97. This implies that a unit increase in inflation would cause an increase in equity market performance of Nairobi securities exchange by a factor of 44.97. This finding is similar to Mukhopadhyay and Sarkar (2003) who found out that inflation has positive effect on the performance of Equity market.

4.5.2 Exchange rate and Equity market performance

The regression model also revealed that a unit increase in exchange rate would cause a decrease in equity market performance of Nairobi securities exchange by a factor of -9.253. These results are in line with Sifunjo and Mwasaru (2012) they found out that the movements in exchange rates exert significant influence on stock price determination in Kenya.

4.5.3 Money Supply and Equity market performance

It was also established that there was a significant relationship between money supply and equity market performance of Nairobi security exchange and that a unit increase in money supply would cause an increase in equity market performance of Nairobi security exchange by a factor of .001.These results agrees with Jiranyakul (2007), who did a study to establish the relationship between money supply and equity market performance of the Thai Equity market between 1992 and 2003, where they found positive relations between money supply and equity prices.

4.5.4 Real Gross Domestic Product and Equity market performance

The study also established that there was a significant relationship between real Gross Domestic Product and equity market performance. This means a unit increase in real Gross Domestic Product would cause an increase in equity market performance of Nairobi securities exchange by a factor of 61.832. These results agree with Caporale and Spagnolo (2003) whose study on the effect of GDP on the performance of equity market captured a positive influence on output growth volatility from the equity market volatility.

4.6 Statistical Significance of the model

The study sought to establish the significance of the model established through the regression analysis. The regression analysis produced the statistics as shown in table 4.5 below.

Table 4.5: Analysis of Variance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	958631.172	4	239657.793	7.715	.0061[b]
1	Residual	322564.220	5	64512.844		
	Total	1281195.391	9			

a. Dependent Variable: Equity market capitalization US Dollar

b. Predictors: (Constant), Annual monetary base (M3), Average annual GDP Growth rate, Average annual inflation rate, Annual Exchange rate Ksh/US$.

In this output, the test statistic, F, is reported in the analysis of variance table, $F (4, 5) =$ 7.715 and the regression analysis obtained P-value test for significance equal to 0.0061 (which is smaller than 0.05) depicting that a possible model between the Equity market capitalization and the selected predictor variables is statistically significant.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter provides the summary, conclusions and recommendations of the study as per the study objective.

5.1 Summary of Findings

The study sought to establish the effects of macroeconomic factors on the performance of the Equity market of Nairobi Securities Exchange. The study was guided by an objective; to examine the effect of the selected macro-economic factors on the performance of the Equity market of Nairobi Securities Exchange. The selected macro-economic factors included inflation rate, Exchange rate, money supply and real GDP growth rate.

The study followed descriptive research design and used secondary data. The data spanned the period between 2005 and 2014. The data used for the analysis was the average annual figures and was obtained from; Nairobi Securities Exchange (Equity market capitalization), Central Bank of Kenya (Average annual Inflation rate), Kenya National Bureau of Statistics (GDP growth rate) and International Monetary Fund website (Money Supply M3). The data was analyzed using SPSS version 21.

The regression analysis obtained Coefficient of determination (R), Correlation Coefficient (R-Squared) and P-Value respectively. Since R was positive the relationship between the Equity Market Performance and the macro-economic factors was positive. However, the study results established that the relationship between Exchange rate as

measured by average annual exchange rate and Equity Market Performance is inverse as the corresponding coefficient in the model was negative.

Also, since P-Value was smaller than the significant level, the established model describing the relationship between the study variables is statistically significant. P-Values associated with exchange rate and GDP were found to be significant, whereas those of inflation and money supply were individually statistically insignificant in predicting the equity market performance.

5.2 Conclusion

The results of the study reveal a positive impact of inflation rate on equity market performance for the ten year period investigated, the rationale for this pattern is related to the inadequacy of hedging role of stock against inflation in Kenya. This therefor impose on The Central Bank of Kenya a role to make sure that the rate of inflation in Kenya is kept within the range that would motivate investments since the variable has a great impact on investors. Increase in inflation rate can cause the real income to decline, when this happens, the investor end up selling their assets, including stocks to improve their buying power.

The impact of exchange rate on equity market performance in Kenya has been established by this study to be negative and insignificant. The results present a rich ground for the CBK in mastering the relationship between exchange rates and equity shares prices. This may help them employ the monetary policy tools at their disposal to maintain the exchange rates stability in Kenya and consequently averting adverse effect on the Equity market.

The impact of money supply on Equity market performance in Kenya postulate that an increase in money supply causes equity market capitalization to increase indicating that the increase results in expanded productions by companies and then increases sale resulting in increased earnings for firms which results in better dividend payments for firms leading to an increase in the equity market shares.

The fourth objective of this research was to determine the effect of real GDP on the performance of equity market of Nairobi Securities Exchange. This objective has been achieved. The result of the study do reveal that this variable do have impact on equity market of Nairobi Securities Exchange. Real GDP has a statistically significant effect.

5.3 Recommendations to policy

The study recommends that the central bank of Kenya (CBK) and other regulators should plan in advance and influence the macro-economic variables such as inflation, money supply on the right direction.

Inflation should be maintained at low levels, a rise in the general level of prices reduces the expected cash inflow from an investment, as result investors who own some assets are exposed to potential reduction of the real value of the asset they hold due to inflation. To encourage investment and growth of the financial market, inflation should be kept at the minimum. Although the study showed a positive correlation, this could have resulted from market impurities.

There should be a deliberate policy framework aimed to create favorable foreign exchange market to provide stability to the national currency. This will bolster investor confidence, attracting more foreign currency inflows and with the increased liquidity

activity will be enhanced at the equity market. The forex market should have some level of control to protect the local currency.

The economy should have sufficient money supply to ensure that there is enough money to conduct trade in the economy. The level of money supply should be sufficient to encourage investments. But there should be a tradeoff because excess supply will trigger inflation which will have a counterproductive effect in the economy.

The government should aim to grow the country's GDP as it positively influences equity market performance. The study established that all the selected macro-economic variables worsened just before, during or/and the immediate year following elections. The study recommends that the investment community should plan for the adverse effects of the changes before, during, and immediate years following an election.

5.4 Suggestions for Further Studies

This study considered four variables which included inflation, Exchange rate, Money supply and real GDP growth rate. This study therefore recommends that another study be done to establish the effect of more macroeconomic factors on the equity market performance of Nairobi Securities Exchange in Kenya.

Such variables may include but not limited to political uncertainties, employment/ unemployment levels, export earnings, regional stock market indices, broadband internet penetration, regional retail sales, and bankruptcies among others.

Establishing other macro-economic factors that influence equity market performance can help the regulators to safeguard the market performance so that appropriate results are obtained for the good of investors and the listed corporate bodies.

The study suggests that further research should explore on the specific factors that affect each of the study variables. For instance, further studies should aim to establish the determinants of inflation, Exchange rate, Money supply and real GDP growth rate.

Equivalent studies can be done on other security exchange markets in and outside the country investigating the effect of macroeconomic factor on the performance of the security exchanges.

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LIST OF APPENDICES

Appendix i: Authorization Letter

SOUTH EASTERN KENYA UNIVERSITY
OFFICE OF THE DIRECTOR
BOARD OF POST GRADUATE STUDIES

P.O. BOX 170-90200
KITUI, KENYA
Email: info@seku.ac.ke

TEL: 020-2413859 (KITUI)
020-2531395 (NAIROBI)
E-mail: directorbps@seku.ac.ke

Our Ref: D61/KIT/20510/2014　　　　　　Date: Tuesday, March 29, 2016

Antony Ndunda
Reg: D61/KIT/20510/2014
Master of Business Administration
C/O Dean, School of Business and Economics

Dear Ndunda,

RE: PERMISSION TO PROCEED FOR DATA COLLECTION

This is to acknowledge receipt of your Master in Business Administration Proposal document entitled, *"Effects of Macro-Economic factors on the performance of the Equity market of Nairobi securities exchange".*

Following a successful presentation of your Master Proposal, the School of Business and Economics in conjunction with the Directorate, Board of Post graduate Studies (BPS) have approved that you proceed on and carry out your research data collection in accordance with your approved proposal.

During your research work, you will be closely supervised by Dr. Jared Ariemba and Mr. Robert Kingori. You should ensure that you liaise with your supervisors at all times. In addition, you are required to show proof of publication of your research finding and fill in a Progress Report **(SEKU/ARSA/BPS/F-02)** which can be downloaded from the University Website.

The Board of Postgraduate Studies wishes you well and a successful research data collection as a critical stage in your Master of Business administration.

Prof. Cornelius Wanjala
Director, Board of Postgraduate Studies

Copy to:　　Deputy Vice Chancellor, Academic, Research and Students Affairs
　　　　　　Dean, School of Business and Economics
　　　　　　Chairman, Department of Business & Entrepreneurship
　　　　　　Dr. Jared Ariemba

　　　　　　Mr. Robert Kingori
　　　　　　Director, Kitui Campus
　　　　　　BPS Office- To file

Appendix ii: Secondary Data Collection Sheet

Part 1: Equity market Performance

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Equity market capitalization US Dollar										

Appendix iii: Macroeconomic Factors

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Average annual Inflation rate										
Annual Gross Domestic Product growth rate										
Annual Exchange rate of KSHs vs USA Dollar										
Annual Monetary Base(M3)										

Appendix iv NAIROBI SECURITIES EXCHANGE LISTED COMPANIES

AGRICULTURAL

Eaagads Ltd	Ord 1.25
Kapchorua Tea Co. Ltd	Ord 5.00
Kakuzi	Ord.5.00
Limuru Tea Co. Ltd	Ord 20.00
Rea Vipingo Plantations Ltd	Ord 5.00
Sasini Ltd	Ord 1.00
Williamson Tea Kenya Ltd	Ord 5.00

COMMERCIAL AND SERVICES

Express Ltd	Ord 5.00
Kenya Airways Ltd	Ord 5.00
Nation Media Group	Ord.2.50
Standard Group Ltd	Ord 5.00
TPS Eastern Africa (Serena) Ltd	Ord 1.00
Scan group Ltd	Ord 1.00
Uchumi Supermarket Ltd	Ord 5.00
Hutchings Biemer Ltd	Ord 5.00
Longhorn Kenya Ltd	

TELECOMMUNICATION AND TECHNOLOGY

Access Kenya Group Ltd	Ord.1.00
Safaricom Ltd	Ord 0.05

AUTOMOBILES AND ACCESSORIES

Car and General (K) Ltd	Ord 5.00
CMC Holdings Ltd	Ord 0.50
Sameer Africa Ltd	Ord 5.00
Marshalls (E.A.) Ltd	Ord 5.00

BANKING

Barclays Bank Ltd	Ord 0.50
CFC Stanbic Holdings Ltd	Ord.5.00

I&M Holdings Ltd	Ord 1.00
Diamond Trust Bank Kenya Ltd	Ord 4.00
Housing Finance Co Ltd	Ord 5.00
Kenya Commercial Bank Ltd	Ord 1.00
National Bank of Kenya Ltd	Ord 5.00
NIC Bank Ltd	Ord 5.00
Standard Chartered Bank Ltd	Ord 5.00
Equity Bank Ltd	Ord 0.50
The Co-operative Bank of Kenya Ltd	Ord 1.00

INSURANCE

Jubilee Holdings Ltd	Ord 5.00
Pan Africa Insurance Holdings Ltd	Ord 5.00
Kenya Re-Insurance Corporation Ltd	Ord 2.50
CFC Insurance Holdings	
BritishAmerican Investments Co (K) Ltd	Ord 0.10
CIC Insurance Group Ltd	Ord 1.00

INVESTMENT

Olympia Capital Holdings ltd	Ord 5.00
Centum Investment Co Ltd	Ord 0.50
Trans-Century Ltd	

MANUFACTURING AND ALLIED

B.O.C Kenya Ltd	Ord 5.00
British American Tobacco Kenya Ltd	Ord 10.00
Carbacid Investments Ltd	Ord 5.00
East African Breweries Ltd	Ord 2.00
Mumias Sugar Co. Ltd	Ord 2.00
Unga Group Ltd	Ord 5.00
Eveready East Africa Ltd	Ord.1.00
Kenya Orchards Ltd	Ord 5.00
A. Baumann CO Ltd	Ord 5.00

CONSTRUCTION AND ALLIED

Athi River Mining	Ord 5.00
Bamburi Cement Ltd	Ord 5.00
Crown Berger Ltd	Ord 5.00
E.A.Cables Ltd	Ord 0.50
E.A.Portland Cement Ltd	Ord 5.00
ENERGY AND PETROLEUM	
KenolKobil Ltd	Ord 0.05
Total Kenya Ltd	Ord 5.00
KenGen Ltd	Ord.2.50
Kenya Power & Lighting Co Ltd	

Source: Nairobi Securities Exchange (2014)