RELATIONSHIP BETWEEN MACROECONOMIC FACTORS AND FINANCIAL PERFORMANCE OF FIRMS LISTED IN NAIROBI SECURITIES EXCHANGE (NSE)

BY

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DECLARATION

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

Signed……………………………………. Date…………………………….

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SUPERVISOR

This research proposal has been submitted with my approval as the university supervisor

Dr. Kennedy Okiro

Signed……………………………………. Date…………………………….

DEDICATION

I dedicate this work project to my nuclear household members, family, friends, mentor, classmates, the school of business and the administration at the University of Nairobi for holding a superfluous position throughout my Masters Study program. Devoid of their irresistible Help and immense support, this research work would not be successful. I have been greatly humbled by the understanding, kindness and every form ad way of support they gave me during my study period in the University.

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LIST OF ABBREVIATIONS

AIMS   Alternative Investment Market

ANOVA Analysis of Variance

CPI   Customer Price Index

FIMS   Fixed Income Market Segment

GDP   Gross Domestic Product

KNBS   Kenya National Bureau of Statistics

MIMS   Main Investment Market Segment

NASI   Nairobi All Share Index

NSE   Nairobi Securities Exchange

PPP   Purchasing Power Parity

SPSS   Statistics Package for Social Science

UK   United Kingdom

ABSTRACT

Financial Performance of every individual commercial organization narrates to its ability and soundness to chase capital vital for its procedures and to manage them so as to give it an advantageous edge over the competitors. Financial performance measurement depends intensely on the variables that relay directly to financial statement with regard to Nairobi Securities Exchange (NSE). United performance is portrayed through the usually NSE all share index (NASI) or the 20-share index (NSE 20). Macro-economic aspects are those that relay to the economy either at the local or national level. The aspect that have been pointed out and which have significant influence is; inflation, exchange rates, interest rates, public debt and the legal and regulatory environment. This particular research work sought to examine the association prevailing amongst key macro-economic variables and financial performance of NSE listed corporations in Kenya. Descriptive correlation investigation strategy has been applied. The research work centered focus on all the listed companies at the Nairobi (NSE) and covers timeline from 2008 to 2018.The study has utilized Secondary data extracted from NSE -all Share Index statistical data and KNBS Statistics for the interest rates, inflation rates and public debt. The data was collected from for the period between 2008 to 2018. The data gathered was analyzed with the support of the software Statistical Package for the Social Sciences (SPSS). The outcomes have been illustrated and explained in terms, measures of central tendency, correlation, regression and percentages. Also, a graphical chart to show trend movement demonstration has been done for both dependent and independent factors. The dataset was grouped and analyzed quarterly in a year from 2008-2018 with no specific arrangement in magnitude or time direction Conclusion and recommendation on development and possible upgrade were completed.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Macro-economic variables are parameters that can be used by the investor to measure the performance of firms with a perfect option to acquire extra data concerning the stock market behavior (Jamaludin et al., 2017). A nation's position of the economy controls the performance of businesses operating within its territory. Importantly, the greatest and highly influential macro-economic factors are exchange rates, interest rates, inflation and market risk (Fischer, 2013). Macro-economic variables are aspects of the in the entire economy that influence it at both local and international levels. Their impact and influence involve a huge populace rather than a small number of particular persons. It is frequently claimed that financial performance of companies is determined by therefore stated important macroeconomic variables. These main variables are keenly regulated and monitored by governmental authorities, suppliers and consumers in the national and regional market amongst other vital stakeholders so as to lead them make tangible and vital financial decisions.

Growth and development economically will have been and will always a very important aspect in measuring financial performance of the economy. Economic growth is seen as a very vital economic statistic and is often applied when measuring growth and doing comparisons amongst a number of nations. When a positive economic growth is witnessed, it shows a positive sign of improvement in the standards of living. For instance, there ae main four variables used to measure the rate of economic growth. These variables include: include Inflation, exchange rate and interest rates among others. Distinctive

macroeconomic aspects affect the economy of a country at national level. In circumstances where a nation's output level does not steadily improve, it stands a risk of going to a recession (Fischer, 2013). The level of unemployment in a country, eliminating those incapable of engaging in income generating activities due to sickness or age is high (Tunah, 2010). This particular situation occurs when labor cost is very high and most companies are not financially sound to employ more workers. Consequently, this appears to be a mutual problem because its countered by a significant fall in demand for goods and services in particular sectors, (Rother, 2014).

Macro-economic aspect is a significant monetary, normal or locational and political occurrence that significantly influences the economy at a state or interstate level. These features normally influence the whole population at large not particular persons. Negative macroeconomic issues comprise of happenings that threaten national or international economies. Uncertainties derived from political instability caused by civil wars or inter-pubic conflicts are likely to amplify fiscal stability, as a result the restructuring of resources, or destruction to material goods, properties, and source of revenue. Unexpected happenings, such as the 2014 US economic crisis and strict tariff policies on Asian countries exports to them, consequently produce an extensive ripple effect, resulting to tighter capital conservation rations for financial bodies on an international scale. Other negative macroeconomic factors include natural calamities such as earthquakes, drought and floods, and land splitting, (Graftson,2014).

In stances of fast growth, inflations are very rampant and consequently there is reduction in consumption and demand. Correspondingly, if it reduces swiftly, rates can deflate creation a hard environment for business to realize their margins. Production costs

influence the value of goods and services, and consequently affect the affordability of consumers. Public policies also stand in as macroeconomic factor. For Instance, environmental and structural regulations that attract business costs and business tax

1.1.1 Macro economic Factors

Macroeconomic factors are variables that influence the outcome of an economy in a wider level (Rajan & Zingales, 2013). They include the exact interest rates, inflation, rate of exchange and the rate of GDP growth. The difference in the situation of economy in which a firm operates affects the company's financial performance in the coming periods (Korajczyk, & levy, 2013). In the all nations universally, macroeconomic policies of a particular state affect the financial performances together with their going concern,(Mokhova & Zinecker, 2014). These macroeconomic aspects are allocated into two divisions fiscal and monetary policies of a country. These variables have a large consequence on the decision-making process concerning capital structure and the source of both current and future funding. Moreover, critical decision pertaining financial status of a company have a great impact on key governance and therefore its going forthcoming achievements and market operation.

In both Ghana and South Africa, macroeconomic variable (public debt policy) influences the performance of medium sized businesses (Abor's, 2015). Similarly, Umoren and Babajide (2017) observed that macroeconomic factors affect the performance of manufacturing companies in Nigeria. The stock market in the country also has an overwhelming impact in the direction of any economy which also affects the way companies financed their investment (Levine & Zervos, 2012; Lettau & Ludvigson, 2011 and Black, Fraser & Groene world, 2013).

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1.1.2 Financial Performance

Performance of firms listed in the stocks exchange depend on both the internal and external factors (Elly & Oriwo, 2013). The external factors are determined by macroeconomic variables which are directly affecting the country's economy. For instance, fluctuations in currency greatly impacts on the returns of stock. If the value of a currency of a country goes up and the country depends on export, the result is that the country will not perform well at exporting due to not being competitive. High inflation increases the cost of production and may also reduce the demand for products thus affecting their performance. This will result to lack of competition on the country's export which will make domestic market to suffer because export dependent companies.

This study will use Nairobi All Share Index (NASI). NASI is a market cap weighted index comprising of all stocks and securities Listed in Nairobi Securitas exchange, (NSE 2018).NASI focuses on the whole market instead of price shifting a movement of particular members in the list. According to NASI, prices are determined on previous Trading statistics as per the NSE's Automated Trading System. The index is preservation comprises of monitoring and implementation of continuous changes through firm's addition and removals ,changes of chares numbers and prices, stock splits, stock dividends ,changes in the stock price adjustments due to company restructurings or spinoffs, Douglas,(2010). This effect induces a strict adjustment in the NSE records.

To avoid the rate of the Index from fluctuating because of corporate actions, all business activities which distress the market value of the Index necessitate a Divisor adjustment. When Index Divisor is adjusted to the bar triggering movement on market value, the value of NASI holds constant, (Gajuerel, D.p, 2013). This positions NASI as a very appropriate

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instrument in measuring financial performance of the companies listed in NSE. Every divisor modifications done after winding up trade and the closing value of NASI are arrived at.

1.1.3 Macroeconomic Factors and Financial Performance

Maghyereh (2002) claims that Macroeconomic atmosphere is the inclusive characteristics and mechanisms of a countrywide economy, such as income, output, and the association among varied economic segments. Favorable macroeconomic surroundings endorse the effectiveness of commercial firms which pushes them to a step where they can access funds for going concern. According to Asaolu and Ogunmuyiwa (2010), the measuring indicators for guaranteeing the financial performance of the companies include among others real Inflation rates, exchange rates, interest rates and public debt

Globally, macroeconomic factors have great impact on the financial results recorded by firms (Kiganda, 2014). This is because monetary policy has an impact on all companies as it determines the cost of capital and the accessibility of credit facility to companies which in turn affects the accessibility of fund to companies. If a company grapples with high cost of capital and limited credit facility, its financial results will be greatly hampered. Profitability is one of the important indicators of industry performance that has major insinuation on sector's activities. Several macroeconomic variables affect the performance of the financial sector in any country (Illo, 2012). These macroeconomic variables can include but not limited to interest rates, inflation rates, public debt and exchange rates.

Increase in interest rate and high level of inflation makes cost of doing business higher, which definitely affects the purchasing power of consumers, when the prices are higher consumers tends to shun consumption hence increase in the risk of financial distress and level of default (Malkiel, 2015).). Deliberately altering exchange rates to influence the macro-economic environment may be regarded as a type of monetary policy. According to Dornbusch (2013) when there is depreciation in the value of a currency of a country, it will make exports cheaper, and it will make imports into that country more expensive

1.1.4 Listed Firms at Nairobi Securities Exchange

NSE is a homegrown capital market that imposes a significant role to enable the local companies listed in to acquire financing of their investments whose main purpose is to generate more revenue. (Omondi & Muturi, 2013). Also, it creates conducive environment for the firms' stock trading. Therefore, the NSE plays an important role in directing the transactions of shares for the listed companies and makes an input to the growth of the country's economy. NSE has 64 listed firms and it has singly operated in Kenya since 1954. The listed companies have been classified into three market parts; Main Investment Market Segment (MIMS); Alternative Investment Market (AIMS) and the Fixed Income Market Segment (FIMS).

Nairobi Securities Exchange forms a part of the rising capital markets that are challenged with a number of problems concerning the availability of resources. The inadequacy of the needed resources for the market causes a limitation of the advancement of the NSE market. This further, causes a delisting of a high number of firms. NSE has further segmented the listed companies to ten smaller sections, which are the commercial, and services, agricultural, telecommunication and technology, banking, automobiles and accessories,

insurance, manufacturing and related construction, investment, and the energy and petroleum sector (NSE, 2015). An expansion of the stock market has been experienced through the listing. On the other hand, a notable figure of firms have been struck off due to poor performance (Mwangi, 2014).

1.2. Conceptual Statement.

Performance is clear explanation of productivity and viability of every adventure, confidence and protection of borrower's financial entitlements counter to assets, among other financial factors that influence the market portfolio, (Seethaiah, 2012). The performance status of public listed companies keeps varying due to day to day fluctuations of factors affecting monetary performance. These factors include but not limited to the key macroeconomic variables: Inflation rate, exchange rate, interest rate and Public debt. Each of the named macroeconomic variables significantly affects the level of performance in direct or indirect way.

The financial position of different listed organizations varies from period to period because all share index differs from differ from financial period to another (annually). The study will help investigate the aspect of manipulating performance of corporations' registered on the Nairobi Securities Exchange (NSE) using panel statistics in a given time frame of 10 years.

From research done in the past, it is much evident that, the size of a firm and liquidity levels don't influence much on the financial performance. In Kenya, the NSE incorporates companies of all sectors in the listing such as agricultural, processing and manufacturing, financial among many other sectors study will involve comprehensive comparative analysis across the firms to seek whether varying weights of influence sectors make a

difference in the firm's financial performance. This is because, previously, some firms have registered improved and great financial performance while others have a subsequent decrease in profits and performance.

Subsequently, although majority of the companies listed in the NSE gave sound financial performance, several have experienced a decrease in profitability margins rendering them weak financially. Consequently, this has seen them struck off from the NSE within the last 10 years.

Substantial struggles have been applied to salvage the downsizing companies such as restructuring the capital composition. However, directors and key financial professions still lack crucial skills and leadance in working out to maximum portfolio of financing pronouncements (Kibet, Kibet, Tenei, and Muthol, 2011). Even though many corporations have experienced challenges in the past, it has seen key business put under close statutory monitoring due to the record of several prompting loss of investors 'wealth and the overall confidence in the NSE). Such incidences were largely attributed to financing (Chebii, Kipchumba and Wasike, 2011), and there was no efficient practical indication to back this.

This research is aimed at creating substantial contribution in understanding the precise factors that affect financial performance and even financial structure of the listed companies. (Wasike 2011), Even though numerous difficulties experienced by the corporations that have been listed in NSE are largely credited to Financial difficulties, (Chebii and wasala,2013), there is no though experimental research done to support or evidence the big-time perception.

This research work is therefore sought to study on the that influence the performance of the companies listed at the NSE, covering a period 2008-2018.This research will consequently pursue to do a comprehensive research and analysis of the main aspects that influence financial performance of NSE listed corporations in Kenya from the year 2008 to 2018.

1.3 Research Problem

Close to the end of year 2012, the Kenyan economy experienced very volatile changes macroeconomic variables such extremely high lending interest rates and high rates of inflation that birthed several led to several native workers take industrialized actions. Exchange rate changed rampantly and has led to massive losses to the business involved in import business. This directed to Central Bank of Kenya rise the base lending rates in a proposal to stabilize the Kenyan currency that had performed poorly as equated to the main world currencies.

NSE has the mandate of listing companies that meet the required status for a firm to be listed in Kenya. Over the years many companies have complained of the bar being set too high for them to get listed by NSE. This is as due to the conditions set by NSE to firms for enlisting. According to NSE, many firms are not comfortable with disclosure requirements, fear of losing control relatively weak microeconomic environment and having the perception that the cost of listing is too high (KNBS, 2018). This has kept many firms at bay which is the reason only a few companies control almost 80% of the activities of Nairobi securities exchange (KNBS, 2017). It is therefore necessary that a clear link between macroeconomic factors and their performance are spelt out clearly so that many firms can be able to get listed by NSE.

It is of importance to measure the effect of the macroeconomic variables on the performance of the listed firms. Majority of the firms listed in NSE have recorded decline in performance for example Uchumi supermarket and while others have been delisted for example Access Kenya. This study therefore seeks to establish if macroeconomics factors have contributed to their dismal performance.

Several Kenya studies have been done in regard to the performance of companies listed at NSE. Oyoga (2010) carried out a study to determine the impact of corporate governance on performance of corporate institutions listed in the NSE. The study concluded that there exists a relationship between corporate governance and market performance. This Kenyan study however assumed that all macroeconomic variables are held constant hence the conclusions made from the study was incomplete According to previous studies conducted, the relationship between macro-economic variables and stock market performance in Kenya is still to be comprehensively explained. The study used Nairobi All Share Index (NASI) measure financial performance and thus presenting a conceptual gap. The current study will use NASI as a measure of financial performance. Kiganda (2014) conducted a study on the effect of macroeconomic factors on commercial banks profitability in Kenya: Case of equity bank limited: the study focused on commercial banks and thus presenting a contextual gap. The current study will focus on NSE.

The results of the previous studies have also changed according to the macroeconomic factors used, the research methodology employed, and the countries examined. Since the studies done in Kenya have not taken into consideration each macroeconomic variable, this study therefore examines the relationship between macroeconomic variables and market performance of firms listed in NSE in Kenya. The studies focused on the concepts of

dividends and capital structure which are different from macroeconomic variable and performance, therefore a conceptual gap. This study therefore seeks to answer the question: What is the relationship between macroeconomic factors and financial performance of firms listed in NSE

1.3 Research objectives

1.3.1 General Objective

To find out the relationship that exists between macroeconomic factors and financial performance of firms listed in Nairobi Securities Exchange.

1.3.2 Specific Objectives

i.   To investigate the impact of inflation on the performance of firms listed on the NSE

ii.   To investigate the impact of exchange rate on the performance of firms listed on the NSE

iii. To investigate the impact of interest rates on the performance of firms listed on the NSE

iv.   To investigate the impact of public debt on the performance of firms listed on the NSE

1.4 Value of the Study

This study will help firms listed in the NSE in decision making to avoid being delisted. It will also help firms in decision making before starting new projects, this will help them minimize unnecessary debts and avoid risks. On the same note, the study will help increase the number of firms to be listed in the NSE. The study will again help those interested in buying shares from companies to know how the company is performing before they can

invest their money in buying the shares to avoid running at a loss. Similarly, this study will help the government in understanding how government policies can play a role in influencing the performance of a firm and the impact the policies have on the economy of the entire country. It is important for the government to understand that the policies it makes acts as one of the many macroeconomic factors which influence the performance of firms listed by NSE.

The study will be of greater importance to the scholars and researchers who may show interest in studying the relationship between macroeconomic factors and performance for companies listed in the NSE in the future, as they will use it as reference.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter outlines in deep the Literature review and major theories supporting the study. The chapter extracted supporting information from preciously done research work. Finally, the paper brings out previous empirical studies, the theoretical structure illustrating the relationship amongst macroeconomic factors and the financial performance.

2.2 Theoretical Review

Four theories are been analyzed with regard to the relevance of this study. These theories include; mark-up theory, the purchasing power parity theory, the debt overhang theory and the Keynesian theory.

2.2.1 Behavioral Finance Theory

Behavioral finance is the study of the effect of thinking on the behavior of financial practitioners and the successive result on the overall market's performance. It is a challenge to clarify and bring more comprehensiveness of choice and decision making amongst the investors. Behavioral finance mainly describe the what, why and how of finance and investing, point of psychological judgment.

Hong and Stein (1997) brought evidence to support the epidemic model on how different investors make confirmation biases with regard to their basic perceptions of corporations. However, the investors base their perceptions on personal biases without keen consideration on the real portfolio performance. Investors' biasness and decision based result to over judgment and under judgment to various investments,(Daniel, Hirshleifer

and Subramanyam ,2007) found. Consequently, wrong pricing is fully incorporated as more public information affirms the real investment performance.

2.2.2 The Purchasing Power Parity Theory

The purchasing power parity supposition enunciates the resolving of the average value of currency that is a result of comparing two inconvertible currencies. The theory was born and enforced in 1924 by a Swedish Economist, Gustav Cassel. This theory argues that the symmetrical rate of exchange is influenced by the value or purchasing strength of binary inconvertible currencies

Purchasing power parity (PPP) theory is relevant to this study in the sense that it addresses the link between exchange rate and the purchasing power on different nations. This theory highlights how exchange rate influence inflation in an economy which intern has adverse effect on the performance of companies listed by NSE. This study is also seeking to find the connection between macroeconomic factors such as exchange rate on performance which is why this theory is relevant to the study.

2.2.3 The Keynesian Theory

Keynesian theory is the theory of monetary interest put down into theorem by Maynard Keynes in 1936. This theory argues that, the rate of interest is influenced by the demand and supply of money. The circulation of money determines the demand and supply and therefore purchasing power. Keynes termed cash money as a liquid possession and the interest rate charged on loaning is used to compensate the liquidity loss.

At instances of money equilibrium, circulation is optimally regulated where demand and supply is balanced. At this point, consumers, firms, household consumers and all users of

money are best satisfied. Fluctuations in the compensation for liquidity loss keep varying with regard to how demand and supply for money is balanced. Ngugi (2001) stated that interest is the charge that balances the demand for loan able money with the supply of loan able money. With regard to Keynesian, if the total demand for money fall, it would lead to overall economic growth decline. Consequently, this fall lead to low production and therefore low prices and decrease in available or offered wages.

2.3 Macroeconomic Factors that affect Financial Performance

2.3.1 Inflation Rate

Inflation is defined as general rise in prices of goods and services over a period of one year, (Brajer, 2011).Defining and measuring inflation rate is not a swift assessment due to many variables that influence inflation other than price factors. In most instances, only representative goods are used in measuring inflation in a scenario refereed as market basket. This is done within a significant considerable economic period. This leads a price index, which is the charge of the market basket today as a percentage of the cost of that in identical basket.

Investors usually demand a high price to shelter their acquaintance to inflation risks as long as there is improbability in the market and in turn this leads to reduction in the capacity of investment. In order to bring the inflation permanency rate, it is significant to inspire investment (Nwankwo, 2006). Kadongo (2011) has point up macroeconomic policy letdowns as repelling FDI free flows from Africa; he stresses on that negligent fiscal and monetary guidelines have produced unmanageable budget discrepancies and inflationary pressures, increasing native production costs, making exchange rate unsteadiness thus resulting to the region becoming risky location for investors. Instability 21 in the variables

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as demonstrated by high inflation and extreme budget deficits, restricts the country's capacity to appeal investments opportunities (Kadongo, 2011).

2.3.2 Exchange Rate

Exchange rate is termed as the equivalent of one type of currency to other. Both currencies in most cases have different values. Exchange rates have a material influence on financial performance and this significantly affects the prices and values of import, and cost of production. The second factor moving the performance is transitional imported goods charges affecting the shift on exchange rate which has direct influence on cost of goods and inventory of domestically manufactured items. The latter is domestic goods priced in foreign currency. The quantified size of variables redirected in the consumer price index (CPI) which rest on the portion of consumption 20 imports basket (Nwankwo, 2006)

Demand increases for domestic goods when factors affecting prices causes rise in price level of imported goods and services hence reduction in completion is experienced. This shift equilibrium which results pressure mounting on domestic prices and nominal wages as demand increases. Additional rising pressure will be applied on domestic prices as a result of rising wages. Depreciation in the rate of exchange can merely safeguard the local industry as local production cost rises much less than the rate of depreciation as compared to prices of imported equivalent increases by the full amount of the depreciation. This scenario of currency depreciation leads to improved and conducive environment for indigenous industry production. Supplementary, upsurge in rate of exchange lead to foreign currency gains in a well-controlled macroeconomic policy environment by commercial banks, (Nwankwo, 2006).

2.3.3 Public debt

Public debt which is otherwise known as the national debt is the total financial obligations incurred by all governmental bodies of a nation (Checcherita, 2010). The total of the nation's debts is the debts of local, state and national governments. The level of a nation's debt is an indicator of how much public spending is financed by borrowing instead of taxation.

2.3.4 Interest rates

The interest rate defined as the annual charge laced on the loanable amount and is payable by the borrower to the lender. It is illustrated as a percentage proportional the amount borrowed. Interest rate can be charged based on simple or compound interest terms, (Cox & Ingersoll, 2005). Different interest rates are charged on different customized loans each varying according to the nature of customers.

Varying interest rates echo the capability and enthusiasm of borrowers to meet their obligations and easiness with which a borrower's promissory note or bond, mortgage, debenture or other indication of indebtedness can be turned into money.

The impression of the nature of the cash wherein an obligation is 19 named is outlined by the degree of loan fees. This is the rate at which the moneylender and account holder are exhausted ensured by the confidence wherein speculators grasp the relevant financial and fiscal foundations. The all out acquired loan fees additionally show the arrival on resource like Government bond inside an economy (Kadongo, 2011).

Duetsch Bundesbank (2001) noticed that loan fee is the income a lender foresees by progressing and valedictory with his/her liquidity. The loan fee is a two-stage situation in that proprietors of surplus subsidizes will leave behind a few on the off chance that it is

high as they anticipate more significant yields in future. Higher loan costs dampen getting then again. In harmony state loan cost is equivalent to request, venture and supply and sparing in the capital market2.4 Empirical Review

This section reviews the past studies that were conducted and are relevant to the objectives of this study. The empirical review is done based on each objectives of the study. Wheelock (2016) conducted a study to establish the relationship between market interest rates and net interest margins of banks in the U.S. In cases where public lending rates rise, financial institutions funding charges also go high.It was concluded that after grace period elapse and payment of loaned funds begin, net interests attainable begin to decrease as loans are paid at a reducing balance and therefore less interest charges. out further that, over time, however, net interest margins fall as loans are repaid or renewed at lower interest rates.

Umar (2014) conducted a study on effect of inflation on bank performance in Nigeria. The findings of the study indicated a negative relationship between inflation and financial performance of banks in Nigeria. It was pointed out from the study that, inflation usually disrupts business planning of banks. Despite the ability of many financial institutions to survive during hyperinflation, when the thresh hold is exceed most banks find themselves in a situation of not having muscles to absorb the shock. Financial institutions fight through inflation by counter –increasing interest rates upon inflation increased.

Coleman and Tettey (2008 in their research investigations sought to establish the effect of macro economical variables on portfolio performance in the market, sought to establish the effect money deposits and hindrance to stock market performance. The research established that, in most cases inflation negatively influence financial performance of

businesses. However, the outcome indicated that it takes material timeline for a particular investor to benefit from forex trading due to currency depreciation.

Mbubi (2010) did a comprehensive research on the impact of foreign exchange in financial performance of listed firms in the NSE. The study established that greater part of the firms listed in the NSE operated on a documented exchange rate policy. For those firms that had strict internal policies and regulation on exchange rates, hedged fully and others significantly partially compared to those who dependent on chances. The study concluded that all the businesses listed in NSE were hedged against foreign exchange rates.

Kagunda (2013) conducted a study on relationship between interest rates and financial performance of firms listed at the Nairobi Securities Exchange. The findings revealed that there is a positive relationship between interest rates and financial performance for both Market rate of return and return on equity when all firms are considered together. However, the relationship was not considered significant. On disaggregation of the firms and grouping the firms in their respective industries however, the study found that the relationship between interest rates and financial performance was diverse among industries. A near perfect negative relationship was found out in the energy and petroleum industry, while the investment industry had a strong negative relationship. Other industries recorded a weak positive relationship while a weak negative relationship was also established in some industries. It was recommended from the study that, the managements of firms listed by NSE should try to make informed decision on borrowing and lending to influence the financial performance of their firms positively.

Gladys (2017) in a study to determine the effects of macroeconomic variables on financial performance of insurance companies in Kenya indicated that, Inflation rate was not constant and keep changing with time and the findings revealed that inflation rates had a negative effect on a firm's performance, in terms NASI, Debt Ratio, Equity Ratio, Debt to Equity Ratio. Although this is the case inflation only affects 12.9% of the variation in return on NASI. of insurance firms. The study further revealed that, interest rates was volatile and had a negative impact on the NASI and its impact on the performance indicators was limited as it influences minimal the variation in NASI of insurance firms.

2.5 Conceptual Framework

Young (2009) stated that conceptual framework examines the interrelationship between the independent variables and the dependent variable; in this case the independent variables are interest rates, exchange rates, public debt and the inflation rates and the firm specific factors (age, size and liquidity) while dependent variable is the performance measured using NASI.

Macro-economic factors	Performance
• Inflation • Exchange rate • Interest rate • Total public debt	• NASI
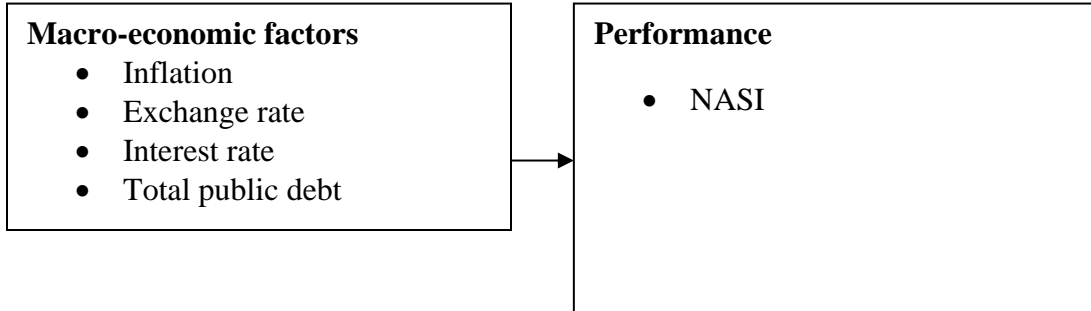
Independent Variables   **Dependent Variable**

Figure 2.1: Conceptual Framework

2.6 Summary of Literature Review

The study reviewed the theories that informed the study variables which are markup theory, purchasing power parity and Keynesian theory. The study conducted empirical review from both global and local perspective. It finally brought conceptualization of macroeconomic variables and performance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research philosophy, research design, target and accessible population, sampling design and sample size, and data collection methods. Further, issues relating to data processing and analysis are also discussed in this chapter.

3.2 Research Design

This study will adopt a panel research design. This is a type of quantitative research that involves studying the same cross-sectional units across a given time period (Kumar, 2014). This will establish the relationship between macroeconomic variables and the performance of firms listed by NSE. According to Flick (2015), for studies on cause and effect relationships such as this, a panel research design provides the best results.

3.3 Target Population

It is the entire set of individuals, cases or objects with similar visible features which are distinct from group Mugenda & Mugenda (2009). The target population for this study will comprise of all firms listed at the NSE for a period of 10 years from 2008-2018 in quarters.

3.4 Sample Size

This study will utilize the sample period data from the year 2018-2018 on annual basis for interest rates, public date, inflation rate, exchange rate and performance. The choice of the 10 years is because it is a current data and the existing relevant studies have focused on 2008going backwards. Therefore, the total number of observations will be 40observations.

3.5 Data Collection

The study will entail the use of secondary data that will be obtained from the Central Bank of Kenya and World Bank indicators website. The study period will be from 2008-2018 (10 years). Secondary data for all the variables in the study will be extracted from the NSE website, Central bank of Kenya, and world bank website and recorded in a data collection template (See: Appendix I).

3.6 Data Analysis

The study will use SPSS to analyze the data while Vector Auto Regression Model (VAR) to be applied when analyzing the relationship between macro-economic factors applied on the study and the financial performance of companies listed at NSE. This approach is applicable for time series data. The structure is that each variable is a linear function of its past dallies itself. The analyses entailed the various coefficients computations to deduce the relationship between macro-economic factors and the financial performance of listed companies NSE.

3.7 Analytical Model

Data will be keyed into the SPSS version 20.0 program. Then data will be analyzed using descriptive statistics and panel least squares regression model. Panel least squares regression model will be used to estimate the relationship between the explanatory variables and the dependent variable. This model will be appropriate because of the panel nature of the data. The statistical significance of each regression coefficient will be tested using the t-test while the joint significance of the coefficients will be tested using the F-test. The tests will be done at 5% significance level which is considered a rule of thumb by most statisticians (Engel & Schutt, 2014).

3.7.1 Model Specifications

In order to undertake the empirical analysis on the relationship between the selected independent and dependent variables, the model below was used:

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Definition of Model Variables

Variable	Definition	Operationalization /Measurement
Y	Performance	NASI
β_0	Constant	-
$\beta_1 .... \beta_4$	Coefficients of the variables	-
X_1	Inflation	Inflation rates as the percentage change in the monthly consumer price index (CPI)
X_2	Exchange Rate	Exchange rates as a percentage of KES in relation to USD.
X_3	Total Public Debt	Total public debt
X_4	Interest Rate	Real interest rate
ε	error term	-

3.7.2 Test of Reliability

The study will use the ANOVA and F tests to establish the relationship that exists between microeconomic factors and financial performance when applying the model. Then apply t test to determine the importance of regression coefficient. The tests will be performed at 95% confidence level and at 5% significance level.

3.8 Test of Significance

The study t-test was subjected to the 95% significance level. The null hypothesis that there was no significant difference against the alternative hypothesis of significant difference was tested. If the value under "Sig." is less than .05, then it denotes the test is significant, meaning the two variances were significantly different. If it is not significant (Sig. is greater

than .05), the two variances are not significantly different; that is, the two variances are approximately equal.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The chapter presents results of the data collected. Model results are presented together with descriptive statistics. The chapter also includes the interpretation of the results together with summary of the findings thereon.

4.2 Descriptive Results

This section presents the findings where the measures of central tendency and trend analysis are shown. The descriptive information for the four factors have been achieved for experimental assessment and are presented in the Table 4.1.

Table 4.1: Data collected

Year	Quarters	Inflation rate	Exchange rate	Interest rate	Public debt	NASI
2008	Q1	6.13	62.85	6.46	869823.3	97.6
	Q2	9.86	64.69	7.61	870578.7	106.77
	Q3	13.02	73.22	6.06	882287.9	99.36
	Q4	16.27	77.71	6.36	972899.3	73.83
2009	Q1	17.07	80.43	4.62	988372.8	61.95
	Q2	15.11	87.43	4.01	1053490	61.3218
	Q3	12.41	74.16	3.43	1075596	69.02035
	Q4	9.24	75.82	3.66	1177941	68.84477
2010	Q1	7.03	77.33	2.43	1177274	79.70286
	Q2	5.43	81.97	2.41	1225720	90.89952
	Q3	4.4	80.78	1.84	1298926	97.3439
	Q4	3.96	80.75	1.41	1320138	99.63464
2011	Q1	4.49	82.99	1.66	1396896	96.54915
	Q2	6.88	89.86	5.73	1487111	93.0759
	Q3	10.18	99.83	5.75	1564109	80.10092
	Q4	14.02	85.07	17.75	1485488	69.13758
2012	Q1	16.45	83.06	13.78	1564109	70.59884
	Q2	15.97	84.22	17.6	1633380	78.02059
	Q3	13.29	85.28	8.42	1724654	84.23545
	Q4	9.38	86.03	6.39	1793238	91.28498

2013	Q1	6.33	85.64	9.35	1794611	107.0134
	Q2	4.56	86.64	7.48	1894191	122.1705
	Q3	4.75	86.65	7.11	2057429	122.6752
	Q4	5.72	86.31	7.95	2111552	134.4156
2014	Q1	6.39	86.44	6.92	2171586	140.6475
	Q2	7.05	87.63	6.46	2370256	149.0456
	Q3	7.19	89.28	8.39	2348702	156.1995
	Q4	6.88	90.6	8.29	2478445	161.7739
2015	Q1	6.663	92.34	8.08	2675234	169.8411
	Q2	6.63	98.64	9.7	2829058	167.4707
	Q3	6.29	105.3	11.5	2938495	150.7882
	Q4	6.58	102.3	7.23	3155763	142.3291
2016	Q1	6.88	101.3	4.31	3312106	142.4555
	Q2	6.46	101.1	10.04	3618727	145.5343
	Q3	6.5	101.3	10.36	3703574	138.5089
	Q4	6.3	102.8	1.04	3827298	136.3382
2017	Q1	6.76	102.9	7.23	4104322	125.5027
	Q2	8.13	103.5	4.13	4406446	141.7095
	Q3	8.4	103.1	7.23	4483034	161.566
	Q4	7.98	103.1	7.75	4569630	165.4954
2018	Q1	6.89	101.2	9.95	4884081	180.94
	Q2	5.2	101	6.16	5639035	179.76
	Q3	4.53	100	4.77	5461168	167.57
	Q4	4.69	103.03	9.00	5272503	144.88

Measures of Central Tendency

Table 4.2 Measures of Central Tendency

	Inflation Rates	Exchange Rates	Interest Rates	Public debt	Financial performance(NASI)
Average	8.28052	89.43	6.966591	2447029	118.7253
Standard Deviation	3.71684	11.1	3.655593	1406254	36.56159
Maximum	17.07	105.3	17.75	5639035	180.94
Minimum	3.96	62.85	1.04	869823.3	61.3218

The descriptive statistics for the four variables have been attained for empirical examination and are presented in the Table 4.2.

The table presents the descriptive statistics for all the variables. As shown above, there were 40 observations made for all the five variables, (both independent and dependent). Also presented are the average values, minimum and maximum values and the standard deviation.

The dependent variable, financial performance (NASI) of the companies has the mean (average) value of 118.7253. It has a minimum value of 61.3218(2009-Q2), maximum value of 180.94 and a standard deviation of 36.56159

Exchange rate has the mean (average) value of 89.43; it has a minimum value of 62.85(2009) maximum value of 105.3(2017) and a standard deviation of 11.1

Inflation rate has the mean (average) value of 8.28052%; it has a minimum value of 3.96% (2010), maximum value of 17.07% (2009-Q1) and a standard deviation of 3.7168.

Interest rate has the mean (average) value of 9.958%; it has a minimum value of 3.96 %(2010), maximum value of 12.50% (2010) and a standard deviation of 4.6453%.

Public debt has the mean (average) value of 2447029 million; it has a minimum value of 869823.3 million maximum value of 5639035 million (2017) and a standard deviation of 1406254 million.

4.2.2 Annual Trends

The trend in financial performance as inclined by NASI, Public debt, Exchange rates, interest rates, inflation rates over the 10 consistent years is presented in the graph below.

Table 4.3 Annual Trends
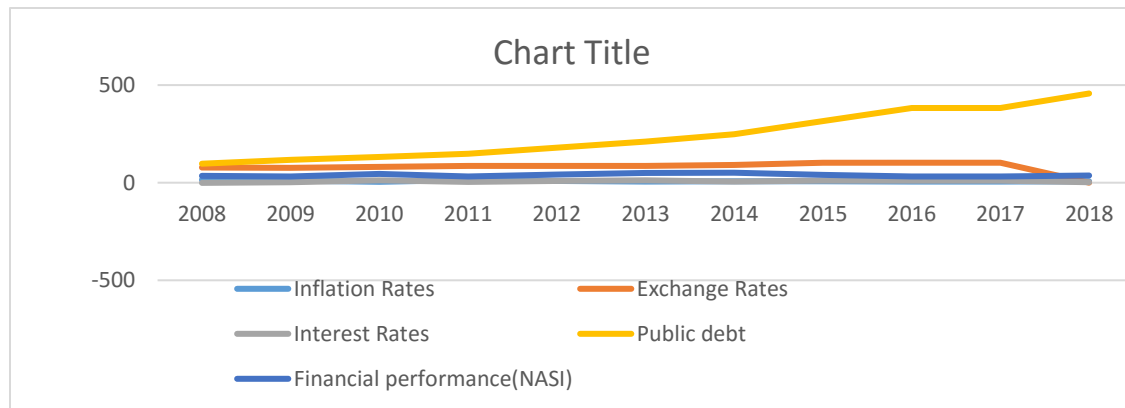
The outcomes show that Public debt (both internal and external) has progressively be on the rise with a very rampant boom between 2010 to 2018.This is caused when the budget is in huge deficits, (Booth &Laurence, 2001).Kenya's debt is growing to harmful levels. With more imports and less exports, high inflation rates and high cost of debt, this greatly weakens the economic system creating a very big financial gap.

The trend indicate that inflation rates have been greatly volatile registering high increases between 2008, 2011 and 2013.The low levels of inflation were registered between 2008 and 2018.Main cause of inflation is when demand exceeds supply and when there is a lot of money circulation in the economy and vice versa on its decrease.

Also, exchange rate as a macro-economic factor has been unstable and unpredictable especially during instabilities and unfavorable economic conditions; exchange rates tend to go way up during such episodes. Exchange rates increased gradually from year 2009 to

2011, then slightly decreased in 2012 and then went up in the year 2013. The increase may be accredited to balance of payment account, confidence in the local currency, interest rates, and state of the economy.

Comparatively, outcomes show that, trend in inflation rate and interest rate as a macroeconomic factor was inconsistent. For the period 2009 to 2010 there was a gradual decrease with an increase in 2010 to 2011 and then a slight decline in 2012 and 2013. This could have been caused by excess demand in the economy or cost push factors.

The NASI trend revealed a volatile and inconsistent NASI especially when interests' rates and exchange rate registered high levels. A gradual decrease from year 2000 to 2001 after which is remains relatively consistent, increases to high levels between 2006 and 2007 when the duo was relatively know and then went down again at 2014.

4.2.3 Correlation
Table 4.4 Correlation matrix

Note: The correlation was done at significance level of 0.01 (2-tailed).

	Inflation rate	Exchange Rate	Interest Rate	Public debt	NASI
Inflation rate	1				
Exchange Rate	- 0.4131126417	1			
Interest Rate	- 01.319631811	0.153410164	1		
Public Debt	-0.49666856	0.91982983	0.009785852	1	
NASI	-0.52669667	0.87345114998	0.3746154663	0.855156845	1

4.4 Regression

30

In order to establish whether macro-economic factors influence financial performance of companies listed in the NSE, regression has been done below

4.4 Regression

In order to ascertain if macro-economic variables manipulate financial performance of corporations listed in the NSE, regression has been done below

Table 4.5

Regression Statistics	
Multiple R	0.878644
R Square	0.772015
Adjusted R Square	0.748632
Standard Error	18.33076
Observations	40

Independent variables which include, Interest Rate, Public Debt, Exchange Rate, and Inflation Rate.The outcomes expose that the R squared of 0.772015 means that macro-economic factors accounted for 77.20% of the financial performance of companies listed in the Nairobi Securities Exchange changes, while 18.33076.35% cannot be explained by explanatory variables hence error term.

Table 4.6 ANOVA

	df	SS	MS	F	Significance F
Regression	4	44375.58	11093.89	33.0159	4.84E-12
Residual	35	13104.65	336.0167		
Total	39	57480.23			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Interest rate, Public Debt, Exchange rate, Inflation rate

The above table indicates that the overall model was significant. This was supported by a

p value of 2.6405. The ANOVA results demonstrated that the macro-economic factors, that

is, Interest rate, GDP, Exchange rate, Inflation rate are good predictors of financial

performance of Companies listed in NSE.

Table 4.6

	Coefficients	Standard Error	t Stat	P-value	Lower 95%
Intercept	101.2614	21.26094	4.762789	2.6405	58.25706
Inflation rate	-4.17546	0.969843	-4.30529	0.000109	-6.13715
Exchange rate	0.011158	0.243009	0.045917	0.963611	-0.48037
Interest rate	1.801394	0.887704	2.029272	0.049295	0.005842
Public debt	1.5705	2.7506	5.719376	1.2706	1.0205

a. Dependent Variable: Financial performance (NASI)

The manifold regression analysis was executed to find out the relationship between the

four macro-economic variables and financial performance of NSE listed companies in

Kenya. P-values were used to test for the significance of each predictor variables (macro-

economic factors) in the model. The macro-economic factors were significant when the

significance value was less than 0.1 (significance level). Stated below is the regression

equation.

$(Y = \beta 0 + \beta 1 X1 + \beta 2 X2 + \beta 3 X3 + \beta 4 X4 + \varepsilon)$

Becomes,

$Y = \beta 0 + \beta 1 X1 + \beta 2 X2 + \beta 3 X3 + \beta 4 X4 + \varepsilon$

$(Y = 101.26 + (-4.17) X1 + (0.011) X2 + (1.801) X3 + 1.5705 X4 + \varepsilon)$

$= (Y = 101.26 - 4.17 X1 + 0.11 X2 + 1.801 X3 + 1.57 X4$

Relationship between the independent Variables and financial performance of NSE listed companies in Kenya. The t value and significance level were 0.405 for the exchange rate and 0.01respectively. At the respective significance level, the independent variable exchange rate accounted for a 0.11 lower variation in the dependent variable financial performance (NASI) of listed NSE companies.

The interest rate and financial performance of NSE listed companies in Kenya. The t value and significance level were -2.029 and 0.01 respectively. At 0.01significance level, interest rate explained a highly significant negative proportion of the change in the financial performance of NSE listed companies.

Inflation rate and financial performance of NSE companies in Kenya

From the above table, the t value and significance level were -4.17 and 0.096 respectively. At 0.096, inflation rate explained a highly significant negative proportion of the change in the financial performance of listed NSE companies.

Public debt and financial performance of listed companies in Kenya

The t value and significance levels were 0.95 and 0.01 respectively. Public debt positively affects financial performance by 1.5705

Indication that interest rate explained a highly significant positive proportion of the change in financial performance of NSE listed companies

CHAPTER FIVE
CONCLUSION AND RECOMMENDATION

5.1 Introduction

The statistics collected was analyzed, and findings obtained in tabular presentations and trend graph for easier interpretation. This chapter specifically brings out the discussion findings based on the study in chapter four. It gives conclusion to the study and highlights recommendations for more comprehensive research in the future.

5.2 Conclusion

This last chapter sought to evaluate the results arrived after data recollected was statistically analyzed. Consistent with preceding studies done on the same or relative topic, the study concluded that Interest rates, public debt, exchange rate and Inflation rate significantly influenced how NSE listed companies performed financially.

The study aimed at making an explanation of interconnections amongst macro-economic factors and how they affect financial performance of NSE listed corporations This independent variable was measured against the Nairobi All Share Index (NASI). The four macro-economic variables with lead-lag relationships have an R2 of 0.5245 or 52.45%. Subsequently, a conclusion in relation to this research states that a significant relationship does exist amongst the NASI and listed macro variables. Besides, these listed macro variables together with the NASI define a firm's financial performance. The firms may forecast their performances based on the data analyzed based too on NSE and KNBS data if accuracy is utterly maintained. All the aforesaid macro-economic variables are influenced by the policy regulating body authorized by the government. This study work

clearly indicates an existing relationship between available financial policies and performance of the involved firm.

Statistical analysis is facilitated by the multiple regression model. It clearly provides directives in illustrating and comprehensively clarifying how both the dependent and independent factors relate. This study also found that interest rate, inflation rate, Public debt and exchange rate are statistically significant with inflation rate, real exchange rate and interest rate explaining a highly significant negative proportion of the change in the dependent variable financial performance (NASI) of listed companies.

5.3 Recommendations

Having laid down the finding, this research recommends implementation of policies enabling a stable exchange rate within the Kenyan financial market. This would better the performance of all listed companies in the NSE. Stable and perhaps lower exchange rates would help the firms in the industry experience better financial performance. It does away with previous negative correlation compared with financial performance of the involved companies.

Also, the second recommendation has to do with managing the supply of money within the economy. An increase of money supply within an economy has been linked with a better financial performance of companies according to previous studies. This is largely due to the high disposable income by individual thus increasing demand for goods and offered by listed companies in Kenya.

The third recommendation states that the government need to come up with policies for lowering inflation rates within the economy and maintaining financial stability. Moreover, measures need to be put in place to enable borrowers have direct access to finances with favorable interest rate charges. Consequently, making the aforementioned interest rates being affordable to borrowers would better the liquidity of companies. In return, these companies would experience increased investments and market consumptions.

Public debt has a positive influence on NSE listed companies. Positively, with moderation the government should seek more funds through public debt to ensure more capital and finance is availed to companies to help expand operations, more research, more market reach among other constructive extensions.

5.5 Study Limitations

According to the study, no analysis of any internal and external SWOT variables beyond the control of the firms that affect their financial performance was done. Perhaps, competition, effectiveness of the companies, management decisions and operating efficiency and other factors could have influenced performances in finance.

5.5 Further Studies Suggestions

Considerations need to be prioritized in the following suggested areas that directly affect the financial operations of NSE listed companies in Kenya. They include; strengths, weaknesses, opportunities and threats. Besides, it will analyze critical factors that managers ought to consider in order to make their decisions on organization strategy to yield successful results.

Further studies should also include other macro-economic variables to establish their contribution whether positive or negative on Kenyan NSE listed companies in their financial performance. The present research covers a scope of only 10 years. For more comprehensive results, it can be extended to a longer period of time

REFERENCES

Alzomaia, T. (2014). Capital structure determinants of publicly listed companies in Saudi Arabia.

Bacchetta, P., & Van Wincoop, E. (2013). On the unstable relationship between exchange rates and macroeconomic fundamentals. *Journal of International Economics*, *91*(1), 18-26.

Baghai, R. P., Servaes, H., & Tamayo, A. (2014). Have rating agencies become more conservative? Implications for capital structure and debt pricing. *The Journal of Finance*, *69*(5), 1961-2005.

Baldwin, R., & Krugman, P. (1989). Persistent trade effects of large exchange rate shocks. *The Quarterly Journal of Economics*, *104*(4), 635-654.

Baral, K. J. (2004). Determinants of capital structure: A case study of listed companies of Nepal. *Journal of Nepalese business studies*, *1*(1), 1-13.

Bera, A. K., Jarque, C. M., & Lee, L. F. (1984). Testing the normality assumption in limited dependent variable models. *International Economic Review*, 563-578.

Brajer, V. (1992). Empirical inflation models in developing countries: sensitivity to the definition of inflation. *The Journal of Development Studies*, *28*(4), 717-729..

Cai, J., & Zhang, Z. (2011). Leverage change, debt overhang, and stock prices. *Journal of Corporate Finance*, *17*(3), 391-402.

Checherita, C. (2010). The impact of high and growing government debt on economic growth an empirical investigation for the euro area. *Journal of Finance* 1 (4) 102-120.

Cook, Douglas O., and Tian Tang (2010). Macroeconomic conditions and capital structure adjustment speed. *Journal of corporate finance* 16.1 73-87.

David, O., Umeh, J. C., & Ameh, A. A. (2010). The effect of exchange rate fluctuations on the Nigerian manufacturing sector. *African journal of business management*, *4*(14), 2994-2998.

Dornbusch, R. (2013). Expectations and exchange rate dynamics. *Journal of Political Economy*, *84*(6), 1161-1176.

Engel, R.J., & Schutt, R.K. (2014). *Fundamentals of social work research*(2nd ed.): thousand oaks:Sage Publications.

Fischer, S. (2003). The role of macroeconomic factors in growth. *Journal of monetary economics*, *32*(3), 485-512.

Frank, Murray Z., and Vidhan K. Goyal. (2009).Capital structure decisions: which factors are reliably important?*Financial management* 38: 1-37.

Ghasemi, A., & Zahediasl, S. (2012). Normality tests for statistical analysis: a guide for non-statisticians. *International journal of endocrinology and metabolism*, *10*(2), 486.

Khrawish, H.A. (2011) Determinants of commercial banks performance: Evidence from Jordan.*International Research Journal of Finance and Economics*.5 (5), 19-45.

Kiganda, E. O. (2014). Effect of macroeconomic factors on commercial banks profitability in Kenya: Case of equity bank limited. *Journal of Economics and Sustainable Development*, *5*(2), 46-56.

Köksal, B., & Orman, C. (2015). Determinants of capital structure: evidence from a major developing economy. *Small Business Economics*, *44*(2), 255-282.

Levin, A. T., Natalucci, F. M., & Piger, J. M. (2004). The macroeconomic effects of inflation targeting. *Review-Federal Reserve Bank of Saint Louis*, *86*(4), 51-8.

Majok, E. (2015). Effects of exchange rate fluctuations on financial performance of commercial banks in Kenya. *Universitas of Naibori*.

Modigliani, F and M. H. Miller (2012). Corporate income taxes and the cost of capital; a correction.*American Economic Review*, 53

Mokhova, N., & Zinecker, M. (2014). Macroeconomic factors and corporate capital structure. *Procedia-Social and Behavioral Sciences*, *110*, 530-540.

Morawakage, P. S. (2013). Relationship between macro–economic variables and stock market performance of Colombo Stock Exchange.

Muthama, C, P., & K, E. (2013). An experimental analysis of macro-economic influences on corporate capital structure of listed companies in Kenya.*Journal of Finance and Investment Analysis*, *2*(2), 41-62.

Mwangi, L. W., MK &K.K. (2014). Association between capital structure and performance of non-financial companies listed in NSE, Kenya. *Global Journal of Contemporary Research in Accounting, Auditing and Business Ethics*, *1*(2), 72-90.

Myers S. C. (2011). Capital structure, *Journal of Economic perspective,* 15.

Ngugi, J. K. (2014). Influence of intellectual capital on the growth of SME in Kenya.

Omondi, M. M., & Muturi, W. (2013). Factors influencing the financial performance of NSE listed In Kneya. *Research Journal of Finance and Accounting*, *4*(15), 99-104.

Olweny, T., Shipho, T.M. (2011) Influence of banking market aspects on the profitability of commercial banks in Kenya. *Economics and Finance Review*, 1(5), 1-30.

Pradhan, R. S., & Pandey, A. (2016). Bank specific and macroeconomic factors on low performing loans of Nepalese commercial banks.

A skill Stockman, A. C. (1981). Expected inflation and the assets stock in stable economy. *Journal of Monetary Economics*, *8*(3), 387-393.

Thompson, C.G., Kim, R.S., Aloe, A.M.& Becker, B.J. (2017). Changing Inflation and its indication.*Basic and Applied Social Psychology,39*(2), 81-90.

Umoren, G. E., & Babajide, A. A. (2017). Effect of Macroeconoic variables on Capital structure criteria in Nigerian Companies. *International Journal of Operational Research in Management, Social Sciences & Education*, *3*(1), 165-183.

Zein, A., & Ångström, P. (2016). Are there times when Macroeconomic factors affect cap[ital structure in an Investiment? A study of listed non-financial Corporations in Sweden.

APPENDICES

APPENDIX I: Data Collection Form

	Year	Inflation Rates	Exchange Rates	Public Debt	Interest Rates	NASI
Q1-Q4	2008					
Q1-Q4	2009					
Q1-Q4	2010					
Q1-Q4	2011					
Q1-Q4	2012					
Q1-Q4	2013					
Q1-Q4	2014					
Q1-Q4	2015					
Q1-Q4	2016					
Q1-Q4	2017					
Q1-Q4	2018					

Agricultural	Eagles ltd Kapchorua Tea Ltd Kakuzi Ltd Limuru Tea co. Ltd Rea Vipingo Plantations co. ltd Sasini Ltd Williamson tea ltd Kenya
Automobiles and Accessories	Car and General(K) ltd
Construction	Athi river and Mining Crown Cement Bamburi Cement Portland Cement
Telecommunications and Technology	Safaricom Ltd
Commercial services	Sameer Africa Express Ltd
Exchange Traded Fund services	NewGold Issuer (RP)Ltd
Manufacturing	British American Tobacco East African Breweries Mumias Sugar
Banking	Stanbic Holdings Barclays Bank Ltd I&M DTB NIC Bank Equity Bank Ltd KCB Ltd B Group Standard Chartered(Kenya0
Energy and petroleum	Total Kenya Kengen Ltd Kenya Power and Lightening Company Umeme Ltd
Investment services	Nairobi Securities exchange
Commercial Services	National Media Group Ltd Sameer Africa Plc Express Ltd Standard Group Nairobi Ventures Ltd Longhorn Publishers
Investment	Centum Home Afrika Ltd Trans-century Ltd
Real Estate	Stanlib Fahari I-REIT

APPENDIX III: Data

Public Debt=Annual debt acquired.(External debt and internal debt).Data acquired from CBK website.

Data collected

Year	Quarters	Inflation rate	Exchange rate	Interest rate	Public debt	NASI
2008	Q1	6.13	62.85	6.46	869823.3	97.6
	Q2	9.86	64.69	7.61	870578.7	106.77
	Q3	13.02	73.22	6.06	882287.9	99.36
	Q4	16.27	77.71	6.36	972899.3	73.83
2009	Q1	17.07	80.43	4.62	988372.8	61.95
	Q2	15.11	87.43	4.01	1053490	61.3218
	Q3	12.41	74.16	3.43	1075596	69.02035
	Q4	9.24	75.82	3.66	1177941	68.84477
2010	Q1	7.03	77.33	2.43	1177274	79.70286
	Q2	5.43	81.97	2.41	1225720	90.89952
	Q3	4.4	80.78	1.84	1298926	97.3439
	Q4	3.96	80.75	1.41	1320138	99.63464
2011	Q1	4.49	82.99	1.66	1396896	96.54915
	Q2	6.88	89.86	5.73	1487111	93.0759
	Q3	10.18	99.83	5.75	1564109	80.10092
	Q4	14.02	85.07	17.75	1485488	69.13758
2012	Q1	16.45	83.06	13.78	1564109	70.59884
	Q2	15.97	84.22	17.6	1633380	78.02059
	Q3	13.29	85.28	8.42	1724654	84.23545
	Q4	9.38	86.03	6.39	1793238	91.28498
2013	Q1	6.33	85.64	9.35	1794611	107.0134
	Q2	4.56	86.64	7.48	1894191	122.1705
	Q3	4.75	86.65	7.11	2057429	122.6752
	Q4	5.72	86.31	7.95	2111552	134.4156
2014	Q1	6.39	86.44	6.92	2171586	140.6475
	Q2	7.05	87.63	6.46	2370256	149.0456
	Q3	7.19	89.28	8.39	2348702	156.1995
	Q4	6.88	90.6	8.29	2478445	161.7739
2015	Q1	6.663	92.34	8.08	2675234	169.8411
	Q2	6.63	98.64	9.7	2829058	167.4707
	Q3	6.29	105.3	11.5	2938495	150.7882
	Q4	6.58	102.3	7.23	3155763	142.3291
2016	Q1	6.88	101.3	4.31	3312106	142.4555
	Q2	6.46	101.1	10.04	3618727	145.5343

	Q3	6.5	101.3	10.36	3703574	138.5089
	Q4	6.3	102.8	1.04	3827298	136.3382
2017	Q1	6.76	102.9	7.23	4104322	125.5027
	Q2	8.13	103.5	4.13	4406446	141.7095
	Q3	8.4	103.1	7.23	4483034	161.566
	Q4	7.98	103.1	7.75	4569630	165.4954
2018	Q1	6.89	101.2	9.95	4884081	180.94
	Q2	5.2	101	6.16	5639035	179.76
	Q3	4.53	100	4.77	5461168	167.57
	Q4	4.69	103.03	9.00	5272503.04	144.88