THE EFFECT OF MONETARY POLICY ON INFLATION IN KENYA

BY

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DECLARATION

I declare that this is my original work. This work has not been presented for award of a degree in this university or any other university, neither has part of this work been reproduced, reprinted or made available to others in any form.

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This project has been submitted for examination with my approval as the supervisor.

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DEDICATION

This project is dedicated to My Lovely wife Susan Yiamiti Kisaka and kids, Lemashon, Kitayion, Malanto and Seneyia , my source of hard work, hope, kindness and patience. Their unmatched love, advice and unity gave me the moral and financial strength to complete my studies.

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ABSTRACT

Over the years central Bank of Kenya (CBK) has utilized monetary policies to bring about stabilization on inflation and output by use of reserve money simultaneously and Central bank rates (CBR). It is however very important that a central bank should respond to the problem of monetary policy transmission mechanism. With respect to monetary policy shocks a monetary authority or central banks needs to know the elasticity of price rises in order to decide the amount by which value of the policy instrument should change so as to get hold of a preferred amount of change in inflation. The monetary authority should also be familiar with the standard amount of time taken for the full impact of a monetary policy shock on inflation to become visible. In cooperation with information of the suppleness, this it possible for the central bank to take timely measured policy actions aimed at managing inflation.

The objective of this project was to establish the effects of monetary policies on inflation in the economy. To achieve this objective, a descriptive research design that covers a time series of five (5) years was adopted. The population of interest in this study consisted of monetary policy aggregates used by central bank over the study period. The study used secondary data obtained from the KNBS for the years 2009-2013.The variables of interest i.e. inflation rates, reserve ratios, CBR rates were entered into statistical package for social sciences and analyzed to examine their relationship and hence achieve the research objective.

It was noted that there is a relationship between monetary policies and inflation. Evidence from the statistics showed that the coefficients of central bank rate are positive while that of reserve ratio is negative. This implies that there is a negative relationship between inflation rate and reserve ratio requirement while that of central bank rate is positive. The relationship can be used to formulate a targeted policy towards attaining acceptable level of inflation set at 5% in Kenya.

The study recommends that in order for the country to realize a stable rate of inflation the central bank should focus on Reserve ratio requirement and develop best practices towards its full implementation. However the use of multiple monetary policy tools is therefore necessary so as to eliminate the bias related to period under consideration.

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

ARMA	Auto Regressive Moving Average.
CBK	Central Bank of Kenya.
CBR	Central Bank Rate.
CPI	Consumer Price Index.
GDP	Growth Domestic Products.
IS	Investment and Saving.
IT	Inflation Targeting.
KNBS	Kenya National Bureau of Statistics.
LM	Liquidity Money.
MPAC	Monetary Policy Advisory Committee.
NBFI	Non Bank Financial Institutions.
OMO	Open Market Operations.
RRR	Required reserve ratio
SPSS	Statistical Package for Social Sciences.
UK	United Kingdom.

CHAPTER ONE
INTRODUCTION

1.1. Background of the study

Monetary policy, specifically unanticipated financial shock, has a large impact on the economy, even if it is only in for a short period. Financial policy on prices and real economic activities lies at the essential part of macroeconomic presumption and at the heart of monetary policy. This as cash, being the most acknowledged standard of exchange, has turned out to be the most significant product in current economies. So, policy makers must appreciate the timings and effects of their policies on the economy in order to successfully conduct a monetary policy.

The behavior of the policy usually depends on open market operations and reserve ratios, to to bring change into intermediate targets such as interest rates or a monetary aggregate, in the chase of a preferred price rises or production target. Transformation in monetary policy is dispersed throughout the economy via a transmission mechanism, usually called the monetary transfer mechanism. Experiential examination of the effects of monetary policy has treated the monetary mechanism itself as a black box (Bernanke and Gertler, 1995).” The analysis of developing economies shows they conduct monetary policy via interest rate manipulation.

Achieving and preserving a stable and low price, in cooperation with satisfactory liquidity in the market facilitate increasing levels of savings locally and private investment. This however leads to improved employment opportunities, higher real incomes and better economic development. CBK (2010) indicates that Monetary policy of central bank Kenya is intended to give support to the Government’s preferred financial activity and enlargement in addition to employment formation through achieving and maintaining a low and stable inflation. This study sought to evaluate the effects of the monetary policy interventions given the current financial reforms and exchange rate liberalization in Kenya.

1.1.1 Monetary Policy

The CBK has fundamentally used a monetary-targeting outline to pursue the price increases objective since its establishment in 1966. Similar to many central banks especially in developing economies, the responsibility of formulating and implementing monetary policies is in Kenya is given to Central Bank of Kenya (CBK). The responsibility is directed at achieving and preserving one of its two major objectives that is: being to maintain a sound market-based financial system and low price rises (inflation). The utilization of this monetary policy strategy is always based on the guess that money matters, that the behavior of financial collections has a major bearing on the performance of the economy, mainly on price rises.

As established by econometric studies done to examine the relationship amid price rises and pecuniary growth there is a strong relationship between price increases and money supply in Kenya, Mwega, (1990), Durevall & Ndungu, (1999). In order to boost effectiveness and efficiency in providing objects in altering financial and economic environment Central Bank of Kenya has been refining its pecuniary strategy operations and procedures. The radical changes effected included the shift towards using indirect instruments of monetary control by introducing open market operations (OMO) and by liberalizing interest rates and the shilling exchange rate. Therefore, following the persistent failure of pecuniary strategy to deliver on its inflation objective in the late 1980s and the early 1990s, the Central Bank of Kenya (CBK) significant effected changes to financial policy completion procedures, including the introduction of new tools.

Financial policy structure has turn out to be more precise in respect of price rises pursuant to the instruments used in achieving it. Before then, pecuniary strategy in Kenya were carefully utilized as tools of economic administration as of the unescapable controls covering almost all economic activities. Monetary policy, under the regime of direct controls, was more preoccupied with reacting rather than driving financial developments. Control was then the trendy methodology to economic plan management in most emerging countries. This was of course not only one of its kinds to Kenya;

1.1.2 Inflation

Jalil (2011) defines inflation as a uninterrupted upward change in the price level, constant over a period of time. Inflation may be brought out by an uninterrupted intensification in the supply of money, an unceasing decline in the demand for money, or a mixture of the two. Government might amplify the money supply continuously. If the demand for money were fixed, then the price level would grow at the same rate as money supply. Rising real incomes usually cause the demand for money to rise over time. This tempers the inflationary effect of money supply growth, and so the price level typically grows more slowly than the money supply. In any economy inflation is undesirable. According to Jalil (2011) a high rate of supply growth of money is predictable to bring about a high rate of price rises. This is due to the costs of economy linked to price rises. When price rises are high, noninterest- bearing checking accounts and currency are unwanted since they are continually decreasing in buying power. There are also unfair gains and losses. Ludi and Ground (2006) says that there is tax change, for example, when price rises rages, the actual value of these interpretations are lesser than it should actually be.

According to Rasche (2005) when inflation hits, some populace lose and some gain for instance those whose pensions are fixed in shilling terms lose. People see price rises as an analyses is of the essential government obligation to deliver an unwavering unit of purchasing power. Some individuals might fail to understand the relation amid their personal earnings and escalating prices. To them, higher prices represent diminished real income. The marginal social cost of unemployment is higher when unemployment is high. Since work supply is inelastic, the marginal value of time in other uses falls if unemployment rises, and rises if unemployment falls below normal levels. Rasche, (2005) argues that the economy is better off with stable output at optimal employment levels as against fluctuating output and employment.

Measures of Inflation most well-known are the CPI which processes the GDP deflator and consumer prices which measures price increases in the whole of the domestic economy. Generally, rate of price increases is termed as the rise in prices calculated against a standard level of purchase power over a long period of time. From the history between 2005 and 2012, Inflation Rate in Kenya averaged 12.8% reaching an all-time high of 31.5% in 2008 May and

a record low of 3.2% in 2010October. The rate of price rises in Kenya was recorded at 10% in 2012June (the CBK report, 2014).

1.1.3 Monetary Policy and Inflation

The procedure by which the monetary authority (central bank) manages the supply of money to achieve special objectives including: conserving an exchange rate, restraining price increases or deflation, achieving full employment and progression of economy is called monetary policy. Monetary authority does these using apparatus such as; discount window operations, open market operations, and reserve ratios. The process where the monetary authority acquires or disposes securities in the secondary market in order to attain a pleasing level of bank treasury is known as an open market operation. According to Ikhide & Alawode ,(1994) money stock modifies itself to the anticipated level, as the law of supply and demand proceeds consequence to determine the cost of credit (interest rates) in the money market.

Abakah (2009) did a study in Ghana on the influence of monetary policy on stock prices. The study examined the long and short-run associations linking financial policy and stock prices as well as some selected variables of macroeconomic including: inflation and exchange rates for the period 1990-2006 in Ghana using time series analysis. This study employed the Johansen's multivariate Cointegartion technique (Johansen and Juselius, 1990) in conjunction with the Granger causality test used. The study also monthly data time series on all the variables and to examine the possible long and short-run effects among the investigated series in addition to the direction of these effects. The Dickey-Fuller (ADF) test was used to the otherwise of the series. In recent years monetary policy has developed significantly due to the governments urge to manage inflation and to endorse growth of economy. Monetary policy depended largely on direct controls in the 50's and 60's. Then, the government frequently set restrictions on the quantity of cash that monetary institution could let somebody use, and mortgages were efficiently rationed. Individuals and banks had severe restrictions on the amount they could transform into other currencies. Bank could put forth some control on fiscal institutions by what 'moral suasion'.

Discount window operations (DWO) is where the monetary authority (central bank) provides (on overnight basis at punitive rates) secured short term loans to commercial banks thus

limiting banks to seek out financial support in the market yielding to monetary authority finances individual as a last resolution. The interest rate that the monetary authority /central bank charge on the loans it lends on to the commercial banks is known as Discount rate. The monetary policy board is the organ of the monetary authority (central bank) of Kenya that is responsible for formulating monetary policy. Monetary policy advisory committee (MPAC) was replaced by the monetary policy committee created through a gazette notice 3771 on 30th August 2008. It this organ sets the interest rates at which the CB charges on mortgages to commercial bank. This rate is known as central bank rate (CBR).

1.1.3 Monetary Policy & Inflation in Kenya

According to Kinyua (2001) the 1st ten years after 1963 year of self-government is assumed to have been inactive in the behavior of monetary policy in Kenya. This is due to lack of involvement was essential in surroundings of 8 percent gross domestic product (GDP) growth and below 2 percentages in rate of inflation. The primary main macroeconomic inequity came about in the 2nd decade in the appearance of oil disaster 1973and the 1977/78 coffee boom. This was when the system of fixed exchange rate (FER) with the Britton Woods System in 1971 had just collapsed.

Between 1960's and 1980's, monetary policy was done via: credit ceilings for commercial banks, liquidity ratio, and cash reserve ratio and interest rate controls. The 90's came with the economy being liberalized whereby rate of interest management were detached and rate of exchange made supple. This ushered in a new period in monetary policy where the main tool was open market operations. During that time high rates of interest and widening interest increase, reserved the rising monetary investments and plummeting cost of capital. CBK utilized incidental tools to pacify price rises. In an ambiance of unsteadiness and great doubt competing against twofold digit rate of inflation impelled on by too much supply of money and lodging of distressed banks. The CBK Act was amended in 1996. Kinyua (2001) argues that this permitted the central bank of Kenya to pursuing wide-range of funds as the main idea of stock for money. Central bank of Kenya operates under a monetary policy programming framework (MPF). For the net foreign assets (NFA) the CBK set an upper limit for set aside money and a ground. This remained the foundation of pecuniary strategy which served till the

introduction of the CBR. The utilization of monetary targeting as at present used by the central bank of Kenya has also been condemned. Financial cumulative pursuing policy is extra effectual with the existence of a steady requirement for cash association reliant on general price level and fiscal activity.

1.2. Research Problem

According to Abakah (2009) one would anticipate the financial system at large is well established considering the number of years that the CBK was well-known and the considerable capital and endowment on hand in the state. However, when compared to other developing countries, one can assert that Kenyan economy at large has not been sufficiently lively. In Kenya, poor implementation of past financial policies, political instability, ethical problems and insufficiency of database have been recognized as the major problems.

The central drive of this research paper was to assess the effectiveness of the central bank of Kenya (CBK's) pecuniary strategy in controlling inflation over the years. This goes all the way in gauging the degree to which the economic strategies have affected savings investment and advancement process in Kenya.

According to Butter (1983) central bank can even contain a most favorable combination of instruments which lies between the monetary aggregates and interest rate which would be superior to either of the instruments used separately. Money supply drives inflation (Ndung'u, 1944). Alterations in pecuniary strategy lead to modifications in the price adjustment frequency and thus variations in constraints of the cost-amendment process (Ball et al, 1988). Ndung'u (1944) also postulates that there is only a short run association between monetary aggregates and interest rate divergence from balance in the money market and do not enter the model thus money does not establish in the long run the price level.

Kenya, in the midst of other sub-Saharan Africa states, pursued self-defeatist pecuniary strategy (Baffie, 2003). As the states strove (using open market operations) to take up surplus liquidity rate of interest differentials increased thus attracting even better net capital inflows.Starting the vicious circle all over again these net capital inflows entailed additional financial tightening. Pollin and Heintz (2007) in their study on the role of monetary policy,

inflation control and the exchange rate established that the present instruments used in Kenya to address monetary challenges are insufficient.Ndung'u (1996) raised similar concerns in which a policy of "not engaging in anything" in the face of periodic investment influxes was acclaimed. CBK committed to the five percent price raises object and stiffens regulatory strategy when obligatory.

The RBM reacted to price rises and, fairly, to the rate of exchange in setting the monetary base (Kwalingana, 2007); Kwalingana (2007) also states that the RBM reacted not to the production gap in siting the financial base; and determination of Bank rate was mainly prejudiced by the yearning to approved disequilibrium rather than economic progresses (Kwalingana, 2007). Particularly, though the Bank rate was determined in this slender way given the monetary base, it would be a high-quality present pointer of the posture of strategy.

Most of the studies analyzed above were generalized to the various monetary policy variables to be used on attaining a targeted inflation level of 5% without thorough scrutiny on which of them are the most effective to be preferred. My study therefore seek to determine their various impacts to find out on how each of them impacts to the inflation rate and thus rate them on their effective trends.

1.3. The Study Objective

To establish how price increases (inflation) in Kenya is affected by monetary policy

1.4. The Value of the study

The study is be significant to both the local and the international investors who want to make better investment decisions putting in consideration, the impacts of inflation on their returns on investments. The findings of this research is therefore aid the investors in making informed investment decisions.

The main aim of the Kenyan government is to ensure economic stability in the country. With regards to this, the government will want to know the prevailing rate of inflation in the economy to decide on fiscal policy it uses to achieve its target on inflation rates. These findings will enable the government to put in place appropriate measures. Formulation of legislation and making of policies greatly rely on the findings of this research which the

regulator may want to incorporate so as to make proper adjustments and recommendations concerning major macroeconomic policies.

Researchers and academicians want to understand the effect of financial policy on inflation to increase their knowledge base and identify gaps that require further research and instruments that can be used to offer quality research. These findings provide a basis for development of new theories.

The public want to hold their government accountable concerning the real commodity prices brought about by prevailing inflation in the country. These findings therefore give them the relevant information regarding the rate of inflation in the country and to hold central bank accountable for the monetary policy decisions made.

CHAPTER TWO
2.0. LITERATURE REVIEW

2.1. Introduction

The outline of this chapter involves several theories and experiential studies based on the effects of financial policies on price increases. These chapter foremost deals with the review of the theories, empirical studies and lastly review of general literature. Literature on monetary policy is diverse ranging from the development in information technology to linkages between inflation and economic growth.

2.2. Theoretical literature

Here reviewing theoretical description on the conduct of monetary policies and how they relate with inflation is done. These theoretical foundations come from Classical monetarists and the Keynesian economists who formulated the theories of money using its major functions.

2.2.1. Classical theory of monetary policy

The view of classical economists' on pecuniary policy is founded on the amount of money Alfred M., Edgeworth F.Y and Arthur Pigouor, (1992). This model outlines that, an upward shift in the money quantity results to a proportional increase in the price and vice versa. The market for goods unceasingly clear and comparative prices change flexibly to ensure an equilibrium point is reached. Money serves as a unit of expressing prices and values. Money ensures that the exchange of goods and services is mad e possible. Money is unbiased; it does not affect the determination of prices of relative good, real interest rates and aggregate real income. The quantity theory of money is deliberated in terms of equation of exchange.

Where; P shows the price level and y represents the level of current real GDP. M represents money supply which the central Bank can manage and v is the velocity of money in circulation (interpreted as an standard number of items over the cause of a year).

The classical economists accept as true that the economy is at all times at or close the normal level of actual yield. Supposing that y and v are constant, then it must follow that if the central bank were to employ expansionary financial policy, to arise (or fall) in M, the only resulting effect will be to increase (decrease) the price level p, in proportion to the change observed in

M. So to say, expansionary pecuniary strategy only leads to price increases and consequently, contractionary regulatory policy only leads to decrease of price level. Thus, in relation to the stabilization policy, fiscal policy has no influence of any kind on the price level.

The only effect is felt only on the interest rate and real magnitudes. Monetary policy's role is also limited; since it has no effect on the actual side of the economy nevertheless it exercises influence on the price and nominal magnitude. However, the quantity theory has a number of flaws. First, it accepts that production is determined by resources and money not being one of the resources, its change should not change production. Although in actual datum the variation process of regulatory disruption also affect unemployment and not objective costs, it is generally acknowledged that well projected budgetary changes has no effect on unemployment but only affects prices. Secondly, the classical quantity theory presumes that there is a correlation between changes in the amount of money and spending. In such a case, the changes in money supply are the grounds of spending. Opponents of the quantity theory have advocated that this correlation exist since fluctuations in the amount of money in circulation are caused by fluctuations in business doings. In conclusion the quantity theory undertakes that changes in the amount of money in circulation do not alter velocity, an assumption that was criticized by Keynesians, who assumed that variations in money tend to be equalized by alterations in velocity.

2.2.2. Keynesian view of monetary policy

Keynesians believe not in the straight association flanked by the money supply and the amount levels. They scrap the impression that economy is constantly at or near the regular level of real production with the intention that in the exchange equation *y* is considered as static and that the velocity of money in circulation is constant. They believe that expansionary monetary policy lead to boost in the supply of monies available over the banking system which is loanable. This cause rates of interest to go down. With these lesser rates in interest, grow upward giving rise to real output. Pecuniary policy thus affects real output indirectly.

For the reasons above, Keynesians have a tendency to employ less importance on the usefulness of pecuniary strategy and more importance on the usefulness of financial dogma, which they term to have a more direct influence on real GDP. Keynesians arguments are that

price increases is a cost-push phenomenon self-determining of demand pressure up to a state where output reaches its full employment. This illustrates that there be a trade-off between price rises and unemployment and any effort by the regime to minimize redundancy will probably lead to increased price increases. This affiliation was perceived by Keynesians as rationalization of their policy and hence they treated it as a yardstick to which monetary experts should decide on.

2.2.3. The monetary theory

Monetarist (Milton Friedman 1968) is explicitly apprehensive by means of the impending misuse of pecuniary dogma and weakening of the amount level. They rely on the persistent expansionary or contractionary monetarist policies bring about constant instabilities which are purely monetary phenomenon. However, their argument is in favor of a fixed money supply rule as a way of fighting obstinate times of price increases or deflation. Their belief is that the central bank ought to conduct pecuniary plan to keep up with the progression of the economy over time. They therefore believe that pecuniary strategy should serve to cater for escalations in real production without leading to either price increases or decrease.

Assuming price increases is faultlessly projected; labor conventions would reflect it such that normal wages intensifies by the anticipated rate of price increases. Similarly, unexpected rate of price rises would cause unconventionalities in the ordinary rate by decreasing the real cost of labor and other contributions.Thus, the anticipated outcome of inflation is regularly used to quantify the cost of holding money.

Monetarists tend to put much consideration on money and monetary policy. However, Eatwell et al (1991) stated that there is a lot of uncertainty that velocity is persistent to make pecuniary steering necessary. Furthermore, the many alternatives resulting from financial improvements make it challenging for monetary authorities to have defined description of money. The instability between monetary base and the targeted variables are therefore as a result of financial markets developments.

2.2.4. Taylors' Rule

Taylor (1993) technologically advanced imperative and worthwhile pecuniary strategy guidelines. In his guidelines, Taylor outlined that there are sensitive rubrics that alter the interest rate strategy instruments such as repo rate in reaction to variations in individually price increases and lack of employment. This is to say, the monetarist course of action response role portrays the ascending affiliation a mongst the price rises rate and the redundancy rate. Thai is, when the price increases rate rises, a Reserve Bank looking forward to fight price increases will raise interest rates to diminish yield and thus increase the redundancy rate.

2.3. Determinants of Inflation

The core propelling forces are that administration motifs money to fund its shortage; it increases money supply to inspire cumulative claim, or anticipations of greater price increases forces the authorities to put up with ancient price increases. In relation to monetary phenomenon, high inflation is highly related to excess money supply. In many Sub-Saharan countries it becomes difficult for financial experts to regulate price increases even in the presence of a political will, due to fragile established backgrounds, squeaky economic markets and deficient rivalry amid banks. Such environment prompts central banks to want efficient tools to regulate money supply (Mishra, et al., 2010). Missing monetary anchor that ties prices down might set off prospects and create persistent inflation, in exogenous shocks, such as poor produces or energy-price hikes.

In the conventional Keynesian interest rate network, an increased interest rates prompted via the operation of a strategy instrument (such as an increase in the Bank rate) leads to an increase in the cost of capital, decrease in the mandate for credit and a reduction in expenditure on long-lasting goods (including investment), even though leading to increased savings. Bernanke and Gertler (1995) recap two disapprovals on the Keynesian view. Primarily, it lacks the captivating empirical evidence that purportedly sensitive interest mechanisms of summative expenditure are definitely sensitive to the cost of capital. Next, despite the fact that this channel entails that pecuniary strategy should have a robust impact on short-term interest rates than on long-term rates; it is perplexing to note that pecuniary

strategy has enormous effects on procurements of long-lived assets which are most responsive to real long-term rates than real short-term rates.

However, Taylor (1995) advances a model that is meant to portray how pecuniary strategy affects real short-term and real long-term interest rates, and hence real investment, real consumption and real output. An operative channel of interest rate is evident, at least in terms of prompting prices, has been acknowledged for Egypt (Al-Mashat & Billmeier, 2007) and Kenya (Cheng, 2006).

Credit channel reveals efforts to discover whether credit market resistances, such as defective information, might put forth the reliance of the mechanism of transmission. This channel cannot be perceived as a self-regulating or an equivalent alternate to the old-fashioned interest rate view, but "as a set of influences that intensify and promulgate predictable interest rate causes" (Bernanke and Gertler, 1995). Basis of this channel is on the argument that the consequence of financial plan on interest rates is intensified by endogenous changes in the allegedperipheral finance premium (i.e., the section stuck between the cost of publicly raised funds and the cost of privately raised funds). The premium scope is an image of market deficiencies, and a modification in market interest rates as a result of economic plan is certainly associated to a transformation in the external finance premium, hence acknowledgment situations, monetary supply, amounts and productivity. This approach is thus consistent with the monetarist (classical) money supply propositions postulated by the quantity theory of money. Bernanke and Gertler define possibly in two ways: the bank lending channel and the balance sheet channel. The statement of financial position channel maintains a tough monetarist strategy directly dwindled debtors'equilibrium reduces their security for credits and credit-worthiness, and intensifies their outer finance premium. The lesser net value for debtors elevates the confrontational choice problem, but also increases the moral hazard problem, translating to a weakening in advancing for savings disbursements. The advancing channel in banks postulates an interruption in the bank loans supply that are as result of unchangeable pecuniary course of action makes loan-dependent small and medium firms assume extra costs that come with out-sourcing new lenders (Worms, 2001). As a result, there is a direct increase in their external economics premium, a lower level regarding their loaning, and a reduced actual fiscal outcome. Gertler& Gilchrist, (1993, 1994) and Domac,

(1999) provides evidence that support the existence of the credit channels, and consequently the lack of such evidence as portrayed by Christiano*et al* (1996). Kim (1999) provides overt indication to support the advancing channel bank for Korea, but Faverо*et al* (1999) has not been successful in establishing this using cross-sectional data from Germany. On the other hand, De Bondt (2000) locates confirmation of the possible credit network works along with interest rate network in Germany. 13 European countries generally support the credit channel evidence asrenowned by Bacchetta and Ballabriga (2000).In India, Islam and Rajan (2009) established that the loaning channel bank is very operative even throughout the period of powerful economic hassle.

Internationally,the outcome of domestic pecuniary policy is captured by the exchange rate channel, especially after commercial liberalization (Taylor, 1995; Obstfeld & Rogoff, 1995). In changeable exchange rates, an increase in local real interest rates as a reflection of tight monetarist policy leads to credits denominating the home currency more striking than the denominating the overseas currency. Increased net capital incursions that result from the high real interest rate differential also lead to rise of local legal tender, and also a fall in transfers, export-oriented venture and productivity. In addition, an increase makes imports more competitive in the internal economy. These fluctuations that result from exchange rate, have consequences on single outlay (hence cumulative demand), and organizations'speculation behavior, rate permanency and employment. In the US, Lewis (1995), Eichenbaum and Evans (1995) evidenced the pecuniary plan effects on conversion rates as it increased persistently over periods of time after the initial shock. Borker-Neal *et al* (1998) found that pecuniary strategy impacts conversion rates instantaneously. In Egypt, Al- Mashat and Billmeier (2007) have renowned indication that the conversion rate network demonstrates the resilient role in disseminating pecuniary blows to production and prices, and that other chancels are mostly fragile. In Kenya, conversion rate consequence on price increases is also recognized Rotich, Kathanje & Maana, (2007), and in Ghana Ocran, (2007).

One of the macroeconomic challenges faced by governments in our economic times past today is the maintenance of price stability, a subtle factor denoted as price increases in our economic olden times and it is well-defined by economists as an unceasing escalation in

prices. Defining increases in price is an insistently repetitive and substantial intensification in the broad level of charges (Jhingan, 2002), although not each increase in the price levels is considered as price increases. As a result, for an increase in the general price levels to be termed as price rises, that very increase must be unchanged, long-lasing and steady. This increase in the price ought to interferes nearly all products and ought not to be chronological. Demberg and McDougall more explicitly refer to price rises as an ongoing increase in prices as indicated by indices such as the CPI or by the implicit price deflator for Gross National Product (Jhingan, 2002).

Inflation cannot only be explained by high prices, but is an integral part of the current global economic crisis, and crises experienced by each country including; unemployment and the housing crisis and the high transport fares, reduced agricultural yields, disaster, sabotage, smuggling and wars and the fall in the price of local currency in the currency markets, instability and corruption. Fluctuations in oil prices exercise a distinguishing significant effect on inflation all over the world. The hiking of prices for products purchased by our country exerts pressure on the price level, if not counteracted by a re-valuation of the currency, hence leading to a possibly inducing "imported inflation".

Three approaches are used to quantify price increases, which include the Consumer Price Index (CPI),Gross National Product (GNP), implicit deflator and the Wholesome or Producer Price Index (WPI or PPI). Direct measures of inflation are used to refer to the periodic changes in CPI and WPI. According to the three approaches, there is no single one that exceptionally gives the best measure of inflation. Among these three, the CPI methodology inefficient in measuring rates of price increases in Kenya as it is simply and presently available on a defined period basis (CBK, 1991). Price rises can also be caused by the existence of excess collective demand (demand pull inflation). Upward pressure of production costs leads to cost-push inflation, whereas limitations such as inept production, distribution systems, marketing and in the industrious areas of the economy lead to structural inflation (CBK, 1996).

2.4. Review of Empirical Studies

Financial policy's main focus is to warrant that growth in money supply is at par with employment creation, economic progression and a viable balance of payments position without exerting excessive pressure on inflation. There is no concrete documentation of monetary policy. As a result of dynamic environment in which monetary policy operates, there has been a noticeable response of monetary policy approaches to variations in economic policy which have stirred much econometric exploration on the effects of pecuniary policies on price increases. This section has the purpose of reviewing significant empirical studies that monetary policies have on inflation. Limited studies have been done on the effects of pecuniary strategy system variations on the concerned variables, which is a worse scenario for the African countries. In view of this, the study is meant to review closely related literature on the effects of inflation.

According to Milton Friedman and Anna Schwartz (1963) they moved the battle in their influential effort as they acknowledged the time series correlation of pecuniarycombinations with both produce and values. Their explanation regarding this correlation largely represented no unreceptive replies of pecuniary sums to the emergence in the private segment, but in its place presented the properties of pecuniary policy shifts on the private subdivision. It therefore shows that,invention in pecuniary strategy parameters have the possibility for exciting the economy when it is lethargic or curbing it down when it scorches.

According to Gordon (1979) Canada, using Mundels model of steadiness strategy in supple alternated rates were an improved instruments for pecuniary policy control now that they shield proceeds from instabilities in the money fair which ought to be well probable to be great over times as diminutive as a month or less. According to him, he did not come up with a less complicated multiplier affiliation between money supply and reserves. Control through monetary summative would allow money market to steady returns mainly in the case in which investment flows are extremely interest inflexible but would decrease causes on earnings of volatile instabilities in cumulative demand and steadiness of outflows.

Shansuddin and Holmes (1997) conducted both the Co-integration assessment of the pecuniary proposition of price increases and the Granger- causativeness assessment among

the elements to be considered. They came up with a multivariate and univariate time series models to project price increases rate using periodical time series data for Pakistan, from 1972 to 1993 for experimental research. From the results, there was no co-integrating or extended relationship a mongst the parameters in the pecuniary prototype and that there be some indication of Granger-causality in succession from price rises to output progress. Evaluation of the sampled quarterly prognoses of the 1988-1993 periods is made for univariate and vector Auto Regressive Moving Average (ARMA) models of price increases. There was no anticipating correctness of the multivariate ARMA model that was in relation to statistics, different from that of the univariate ARMA model.

Arestis and Sawyer (2002) investigated the approach to financial policy in the Euro zone, US and UK. In their analysis they reviewed the theoretical underpinnings of financial policy and the channels of financial policy. Much emphasis was on the channels through which changes in interest rate may affect the ultimate goals of policy. A major protagonist on the occurrence of the financial policy was made regarding them. That is to mean, the effects of financial policy in the economy are as a result of the alterations in the manner of pecuniary policy along with financial origination and the sprouting behavior of firms.

The findings were that a recognition of the transmission channels means that there is a long and unsteady chain that emanates from reserve bank discount rate to the ultimate target of the rate of inflation. In addition, affiliation between rate of exchange and the rate of interest articulated in the interest rate uniformity approach have limits on the degree to which domestic interest rate can be used to give direction to the domestic level of aggregate demand and inflation. The results pointed out to a relatively fragile result of interest rate changes on inflation and advocated that based on their results, monetary policy had long-term effects on real magnitude. This however, does not easily fit with the speculative basis of the new financial policy approach.

Cecchetti and Groshen (2000) realized that the USA encountered mutually real and normal blows. Amount as well as remunerations is inflexible in response to pecuniary policy deviations. Their outcome was on how prime financial policy is influenced by inconsistencies observed in combination of blows an economy goes through and stringencies it portrays which explains the importance of financial policy. They made it clear that blows can be primarily real, touching on relative prices, or principally nominal- moving general price level.

These jolts may also be big or small, recurrent or infrequent. While others are asymmetrical, restricting decreases as compared to escalations and hence the implications for monetary policies are diverse.

The findings by Mburu (2012) suggests that variations in money supply are the predominant factors of changes in inflation, as the coefficient of change in money supply is highest at 41%, which was unswerving in regard to the monetarists theory that the effect of an expansionary pecuniary policy on an economy operating at optimum is inflationary in nature. The resulting information had it that the rate of interest variance follow closely per alterations in exchange rate being lastly a significant variable with a coefficient rate of 21%. Using the error correction model and granger causality test he found that changes with regard to money supply, granger cause change in prices and those changes in exchange percentage granger cause changes in supply of moniess well as in interest proportion. This researcher however failed to find direct causality between interest rate and prices.

However this contradicts Ndungu and Duravell (1999) who realized that exchange rates, foreign prices and trade terms affect prices on long-term basis while interest rates and money supply have short term effects. Nyamongo et al (2011) in their paper on asset values and financial policy in Kenya, found out that while effects of financial policy on stock costs instability don't last for long, this volatility in the stock market prices creates unsteadiness in GDP and inflation and that the asset price channel of financial transmission mechanism in Kenya is not convincing.

Adam et al (2010) argues that inflation is not one of most governing elements of money contrary to evidence by most researchers. Moreover, results suggest that interest rate shock temporarily reduced real output for the first 4 months and reduces money demand / supply and inflation perpetually. There is a significant and permanent reduction in the headline inflation as a result of monetary tightening and hence interest rate channel is operational in Kenya. The author noted that repo rate is hypothetically more valuable as a policy implement associated with reserve money. This was because it's in the main self-driven and henceforth additional exogenous variable as compared to reserve money.

2.5 Summary of Literature Review

There are areas where there is discrepancy when it comes to macroeconomics and the conduct of financial policy in an economy, as well as conundrums as to how the economy operates and how financial legislators ought to seek to realize their culminations. Despite the large number of central banks everywhere in the world that have embraced a recognized inflation target, it is not universally meaningful. Having a target on inflation has imposed charges that it does not pay attention to economic objects other than inflation. To report on the issue of financial policy significance to the delinquent of inflation, there is need for a suitable context that serves as the focal point in order for an understanding of the causal interrelationships amongst financial policy instruments and inflation in a Kenyan economy. Several scholars have looked at the use of pecuniary policy implements in refuting inflation. Abaksh (2008) examined the interactions between pecuniary policy and stock costs in the period shorter than a year as well as in period exceeding one year. Use of time series monthly data was employed on all the variables as well as the Johansen's multivariate Cointegartion technique (Johansen and Juselius, 1990) in juxtaposition with the Granger causality test to inspect the likely long-run and short-run effects among the considered series as well as the bearing of these effects

Totonchi (2011) studied macroeconomic theories of inflation by attempting to evaluate and explore the contra and corresponding theories of inflation. It seemed that inflation is the optimal result of intellectual dynamic interactions of these six groups of expounding influences. This implies that inflation is always and everywhere a macroeconomic and organized occurrence. Rasche and Williams (2005) studied the Effectiveness of Monetary Policy. Their analysis addressed changing views of the role and effectiveness In macroeconomics various theoretical models as stated in the literature have been developed on the conduct of pecuniary policy over the years. The emergence of the classical Fishers quantity theory of money has emanated to a lot of debate. It suggests the impartiality of money in the economy and subsequently ignores involvement by governments in the markets. The Keynesians did not agree with the classical proposition. They embraced the Philips idea of the trade off relation between inflation and unemployment which they see as justification of their policies. They treated it as a menu from which the monetarists (Friedman, 1966) placed some doubt of the existence of the trade-off hypothesis. Instead they introduced the idea of rational expectations. Most researchers especially in Kenya has focused on identifying

the instrument that central bank should employ in targeting inflation. Our study therefore seek assess the effectiveness of interest rate and reserve money monetary policy strategies towards attaining a targeted inflation level of 5%.

CHAPTER THREE

3.0. RESEARCH METHODOLOGY

3.1. Introduction**.**

In this section the research design that was used in the study was outlined. The chapter explained the study location and described the tools for data gathering and analysis. The section also developed the methodology for determining the effectual choice for an inflation targeting monetary policy tool.

3.2. Research design.

The researcher adopted a descriptive research design. Descriptive plan explains the connection stuck between two or more variables (Mugenda, 2009). In this study the research design established there is an association between monetary policy and inflation. The rates of inflation values over financial yearly for period between 2009 and 2013 were used as a adequate gauge of economic parameters. The research then would analyze the data to estimate the effectiveness of policy in targeting inflation. For that matter, conclusions are drawn on the basis of the entire period of the study. It involves taking repeated measures over time.

3.3. Population

In this study thepopulation included the inflation rate and monetary policy variables for the financial year 2009 to 2013.

3.4. Sample.

The sample frame for this study focused on the effects of monetary policy variables on inflation rates in Kenya over the annual period of 2009 to 2013. This period has been selected for the following reasons: Data availability and accessibility, the data is up to date and reflects current economic situation, past studies used five year period to establish consistency.

3.5. Data collection.

The study utilized secondary data. This source of the data was GOK publications including yearly financial plan and monetary estimates, CBK twelve-monthly reports, Economic Survey of Kenya and the Treasury.

3.6. Data analysis.

The data collected for the study were analyzed using a multivariate regression model. The dependent variable in this study was inflation rates whereas the independent variables were the central bank rate and the reserve requirement ratio.

3.8. Data analysis model.

The following regression model was used to analyze the data:

Y=**Error! Reference source not found.**+ **Error! Reference source not found.**+ **Error! Reference source not found.**+**Error! Reference source not found.**ε ;

Where; **Y** Represents inflation rate, $\mathbf{X_1}$Represents the central bank rate, X_2 Represents the reserve ratio, **ε** Represents the Error, **Error! Reference source not found.** Represents the intercept, and $\beta_{0\ and}\beta_1$ Represents the coefficients of the independent variables

Monetary policies' impact on price rises rate is determined by the magnitude of the coefficients of both the central bank rate and reserve ratios. In order to test for the significance of the predictor variables, their coefficients are computed by use of SPSS thestatistical package. The significance of the coefficients range from 0.1 to 0.9 whereby the coefficients closer to 0.1 indicates less impact and those close to 0.9 indicate greater impact. The sign of the coefficients of bank rate and reserve ratio on the model above indicates proportionality between monetary policies and inflation. Positive coefficient indicates direct proportionality whereby contractionary monetary policy leads to an increase in inflation rates. Negative coefficient indicates inverse proportionality whereby contractionary monetary policy leads to a decrease in inflation rates.

CHAPTER FOUR
DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

The study objective was to establish the monetary policies impact on rate of inflation. Data was analyzed by use of SPSS and the results were as shown on the tables below.

4.2. Data presentation

Table 4.2.1 Analysis for the Year 2009-2013

The table presented below represents a five year annual inflation rates, central bank rates and the reserve ratio requirements from the year 2009 to the year 2013 study period.

YEARS	INFLATION RATE	CENTRAL BANK RATE (%)	RESERVE RATIO (%)
2009	6.58	6.18	6.61
2010	3.97	6.13	23.33
2011	13.98	6.65	14.71
2012	9.08	10.53	12.68
2013	4.75	8.12	15.25

Source: (KNBS, 2016)

The output shows the number of year for the study was five that is from year 2009 to year 2013. As per the central bank average annual economic indicators the table shows the maximum inflation rate at 13.98% and a minimum of 3.97%. The maximum and minimum CBR was 10.53% and 6.23% respectively. The Reserve Ratio Requirement which is the money that commercial banks must deposit at the central bank was at a maximum of 15.25% and a minimum of 6.61%.

Table 4.2.2 Summary of Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Kurtosis

	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error
Rate of Inflation	5	3.97	13.98	1.80567	4.03759	.699	2.000
Central Bank Rate	5	6.13	10.53	.83381	1.86445	1.266	2.000
Reserve Ratio Requirement	5	6.61	23.33	2.68457	6.00289	1.582	2.000
Valid N (listwise)	5						

Source: Research data

The table above shows the number of year for the study, the maximum and minimum rates for the variables within the study period and their standard deviations.

Table 4.2.3. Summary of the Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95% Confidence Interval for B	
		B	Std. Error	Beta	T	Sig.	Lower Bound	Upper Bound
1	(Constant)	9.057	14.061		.644	.586	-51.444	69.558
	Central Bank Rate	.169	1.481	.078	.114	.920	-6.206	6.543
	Reserve Ratio Requirement	-.183	.460	-.272	-.397	.730	-2.162	1.797

a. Dependent Variable: Rate of Inflation

Source: Research Data

Table above presents the coefficients of the variables, the significance of those coefficients and the standard error term. As per the SPSS generated table 4.2.3, the equation, Y=**Error! Reference source not found.**+ **Error! Reference source not found.**+ **Error! Reference source not found.**+**Error! Reference source not found.** **ε** becomes;

$Y= 9.057 + 0.169X_1 – 0.183X_2 + 14.061$

The results pointed out that there is a weak relationship between inflation rate and central bank rate. This relationship was positive. This indicates that the central bank cannot achieve its target of lowering inflation by relying only raising or lowering the central bank rate.According to the findings a –VE relationship was established between inflation rate and the required reserve ratio. This suggests that the central will be able to effectively control the inflation rates in the market through the increasing or lowering the reserve ratio requirement commercial banks are supposed to hold in the central bank.

Table 4.2.4: Analysis of Variance statistics for 2009-2013 data

The table below presents the relationship between dependent variables and independent variables

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.633	2	2.816	.095	.914[a]
	Residual	59.576	2	29.788		
	Total	65.209	4			

a. Predictors: (Constant), Reserve Ratio Requirement, Central Bank Rate

b. Dependent Variable: Rate of Inflation

Source: Research Data

The researcher used α at 91.4% or 0.914 significance level. This significant statistics is the P-values. When P-value is (<) the chosen significance level of (p=0.914), the P-value will thus be considered as significant.

Table 4.2.5: Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.294[a]	.886	-.827	5.45783	.086	.095	2	2	.914

a. Predictors: (Constant), Reserve Ratio Requirement, Central Bank Rate

Source: Research data

Table above presents the R Square (0.886), adjusted R square (-0.827) and standard error of the estimate for the model (5.45783).

4.3. Summary and interpretation of findings

This scientific study was carried out based on the real market economic indicators published by the monetary authority (central bank) to investigate whether there exists a link between the inflation which is the dependent variable and the policy tools; central bank rate and reserve

ratio which are independent variables of the study. The data collected were entered into the SPSS software where descriptive statistics were generated and used to describe this relationship. To achieve the study objective, the researcher used regression analysis to come up with a model which portrays the association between the dependent and the independent variables.

Summary of statistics computed using (SPSS) package were presented in Table 4.2.2. The output shows the number of year for the study was five that is from year 2009 to year 2013. As per the central bank average annual economic indicators the table shows the maximum inflation rate at 13.98% and a minimum of 3.97%. The maximum and minimum CBR was 10.53% and 6.23% respectively. The Reserve Ratio Requirement which is the money that commercial banks must deposit at the central bank was at a maximum of 15.25% and a minimum of 6.61%. The standard deviation for inflation rate, Central bank rate and reserve requirement were 4.03759, 1.86445 and 6.00289 respectively.

Table 4.2.3 summarizes the coefficients of the variables. From the regression model developed holding other factors (central bank rate and reserve requirement) constant the prevailing inflation rate in the economy as the outcome of the two independent factors will be increased by 9.057. The findings analyzed also show that when central bank rate is zero, a increase by a single unit in Reserve requirement will cause a 0.183 decrease in inflation. Furthermore a unit change in Central bank rate keeping Reserve requirement constant will also translate to a 0.169 increase in inflation. The regression model shows that the central bank rate has a positive relationship while Reserve Requirement has a negative relationship with inflation rates. The error term amounts to a positive figure of 14.061 which is the standard error accepted for the factor (independent factors) to be considered effective in controlling inflation.

The results from the coefficients summary indicate that significance of coefficients of Central Bank Rates and Reserve Ratio are 0.920 and 0.730 respectively. The significance of coefficients range is 0.1 to 0.9, whereby the coefficients closer to 0.1 indicate less impact and those close to 0.9 indicate greater impact. It therefore implies that both the coefficients are significant though the CBR portrays a greater impact of 0.920 than the RR which was 0.730.

The deduction on the standard error covers a level of up to 14.061 whereby the CBR has an error of 1.481 and the RR an error of 0.460. The Reserve requirement emerges a superior tool for use since it covers a minimized error term that leads to more accurate results hence preferred.

The sum of squares column in table 4.2.4 shows the amount of the total sum of squares in the dependent variable not explained by the least squares regression line. Thus this regression model leaves 59.579% unexplained. The results show that the researchers used 91.4% or 0.914 as the significant level denoted by the. This means that there are other factors which have not been covered in this study and contribute 8.6%.

The model summary in table 4.2.5 contains R square showing the section of the variability in one series that can be explained by the unpredictability of series in a regression model. The table also shows the R value for the model. Rsquare measures linear association between the predictor and explanatory variables. Rsquare is therefore a statistic providing information on strength of a model. The value of R^2 is between 0 and 100%. The higher value of R squaresignifies a more fitness of a model. If R^2 is 1(100%) the regression line completely fits the data and vice-versa. R^2 is 88.6% implying that there is a higher percentage that the line perfectly fits the data.

Coefficient of determination, R squared explains the change in the dependent variable (Y) can be explained by the change in the self-determining variables (x) or the percentage of variation in the dependent variable (inflation rate) that is explained by independent variables (RR and CBR). RR and CBR studied explain only 88.6%. This therefore means that 11.4% of the relationship between monetary policies inflation rates is explained by other factors not studied. Additional studies should be done to investigate the other factors that affect inflation rates.

The findings further indicate that adjusted overall R-squared was - 0.827 meaning that the regression line explains 82.7% changes in inflation (dependent variable). The changes are caused by the independent variable included in the regression line. Therefore error term or the residual account for the other factors is 17.7%.

It was evident from the study that the two variables are individually significant. Each variable has an effect on Kenyan economy rate of inflation. The CBR has a positive relationship with inflation implying that as central bank rate increase the inflation rate increases. Therefore, the central bank cannot entirely rely CBR since it cannot achieve desired results in targeting inflation. However the relationship between reserve ratio and inflation rates is a negative one. This implies that the central bank can rely on reserve ratio to achieve desired results in targeting inflation.

These findings agree with Poole and Lieberman (1972) who sought to determine the technological feasibility of scheming price rises through the cash stock as contrasting to rates of interest. The study found out that vagueness in financial management by the use of monetary aggregates seemed to magnify fluctuations in interest rates and income. While rates ofinterest control were comparatively simple, management of monetary stock was not. This findings support findings by Maturu (2006). As discussed byMaturu (2006) Kenya uses set aside money as the monetary aggregate in targeting policy operating framework. In spport of the current findings, James et al, (2011) noted that the interest rate tool minimized losses in monetary policy in comparison to the reserve money instrument.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

A report by CBK (2010) indicated that the main goal of Central Bank of Kenya (CBK)'s is coming up with and implementing monetary policy heading for gaining and maintaining constancy in the universal prices levels. The plan is to attain price stability. This means low inflation to maintain the worth of the Kenyan shilling. Central Bank of Kenya forms and carry out monetary policy with the aim of keeping overall inflation at the Government target of 5%. Low and stable inflation rate jointly with sufficient liquidity facilitate higher levels of savings domestically and personal investment in the market. This finally lead to higher real incomes, growth in the economy, and increased employment opportunities.

The current study objective was to establish the relationship between monetary policies and inflation. This was a descriptive study that adopted a time series of five (5) years. The population of interest in this study consists of monetary policy aggregates used by central bank over the study period. The study used data obtained from the KNBS for the years 2009-2013.The variables of interest i.e inflation rates, reserve ratios, CBR rates were entered into SPSS model and analyzed to examine their relationship and hence achieve the research objective.

The coefficients were put into multivariate regression model to determine the relationship between Y and X variables in attaining the desired results of curbing inflation to the targeted level. The regression equation for the period related the inflation rate, central bank rates and reserve ratios. It is evident from the statistics that the coefficients of central bank rate are positive while that of reserve ratio is negative. This implies that a positive relationship between inflation rate and central bank rate was witnessed while a negative relationship between reserve ratio and inflation was established.

5.2 Conclusions

The purpose of the study was to assess the monetary policies on inflation rate in Kenya. The results indicated an association between rate of inflation and monetary policies. Additionally, there is a negative association between inflation rate and required reserve ratio, which implies that, a unit change in reserve requirement would cause inflation rate decrease. The study also shows that the other variable which is central bank rate has a positive relationship and hence cannot be reliable policy to be used by central bank. Implementation of good Reserve ratio requirement by the CBK (policy committee) to attain effective monetary policy has a strong and significant impact in mitigating the inflation in the Kenyan economy. The central bank rate needs to be maintained at a level that will not result in increase in inflation rates.

Regression results revealed that R-Square was 0.886 implying that 88.6% variation from the expected and actual output of dependent variable i.e inflation are explained by independent variables central bank rate and reserve ratios. This shows that the monetary policy plays a greater role in stabilizing inflation rates whereby other factors cover 11.4 %. Reserve Ratio requirement Central bank rate has a noteworthy effect on inflation regulation in the economy. This is evidentby its negative relationship in the multivariate regression model illustrated. It implies that raise in reserve ratio leads to a decline in inflation rates. However there is a between the central bank rate and the inflation rate there is a bpositive association meaning that upward change in central bank rate lead to an upward change in rate of inflation. Therefore the central bank should not entirely rely on the central bank rate in controlling inflation.

The importance of sustainable inflation level is absolutely. All economic sectors recognize that the lasting productivity and achievement of a nation lies in its ability to classify and choose monetary tools that will add to value and make available the economy with the competitive edge. A significant feature of the sustainable price rises level is the being able to classify accurate monetary apparatus. One more fundamental characteristic is the ability to verify whether the financial apparatus that have been acknowledged in fact attach value and lead to economic growth.

5.3 Policy Recommendations

The findings on the relationship between the inflation and the monetary policies can be used to formulate a targeted policy towards attaining acceptable levels of inflation set at 5% in Kenya. A country's monetary policy has a relative influence on the inflation rates which affects economic growth and development. As observed by other researchers it is possible to have an optimal monetary policy that will stabilize the price levels in the country. There is therefore a need for the central bank to impose a proper policy that will help lower prices and encourage growth in the economy.

The current study recommends that in order for the state to realize a stable rate of inflation the central bank should focus on Reserve ratio requirement and develop best practices towards its implementation in order to have sustainable inflation levels. Taking into consideration the importance of sustainable inflation level, it is imperative that the monetary policy committee who make the decision use the Reserve ratio requirement which is the best technique and tool available to them to ensure that they make informed decisions. Reserve ratio requirement is not flawless and should be applied with necessary understanding and discretion. It must be emphasized that the use of Reserve ratio requirement is intended to support a more informed decision than otherwise possible. Central bank rate appeared to have less impact in controlling inflation levels since it has a positive relationship with inflation.

The solution to bias is not abandoning all monetary tools as misleading, but rather being aware of the biases any particular monetary tool may introduce and letting that knowledge guide in use of the monetary tool. The use of multiple monetary policy tools is therefore necessary so as to eliminate the bias related to period under consideration. In analysis of data, the choice of period and methodology can influence the outcome. The problem of data bulkiness should thus not limit one from giving accurate results. Each issue identified in this study needs further detailed examination for exploring various dimensions of its relationship with implementation process of the economic pillar of Kenya vision 2030. The monetary policy tools aid in the enhancement of the implementation process due to its economic control and should be accorded great importance.

5.4 Limitations of the Study

This study only used secondary data. Relying on the secondary data indicates that any mistake in the source will reflected in the findings of the study under investigation. Errors and assumption not disclosed in the original documents also reoccur in the research.

The study includes high volatile percentage rates that have seen the inflation target rates not being met. It is therefore not predictable that the same prototype witness in the study period will be repeated thus this limits the study findings applicability. Short period of time was used. Data collection was restricted and confirmation of the collected data being nearly impossible, since the reliability of the data depends on the source.

In coming up with the findings the researcher only assumed two monetary policies. As revealed by the findings inflation rates are however affected by other factors, among them rates of exchange, fiscal policies and other policies. Taking into reflection only the two monetary policies to bringing about the causal relationship lead to a weak model.

5.5 Suggestions for Further Research

There is requirement for further research to be done in this area of interest of impact of monetary policy on inflation in Kenya. This is because the operations of central bank rates and reserve ratios have various dimensions in controlling inflation. In other words the success or failure of the monetary policy tools should be evaluated at various economic sectors so that the monetary policy committee is in a better position to judge the impact objectively.

The study investigated the extent to which monetary policy tools achieve sustainable advantage through impacting on inflation rates in Kenya. The study recommends that a further research should be done to establish ways through which the monetary policy committee could enhance inflation target level so as to improve the overall performance of the Kenyan economy and enhance positive perception on monetary policy tools. Further studies should concentrate on trying to identify other policies and factors that affect inflation rate since according to this research; central bank rate and reserve ratios only influence approximately 88.6%. Similarly, the area of interest for future research could entail

researching more on measures to curb inflation rates thus stabilizing the general price levels in the economy.

In terms of measurability of this type of study requires a comparatively longer period of time to determine the impact of monetary tools on impacting towards controlling inflation in Kenya due to ever changing economic factors.

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APPENDICES

Appendix I: Principal central bank Rates, 2009-2013(%)

	2009	2010	2011	2012	2013
Jan	_	6.25	5.74	17.88	6.60
Feb	_	6.25	5.75	13.78	9.10
March	_	6.25	5.75	1	9.35
April	_	6.25	5.73	15.47	9.14
May	_	6.13	5.72	16.97	7.96
June	_	6.13	5.74	17.60	7.93
July	6.18	6.13	5.75	1	7.48
Aug	6.18	6.13	1	9.65	7.36
Sept	6.18	6.00	1	8.42	_
Oct	6.18	6.00	18.89	9.47	_
Nov	6.18	6.00	1	8.30	_
Dec	6.18	6.00	17.75	6.79	_
Annual Average	6.18	6.13	6.65	10.53	8.12

Source: Central Bank of Kenya

Appendix II: Average Annual Inflation Rate

	2009	2010	2011	2012	2013
Jan	_	5.95	5.42	18.31	3.67
Feb	_	5.18	6.54	16.69	4.45
March	_	3.97	9.19	15.61	4.11
April	_	3.67	12.05	13.06	4.14
May	9.61	3.88	12.95	12.22	4.05
June	8.60	3.49	14.48	10.05	4.91
July	8.44	3.57	15.53	1	6.02
Aug	7.36	3.22	16.67	6.09	6.67
Sept	6.74	3.21	17.32	5.32	_
Oct	6.62	3.18	18.93	4.14	_
Nov	5.00	3.84	19.72	3.25	_
Dec	5.32	4.51	18.93	3.20	_
Annual Average	6.58	3.97	13.98	9.08	4.75

Source: Central Bank of Kenya

Appendix III: Average annual Reserve Requirement Ratio

	2009	2010	2011	2012	2013
Jan	_	17.68	17.37	17.21	12.24
Feb	_	17.42	21.77	10.42	23.93
March	_	16.89	20.77	23.17	11.50
April	_	16.09	17.59	14.74	9.54
May	_	21.02	7.80	13.15	18.93
June	_	31.46	4.85	17.61	11.72
July	3.20	26.48	11.50	1	10.31
Aug	3.28	28.10	17.21	9.25	23.81
Sept	7.11	28.39	10.42	9.69	_
Oct	3.96	29.10	23.17	6.75	_
Nov	10.90	25.75	9.52	13.97	_
Dec	11.20	21.52	14.54	15.14	_
Annual Average	6.61	23.33	14.71	12.68	15.25

Source: Central Bank of Kenya