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The Strategic JOURNAL of Business & Change MANAGEMENT
ISSN: 2312-9492 www.strategicjournals.com
Vol. 4, Iss. 2 (51), pp 905 - 922, May 26, 2017, www.strategicjournals.com, ©strategic Journals

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Accepted: May 24, 2017

ABSTRACT

The purpose of this study was to examine the effects of interest rates stability on the economic performance in Kenya. In the recent past, the government has been struggling with deficit in the annual budget forcing them to borrow funds from both internal and external financial institutions. Interest rates in Kenya have been fluctuating over the last few years with the effect of fluctuations remaining unknown on economic performance. Interest rates and macroeconomic volatility generally were the motivation behind this study as there was little information about effect of the same on economic performance in Kenya. Commercial banks were the most affected sector as interest rates have a significant impact on its operations, in relation to lending rates and the loanable assets. Following interest rate liberalization, interest rates have fluctuated to respond to changes in demand and supply of loanable funds in the financial market. The study aimed to establish the effect of interest rate stability on economic growth performance in Kenya and the empirical evidences that help answer the research objective. The data was collected from the Kenya National Bureau of Statics, Kenya Banker Association and Central bank of Kenya for a 10 year period starting 2005 to 2014. The study was guided by the independent variables (purchasing power parity and credit supply) to analyze the affect interest rates stability on dependent variable (economic performance) in Kenya. The study was utilizing a purposive research design as secondary data was used hence draw on a wide range of qualitative research designs. This study used quantitative data analysis techniques with the assistance of Statistical Packages for Social Sciences (SPSS). The study findings, through the slope of the generated trends from 2005-2014, indicated that there was a study rise in Purchasing Power Parity and Credit Supply. The correlation and regression analysis informed the conclusion that the Economic Growth of a country was significantly influenced by Purchasing power Parity and Credit Supply. The result of the study was going to benefit among others, investors and consumers of financial services and industrial goods as it recommend the involvement of the government developing various fiscal policies to control the interest rates and inflation rates so as to ensure good economic growth rate.

Key Words: *Purchasing Power, Credit Supply, Interest Rates Stability*

INTRODUCTION

High interest rate has fluctuated economic growth in most powerful countries in the world, as the dollar improves most worlds' currencies weakens CBK reports 2014. Interest rates are derived from macroeconomic factors which are the study of the behavior of the economy as a whole such as total output, income, employment levels and the interrelationship among diverse economic sectors. The primary effect of high interest rates is the cost of servicing existing debts increases while the incentive to take new credit declines. Higher interest rates bring in more investment from overseas as the returns are higher than countries with low interest rates, Bowe and Saltvedt, (2004). Inflation and inflationary expectations can press interest rate upward which affects lending terms resulting to reduce credit demand and lending ability of commercial banks, Keynes, (2006). World Bank paper on interest rates, (2006) discussed on globalization which often asserts that the fortunes of small countries are driven by larger countries' economies.

This notion contends that small countries are highly susceptible to conditions in large countries and that their economies often experience volatility for reasons independent of domestic policies (Calvo and Reinhart, 2000), as for the interest rate channel, most of the studies indicate that there is no relationship between investment expenditure and the market interest rate, which suggests that the effect of monetary policy on economic growth through the interest rate channel is impeded (Krishnakutty, 2011). According to the Fourteen Bi annual report of IMF Monetary Policy Committee (2015), the era of ultra-low interest rates has eroded the profitability of banks in the Euro zone. Effective net interest margins for Euro zone banks have declined significantly, and their cumulative loss of net interest income totaled$230 billion between 2007 and 2012. Interest rates often change as a result of the inflation and government policies. The real interest rate shows the nominal interest rate inflation. A negative real interest rate means that the nominal interest rate is less than the inflation rate (Gagnon and Ihrig, 2004),

According to Kenya's GDP report 2015, the economy experienced a stable macroeconomic environment with single digit inflation in 2013 and 2014.Recent movements in interest rates, inflation and exchange rates reveal real dangers to economic stability. In a liberalized financial system, where the government finances its deficits via domestic borrowing, public sector will compete with the private sector for loans. However, if financial markets are integrated with world capital markets, higher domestic borrowing results in international capital inflows and higher foreign debt. KPBO statiscal reports (2011) and Bosworth, (2012), stated that there are differences in regards to sensitivity to economic crises in individual countries (Karl, Ray and Shannon, 2009). In the current environment, the weakening of the shilling has been due to a structurally weak Kenyan economy, and the recovery of the US economy, In June 2014, the Government issued a Eurobond to fund infrastructural projects. This is an additional dollar obligation which was not present in 2011, and additional weakening of the shilling increases the government obligation to finance expensive dollar debt (Cytonn investments report, 2015).

According to Lloyd (2006) and McConnell (2009), interest rates are a price paid for borrowing funds expressed as a percentage per year. It can also be defined as the price a borrower needs to pay to the lender for transferring purchasing power to the future. Lloyd (2006) continues to argue that interest rates rank among the most crucial variables with macroeconomic word in the world of Finance. In their study, Gardner and Cooperman (2005) found

out that interest rates represent the cost of borrowing capital for a given period of time. Price changes are anticipated in the real world and these expectations are part of the process that determines interest rates. Interest rate influences the overall level of economic activity, flow of goods and services and financial assets within the economy. It is believed that fluctuations of market interest rates exert significant influence on the performance of commercial banks.

According to Ratti, (2015), Global interest rate is found to rise significantly when global output, global prices and oil prices are increasing. Increases in oil prices are associated with increase in global inflation and global outputs leading to global interest rate tightening. Consistent with a stronger US dollar constituting a tightening of global financial conditions, a positive shock to the trade weighted value of the US dollar results in a significant decline in global interest rates. Ratti, (2015) in his study on what drives global interest rates; results indicated that around 46% of movement in central bank interest rates is attributed to changes in global monetary aggregates (15%), oil prices (13%), global output (11%) and global prices (7%). Increase in global interest rates is associated with reductions in global prices and oil prices, increase in trade-weighted value of the US dollar, and eventually to reduce global output. Increases in oil prices are linked with increase in global inflation and global output leading to global interest rate tightening. McKinsey Global Institute (2010) argues that worldwide real interest rates are set to increase substantially in the medium to long term, putting an end to cheap capital.

According to Kenya's GDP report 2015, the economy experienced a stable macroeconomic environment with single digit inflation in 2013 and 2014, World Bank working paper, (2011) suggested that in economies where financial markets are not repressed, higher deficits financed by domestic debt increases domestic real interest rates when external borrowing is not possible. CBK set a credit borrowing (CBR) rate at 11.5% this as one the measures to decrease inflation and to stabilize the foreign exchange market. The main obstacles of mortgage financing identified by banks in a CBK survey in 2011 and 2012 are interest rates and access to long-term finances .High interest rates cause the number of non-performing loans to rise especially in 2012. The report further says that the tendency for financial institutions to grant mortgage loans on variable interest rate basis may be contributing to slow growth in residential mortgage market in Kenya. Ngugi, (2004) brought out that interest rates effect on the amount of credit to the economy is largely minimal.

Garry, (2005) stated that financial stability assesses prices allocates and manages financial risks and maintains its ability to perform these key functions even when faced with external shocks or a buildup of imbalances. The financial system is one of the most important sources of financing economic decisions related to consumption and investment, they are essential for the possibility of allocating additional financial potential in the economy, and thus for sustainability of economic growth, Vaskov, (2011). According to World Bank reports, (2014), Gross Domestic Product (GDP) in Kenya was worth 60.94 billion US dollars in 2014. The GDP value of Kenya represents 0.10 percent of the world's economy. GDP in Kenya averaged 12.39 USD Billion from 1960 until 2014, reaching an all-time high of 60.94 USD Billion in 2014 and a record low of 0.79 USD Billion in 1961. Kenya's economy advanced 5.8 percent per year on year in the three months to September 2015, up from a 5.5 percent expansion in the previous quarter. It was the highest growth rate since the second quarter of 2014, mainly supported by strong expansions in agriculture, construction, financial activities, internal trade and transportation sectors while accommodation

continued to shrink. GDP Annual Growth Rate in Kenya averaged 5.41 percent from 2004 until 2015, reaching an all time high of 12.40 percent in the fourth quarter of 2010 and a record low of 0.20 percent in the fourth quarter of 2008 as documented by Kenya National Bureau of Statistics (GDP Annual Growth Rate, 2015).

Statement of the problem

Interest rates affect the core operation of an economy in terms of production and consumption through transmission mechanism of inflation, exchange rates amongst other monetary variables. According to monetary and banking situation in Kenya, (2015) report the Kenya shilling and other local currencies have weakened to levels last seen four years ago due to both internal and external factors. The reports further explained that high interest rates have remained a macroeconomic problem that has been difficult to eliminate. Economic observers and academicians in Kenya have pointed out that high interest rates are regressive to the economic development of the country. Regarding price developments, inflation remains within the Bank's target range. According to the latest (KNBS) quarterly report, Kenya's economy expanded by 6.2% in the second quarter compared to 5.9% in the same period in 2015. This growth was mainly supported by agriculture, forestry and fishing; transportation and storage; real estate; and wholesale and retail trade. Manufacturing, construction, financial and insurance sectors slowed down during this quarter while accommodation and food services, mining and quarrying; electricity and water supply; and information and communication sectors recorded improvements.

Monetary and banking situation in Kenya, (2015) report stated that Gross public debt increased from Sh1.633 trillion as at end of June 2012 to Sh1.894 trillion by June 2013, comprising of 44.5 per cent external and 55.5 per cent domestic. Net public debt increased by Sh249.6 billion over the same period. High interest rates may also lead to an increase in Credit Default Rate (CDR) for loans within the banking sector. The Monetary Policy Committee raised the key Central Bank Rate from 8.5% in May to 10% in June and finally to the current rate of11.50% in July 2015. These measures are also expected to reduce consumption and inflationary pressure brought about by expensive imports. The Monetary policy tightening and tight liquidity have forced short term interest rates, which have averaged single digit and lower teens in the last three year, to the upper teens and lower twenties. Interest rates have been rising gradually from July 2015 to the current levels of lower twenties as the Central Bank moved to mop up liquidity to battle the weakening shilling as stated in the Monetary and banking Report.

A number of studies have been done on the effects of interest rate on specific areas. These studies include; Bett (2006), who studied the effects of lending interest rates on profitability of Sacco's, Effects of interest rates on firms' performance Olweny & Chiluwe, (2012) and Effects of flexible interest rates on growth of mortgages in Kenya, the results show a negative relationship between flexible interest rates and the growth of mortgage financing by Muguchia (2012). Nduri, (2013) studied on increase in interest rate to stabilize the exchange rate and to curb the inflationary pressure. However, no known study has dealt on the effects of interest rate on the general economic growth other than studies on various sectors of the economy. This study therefore sought to fill the knowledge gap that exists and explore how interest rate affects economic growth in Kenya.

Study Objectives

The aim of the study was to analyze effect of interest rates stability on Kenya's economic performance. The specific objectives were:

- To establish the effect of credit supply on Kenya's economic performance
- To determine the effect of purchasing power parity on economic performance in Kenya.

LITERATURE REVIEW

Theoretical Review

Purchasing Power Parity Theory

This theory is credited to Gustav Cassel (1918) where he state that this theory is a disarmingly simple and holds that the nominal exchange rate between two currencies should be equal to the ratio of aggregate price levels between the two countries, he continued by saying a unit of currency of one country will have the same purchasing power in a foreign country.PPP theory has two doctrines which include absolute and relative interpretation. Absolute doctrine explains that purchasing power parities calculate the ratio of consumer goods prices for any pair of countries which would tend to approximate the equilibrium rates of exchange. While relative doctrine asserts its comparison to a period when equilibrium rates prevails the changes in relative prices this would indicate necessary adjustments in exchange rates.

Koechlin & Schreyer (2002) analyzed that the theory is used by international organizations, such as Euro stat, the International Monetary Fund, the OECD, the United Nations and World Bank. The general idea behind PPP is that a unit of currency should be able to buy the same basket of goods in one country as the equivalent amount of foreign currency, so that there is parity in the purchasing power of the unit of currency across the two economies, Taylor, and Taylor (2004). PPP theory is based on an extension and variation of the law of one price as applied to the aggregate economy, Devereux and Engel (2003). It's also used in the computation of GDP and GDP per capita across countries. Although GDP per capita has often been criticized as an incomplete statistic of economic well-being, it remains a cornerstone indicator of economic performance of individual countries. Koechlin & Schreyer (2002).Though because of its poor performance which arises largely when its simple form depends on several assumptions that are not likely to hold in the real world and because the amount of foreign exchange activity due to importer and exporter demands is much less than the amount of activity due to investor demands. Nduri (2013).

Credit Market Theory of Credit Supply

A model of the neoclassical credit market postulates that the terms of credits clear the market. The theory postulates that if collateral and other pertinent restrictions remain given, then it is only the lending rate that determines the amount of credit that is dispensed by the banking sector. Therefore with an increasing demand for credit and a fixed supply of the same, interest rates will have to rise. Any additional risk to a project being funded by the bank should be reflected through a risk premium that is added to lending rate to match the increasing risk of default. Subsequently, there exist a positive relationship between the default probability of a borrower and the interest rate charged on the advance. It is thus believed that the higher the failure risks of the borrower, the higher the interest premium (Ewert *et al*, 2000).

Although this theory does not explicitly discuss how collateral would effect on the risk premium, it creates the impression that collateral has no effect on lending rate, and if a risky borrower would wish to face the same lending rate as a borrower with a

lower risk, then all that is required is to pledge more collateral to lower his risk profile and therefore enjoy a lower risk premium. This brings about the 'moral hazard' and 'adverse selection' phenomena, firstly because of information asymmetry existing between the lender and borrowers. The borrower has a more accurate assessment of the risk profile of this investment that is not known by the lender and thus may perform secret actions to increase the risk of his investment without the realization of the lender. The adverse selection problem appears as lenders raise their interest rates to shield themselves from default and on the other hand attract only high risk borrowers and eliminate low risk borrowers (Mason and Roger, 1998)

According to Kenya Bankers Association report (2012).This theory postulates that if collateral and other pertinent restrictions remain given, then it is only the lending rate that determines the amount of credit that is dispensed by the banking sector. Therefore with an increasing demand for credit and a fixed supply of the same, interest rates will have to rise. Any additional risk to a project being funded by the bank should be reflected through a risk premium that is added to lending rate to match the increasing risk of default. Subsequently, there exist a positive relationship between the default probability of a borrower and the interest rate charged on the advance.

Conceptual Framework

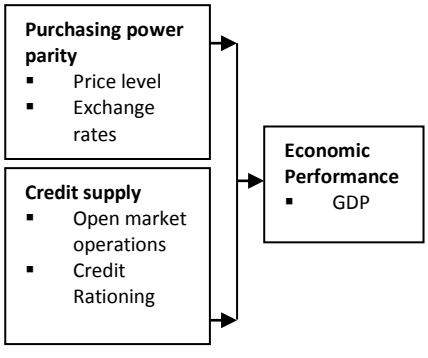

Figure 1: Conceptual framework

Purchasing power parity

Purchasing power parity is a price index very similar in content and estimation to the consumer price index, PPP provides a measure of price level differences across countries. The Exchange rate of countries will also affect the purchasing power of consumers. The dilemma facing analysts and policy makers who need to make comparisons across countries is that each has its own currency. This theory is based on an extension and variation of the "law of one price" as applied to the aggregate economy, Devereux and Engel, (2003). PPP also states that a long-run unit elasticity of the nominal exchange rate with respect to relative national prices, allowing for potentially permanent real exchange rate shocks. A PPP-calculation increases the size of the economy at a bench mark by inflating the traditional sector which at the same time would reduce the growth rate

Okoth, (2013) states that prices change over time, with fixed prices only the volume of goods and services is accounted for, but the purchasing power of a country is affected by how the volume is priced over a period of time. Thus, the income effect will differ from volume change if growth is directed to areas where prices are falling or rising. With the price trends over the last decade, the purchasing power effect would generally be positive for countries specialized in natural resources or complex services, and specialization in standardized goods and services. Absolute purchasing power parity says that countries have equal price levels when expressed in a common currency. Purchasing power parity explains the movements in the exchange rate between two countries' currencies by changes in the countries' price level, while the exchange rate between two countries equals the ratio of the countries' price levels.PPP therefore

holds that when, at going exchange rates, every currencýs domestic purchasing power is always the same as its foreign purchasing power (Krugman and Obstfeld, 2009).

The purchasing power parity theory states that the exchange rate between one currency and another currency is in equilibrium when their domestic purchasing powers at that rate of exchange are equivalent. Market Exchange Rates (MER) balance the demand and supply for international currencies, while (PPP) exchange rates capture the differences between the cost of a given bundle of goods and services in different countries. PPP exchange rates are especially useful when official exchange rates are artificially manipulated by governments. Countries with strong government control of the economy sometimes enforce official exchange rates that make their own currency artificially strong. By contrast, the currency's black market exchange rate is artificially weak. In such cases, a PPP exchange rate is likely the most realistic basis for economic comparison.

Public and private sectors are the most powerful policy makers in an institution or an economy**.** There are substantial differences between the two that are very likely to lead to different policy results. Standard economics assumes consumers simply need to be properly informed about products and, if offered a range of choices, will act in their own self-interest to maximize their own benefits. Evidence from both marketing and behavioral economics but a host of other disciplines proves this is wrong. An improved understanding of consumer behavior gives policy makers a wider range of policy instruments with which to achieve policy objectives. Used in the right circumstances, these instruments are likely to be more cost-effective than more traditional policy instruments.Hakiko,(1992) Policy makers will use PPP as a major variable providing information about the appropriate stance of monetary policy and the short run in guiding exchange rate difference, (Moon, 2010)

Credit Supply

Central bank reports (2010) monetary policy refers to the control of credit and total money supply. This policy is also known as the control of credit. Control of money supply is very important for the economic growth of a country .If there is excess supply of money then the result will be inflation whereas tight control over money may cause depression and unemployment. CBK further indicated that the policy is implemented to achieve various objectives such as achievement of price stability, increase employment opportunities, Stimulate economic growth, achieve stable rate of currency and increase in investment. Monetary policy is implemented by the central bank and it uses different methods for this purpose. The CBK report(2010) further stated that credit rationing is used to fix the credit ceiling allowed for each and every commercial bank and does not give credit to them beyond that limit .Whenever central bank desires to decrease the money supply it decreases the limit up to which it can give loans to the member banks. Similarly, it can increase the money supply by increasing the credit limit.

According to CBK (2010) Central banks affect the quantity of money in circulation by buying or selling government securities through the process known as operations. When a central bank is looking to increase the quantity of money in circulation, it purchases government securities from commercial banks and institutions. This frees up bank assets they now have more cash to loan. This is a part of an expansionary or easing monetary policy which brings down the interest rate in the economy. Each lending-borrowing pair negotiates their own rate and the average of these is the federal funds rate. The federal funds rate, in turn, affects every other

interest rate. Open market operations are a widely used instrument as they are flexible, easy to use, and effective. Open market operations, the most dominant instrument of monetary policy, are the behavior of a nation's central bank to trade or purchase government securities for cash in attempts to expand or contract the total money supply according to (CBK reports, 2010).

Kenya Bankers Association (2012) report, states that monetary policy plays a stabilizing role in influencing economic growth through a number of channels. It also influences expectations about the future direction of economic activity and inflation, thus affecting the prices of goods, asset prices, exchange rates as well as consumption and investment. A monetary policy decision that cuts interest rate, for example, lowers the cost of borrowing, resulting in higher investment activity and the purchase of consumer durables. This may also contribute to higher consumer spending, and makes companies' investment projects more attractive. Low interest rates also tend to cause currency to depreciate because the demand for domestic goods rises when imported goods become more expensive. Some economists have argued that a direct injection of money base into the economy would do the trick of stimulating aggregate demand and boost economic growth (Muellbauer, 2014).

Economic performance

Central bank's economic monthly review, (2014), the compilation of the Kenya Economic Report 2013 is a milestone in the government's efforts to take stock of the economic gains Kenya has achieved and challenges ahead. The report gives the government and the private sector, and indeed all citizens, the opportunity to benchmark our mode of economic activities with what is happening in other countries that we share similar historical and economic orientation with. The exchange rate of the currency in which a portfolio holds the bulk of its investments determines that portfolio's real return. A declining exchange rate obviously decreases the purchasing power of income and capital gains derived from any returns. The government has a target for a low but positive rate of inflation**.** They believe that persistently high inflation can damage economic and social consequences. GDP growth remained robust in 2013 at 5.7% based on rebased statistics and stood at 4.4%, 5.8% and 5.5% in the first three quarters of 2014 compared with 6.4%, 7.2% and 6.2% in comparable quarters of 2013.

According to Central bank's economic monthly review, (2014), growth was mainly supported by expansion in construction, manufacturing, finance and insurance, information, communications and technology, and wholesale and retail trade. The economy slowed in the third quarter of 2014, partly due to a sharp drop in tourism following terrorist attacks in the country. Overall GDP growth is expected to amount to 6.6% and 6.3% in 2015 and 2016, respectively. Consumer price index (CPI) inflation is expected to remain in the single digits, at around 5%, during the same period. Growth theory assumes that the interest rate plays the main role in equilibrating an economy's savings and investment. According to the neo-classical Golden Rule, the optimal growth path is equal to the real interest rate, (Theil, 2001)

Empirical Review

The saving rate in Africa has perpetually been the lowest compared to other regions despite liberalization Ndung'u & Ngugi, (2000). It is also true that Africa faces serious credit constraints and this is coupled with low income could greatly reduce any little incentive to save. Bakare, (2011) in his empirical analysis of the determinants of private investment in Nigeria used error correction model which showed that changes in real private investment are best explained by political

instability, macroeconomic instability and deficiency of infrastructure. Political crises have created unsatisfactory environment for private investment and as such a major impediment to private investment. Uche and Onwuka, (2012) employed modern econometric technique involving co-integration in their study aimed at determining the factors that affect investment in Nigeria. The study reveals that there is a long-run relationship among variables used; the main determinants of investment are the market size and incremental capital ratio.

Luca and Spatafora, (2012) used cross sectional and panel analyses in their study to examine developing countries determinants between, capital inflows, financial development, and domestic investment the study revealed among others that the reductions in the global price of risk and in domestic borrowing costs were the major contributors to the rise in net capital inflows and domestic credit. Were and Wambua, (2013) carried out a research from Research Centre, Kenya School of Monetary Studies, Central carried out a study to establish determinants of interest rate spread of Kenya commercial banks, data was collected from all 44 commercial banks. The empirical results showed that bank-specific factors play a significant role in the determination of interest rate spreads. These include bank size based on bank assets, credit risk as measured by non-performing loans to total loans ratio, liquidity risk, return on average assets and operating costs. The impact of macroeconomic factors such as real economic growth and inflation is not significant.

In regards to purchasing power parity, Haskel and Wolf (2001) use retail transaction prices for a multinational retailer to examine the extent and permanence of violations of LOP. For identical products, Haskel and Wolf found typical deviations of 20 to 50 percent, though there is muted evidence for convergence over time. The authors argue that such differences might be due to differences in local costs. If so, relative prices of similar products should be equal across countries. In fact, relative prices vary significantly across very similar goods within a product group. Also, the ordering of common currency prices often differs for similar products, suggesting that differences in local distribution costs, local taxes, and probably tariffs do not explain the price pattern, leaving strategic pricing or other factors resulting in varying markups as alternative explanations for the observed divergences ,(Sarno and Taylor 2002).

Adofu and Audu, (2010) used ordinary least square method to ascertain the assessment of the effects of interest rates deregulation in enhancing agricultural productivity in Nigeria. The study found out that interest rate play a significant role in enhancing economic activities and as such, monetary authorities ensure appropriate determination of interest rate level that will break the double edge effect of interest rate on savers and local investors. The interest of economic policy makers in growth-related questions is apparently motivated by the appearance of high rates of growth in the country that is considered to have the most advanced financial system, Thiel, (2001). Mutinda, (2012) studied on the effects of lending rates on economic growth in Kenya. Studies have explored the relationship of interest rate and private sector investment, interest rates and mobilization of private savings as well as the effects of interest rates on firms' performance Olweny & Chiluwe, (2012).Other authors argues that small economies are affected by conditions in large countries that is, high large country's interest rate have the concretionary effect on the annual real GDP growth in the domestic economy, Giovanni, (2012).

Beckmann, (2007) argues that high capital leads to low profits since banks with a high capital ratio are risk-averse, they ignore potential (risky) investment opportunities and as a result, investors demand a lower return on their capital in exchange for lower risk. The regulation that exists in most countries is capital requirement. Most countries know their minimum level of required capital. Therefore, many countries require the maintenance of some capital or solvency ratio; that is, a minimum ratio between capital and an overall balance sheet magnitude, such as total assets or liability, or some weighted measure of risk assets. In terms of the nature of capital, there are policies concerning the definition of capital beyond cash or government securities, the definition and valuation of bank assets, and whether the regulatory and supervisory authorities verify the sources of capital (Barth, Caprio & Levine, 2013). Giovanni (2012), argues that small economies are affected by conditions in large countries that is, high large country's interest rate have the concretionary effect on the annual real GDP growth in the domestic economy. But this effect is centered in countries with fixed exchange rates. The effects on interest rate in small countries are through direct monetary policy channel and the general capital market or trade effect. A demand shock leads to short term rise in the real interest rate.

Korir (2006), noted that high interest rate on lending by the financial institutions in the country have made the accessibility almost impossible to the poor and effectively negates on poverty alleviation. Korir (2006), contend that for the first time borrowers can confidently face their bankers and negotiate interest rates on their loans based on the new CBK rate.Other studies done by Delong and Summers, (2012), presented a highly stylized framework to assess the effect of public investment on output and the debt to GDP ratio, and to evaluate the conditions under which an increase in public investment may be self-financing. They concluded that an increase in public infrastructure investment affects the economy in two ways. First, similar to other government spending, it boosts aggregate demand through the short term fiscal multiplier, whose magnitude may vary with the state of the economy, Auerbach and Gorodnichenko, (2013). Secondly, it may also crowd in private investment, given the highly complementary nature of infrastructure services. The increase in government spending will also affect the debt-to-GDP ratio, which may increase or decrease depending on the size of the fiscal multiplier and on the elasticity of revenues to output.

RESEARCH METHODOLOGY

Purposive research design was used for the study to examine and explore characteristics of several variables of interest. The study focused on four financial institutions listed in Nairobi securities exchange which included the Kenya commercial bank, Barclays bank of Kenya, Standard Chartered bank of Kenya and Co-operative bank .The study covered a period year from 2005- 2014. The data collected was tested using the validity and reliability of the study. Secondary data was the main source of data collected from CBK and Kenya National Bureau of statistics. The Secondary data sources were chosen owing to the fact that they are cheaper and more quickly available than primary data and help clarify and answer research question (Kombo and Tromps, 2011). The data was analyzed using Statistical Package for Social Sciences (SPSS). The SPSS software is quite efficient to handle large amount of data (Martin et al., 2002). The study used descriptive statistics to analyze the data collected.

DATA ANALYSIS, RESULTS AND DISCUSSION

Purchasing Power Parity (PPP)

Table 1: Purchasing Power Parity

Parameters (N=20)	Mean	Median	Standard Deviation	Minimum	Maximum
PPP (Billions)	1263.03	1242.33	120.23	1033.63	1431.02

The study revealed that for the 10 years period (2005 – 2014), the purchasing power parity of Kenyans recorded a mean of 1263.03 billion with a median of 1242.33 billions and a standard deviation of 120.23 indicating that the PPP was highly varied. The maximum PPP of 1431.33 billion was recorded in the second quarter of 2013 while the minimum value was found to be 1033.63 billion was observed in the first quarter of 2014.

The researcher fixed a time series trend for the lending rates for 2005 – 2014 period. The curve had the peak at the year 2014 and the lowest point at the year 2005. According to trend line that was fitted to the curve, there was a steep slope in the PPP with change in time.

Table 2: Price Levels

Parameters (N=20)	Mean	Median	Standard Deviation	Minimum	Maximum
Price Levels	174.93	162.13	57.19	105.33	295.11

The study established that the highest price levels of commodities in the country was experienced in the second quarter of the year 2008 that recorded 295.11 while the minimum value of 105.33 was attained in the first quarter of the year 2010. The descriptive statistics as indicated in Table 2 showed that the mean price levels for the 10 years study period was 174.93 with a median of 162.13 and a standard deviation of 57.19. This shows that there is higher variability of the price levels and hence not stable. This in line with the findings of Okoth, (2013) who postulates that prices change over time, with fixed prices only for the volume of goods and services is accounted for, but the purchasing power of a country is affected by how the volume is priced over a period of time. This in turn shows that the income effect will differ from volume change if growth is directed to areas where prices are falling or rising. He observed that with the price trends over the last decade, the purchasing power effect would generally be positive for countries specialized in natural resources or complex services, and specialization in standardized goods and services.

Table 3: Exchange Rates

Parameters (N=20)	Mean	Median	Standard Deviation	Minimum	Maximum
Exchange Rates (%)	78.78	78.36	7.95	65.11	93.44

It was revealed that the highest exchange rates of 93.44% was recorded in the in the second quarter of the year 2011. However, the minimum of 65.11% was observed in the second quarter of 2007 followed by 65.26% recorded in the first quarter of 2008 which was during the Post Election Violence for the disputed 2007 general elections. For the study period (2005 – 2014), the mean exchange rate was found to be 78.78% with a median of 78.36%. As indicated by the standard deviation of 7.96, showing that the exchange rates are a relatively stable.

Credit Supply

Table 4: Credit Supply

Parameters (N=20)	Mean	Median	Standard Deviation	Minimum	Maximum
Credit Supply (Billions)	1181603.6	1063184	538518	511425	2259834

The researcher found out that the amount of credit supply in circulation in the Kenyan economy recorded a steady rise with the initial state being at the first quarter of 2005 recording the lowest credit supply of 511,425 billion while the final state as per the study period, that is the second quarter of 2014, recording the highest of 2,259,834 billion. The mean credit supply for the duration was found to be 1,131,603 billion with a media of 1,063,184 and a standard deviation of 5,385,518.47 indicating that the credit supply for the first two quarters of the years 2005 – 2014 has extreme variability. This explains the necessity of direct injection of money base into the economy to stimulate aggregate demand and boost economic growth as recommended by Muellbauer (2014) as postulated by Kenya Bankers Association (2012) report, which states that monetary policy plays a stabilizing role in influencing economic growth through a number of channels.

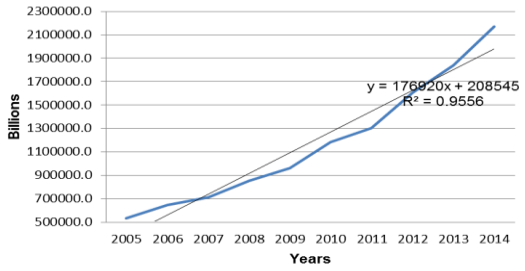

Figure 2: Credit Supply Trend

The researcher plotted a time series trend for the credit supply for a 10 years period as indicated in Figure 2 above. The curve has the peak at the year 2014 and the lowest point at the year 2005. According to trend line that was plotted, there is a steep slope in the credit supply with change in time. This is shown by the positive gradient of 17690 with a y-axis intercept of 208545. According to the resultant R^2=0.9556 of the trend line, time as the independent variable explains a very large proportion of 95.56% of the change observed in the credit supply with a only little proportion of 4.44% explained by the error term.

Table 5: Open Market Operations

Parameters N=20)	Mean	Median	Std. Deviation	Minimum	Maximum
Open Market Operations (%)	7.19	6.8	4.98	1.98	22.37

According to Table 5, the open market operations for the 10 years study period was found to be at the highest of 22.37% in the first quarter of 2011 and minimum of 1.98% in the first quarter of 2005. In a summary of the open market operations in the study period summary yielded a mean of 7.19% with a median of 6.8% and a standard deviation of 4.98 which is relatively high. This agrees with the report by CBK (2010) that considers open market operations as the most dominant instrument of monetary policy are the behavior of a nation's central bank to trade or purchase government securities for cash in attempts to expand or contract the total money supply according to. The variability conforms with the statement that the open market operations are a widely used instrument as they are flexible, easy to use, and effective.

Economic Performance

Table 1: Growth Domestic Product (GDP)

Parameters (N=20)	Mean	Median	Std. Deviation	Minimum	Maximum
GDP	758362.3	750419	128520	525380	977202

The researcher used the GDP as the measure for the country's economic performance. The highest economic growth was recorded in the first quarter of 2014 that recorded 977,202 while the worst economic growth was recorded in the first quarter of 2005. Further descriptive statistics indicate that the mean economic performance from 2005 to 2014 was 758,362 with mean of 750,418 and a standard deviation of 128,518 which is relatively high. This depicts that the economic growth is not stable.

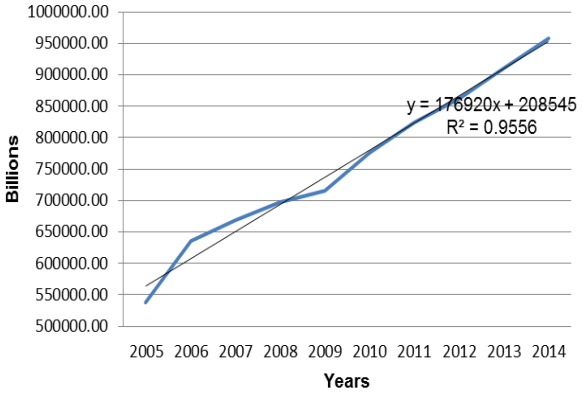

Figure 3: The GDP Trend

The researcher plotted a time series trend for the credit supply for a 10 years period as indicated in Figure 3 above. The curve has the peak at the year 2014 and the lowest point at the year 2005. According to trend line that was plotted, there is a steep slope in the GDP with change in time. This is shown by the positive gradient of 176,920 with a y-axis intercept of 208545. According to the resultant R^2=0.9556 of the trend line, time as the independent variable explains a very large proportion of 95.56% of the change observed in the GDP with a only little proportion of 4.44% explained by the error term.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The purchasing power parity of Kenyans recorded a mean of 1263.03 billion with a median of 1242.33 billions and a standard deviation of 120.23 indicating that the PPP was highly varied for the 10 years from 2005 to 2014. The mean price levels for the 10 years study period was 174.93 with a median of 162.13 and a standard deviation of 57.19. This shows that there is higher variability of the price

levels and hence not stable. The mean exchange rate was found to be 78.78% with a median of 78.36%. As indicated by the standard deviation of 7.96, showing that the exchange rates are a relatively stable. After plotting the PPP against time (years), the trend yielded a positive gradient of 29.261 with a y-axis intercept of 1102.1. According to the resultant R^2=0.94403 of the trend line, time as the independent variable explains a very large proportion of 94.03% of the change observed in the PPP with a very little proportion explained 5.97 % by the error term.

The mean credit supply for the duration was found to be 1,131,603 billion with a media of 1,063,184 and a standard deviation of 5,385,518.47 indicating that the credit supply for the first two quarters of the years 2005 – 2014 has extreme variability. The open market operations in the study period summary yielded a mean of 7.19% with a median of 6.8% and a standard deviation of 4.98 which is relatively high. The fixed trend of credit supply versus the time in years yielded a positive gradient of 17690 with a y-axis intercept of 208545. According to the resultant R^2=0.9556 of the trend line, time as the independent variable explains a very large proportion of 95.56% of the change observed in the credit supply with a only little proportion of 4.44% explained by the error term.

The mean economic performance from 2005 to 2014 was 758,362 with mean of 750,418 and a standard deviation of 128,518 which is relatively high. This depicts that the economic growth is not stable. The trend line plotted for the GDP against time yielded a steep slope with a positive gradient of 176,920 with a y-axis intercept of 208545. According to the resultant R^2=0.9556 of the trend line, time as the independent variable explains a very large proportion of 95.56% of the change observed in the GDP with a only little proportion of 4.44% explained by the error term.

Conclusions

The analysis testing the relationship between the Purchasing Power Parity and economic performance yielded a coefficient of correlation r(20)= 0.730, p=0.000<0.05 implying that the Purchasing Power Parity and economic performance have a positive relationship that is significant at 5% levels of significance. The regression analysis revealed that the coefficient of regression was 170.766, p=0.049<0.05 implying that the Purchasing Power Parity affects the economic performance in Kenya significantly at 5% levels of significance. This facilitates the rejection of the null hypothesis stating that 'Purchasing power parity has no significant effect on Kenya's economic performance.' Therefore it is in order to conclude that Purchasing Power Parity have significant effects on economic performance in Kenya.

The tests on the relationships between Credit Supply and economic performance in Kenya yielded a coefficient of correlation of r(20)= 0.953, p=0.000<0.05 which implies that the Credit Supply and economic performance have a positive relationship that is significant at 5% levels of significance in the Kenya Economy. Further analysis revealed a coefficient of regression of 0.199, p=0.000<0.05 implying that the variables have a positive relationship that is significant at 5% levels of significance. This informed the decision to reject the null hypothesis stating that 'Credit supply has no significant effect on Kenya's economic performance.' There the researcher draws a conclusion that credit supply has significant effects on Kenya's economic performance.

Recommendations for the Study

From the findings and conclusion, the study recommends that there is need for the government to control the country interest rates as it was found that interest rates negatively affect the economic

growth of the country. The study further recommends that there is need for the government to control the country inflation rate through various fiscal policies as it was revealed that a unit increase in inflation rate negatively affects economic growth in the country. There is need for the for the government to control purchasing power parity as it was noted that a higher interest rates would affect the foreign domestic investment and thus purchasing power would decrease affecting the economy negatively. Cash inflow increase will stimulate investment in the country which positively affects the economic growth in the country and thus the country should reduce the charges imposed on the transfer of funds to encourage an ease transfer of money. It was also found that increase in gross investment positively affect economic growth in the country.

Areas for Further Research

The study sought to establish the effect of interest rate on economic performance in Kenya. While this was done, it recommends a study to be done on the relationship between Purchasing power and foreign direct investment in Kenya. Further it recommends that a study be done on the effect of interest rates on cash flow in Kenya. In addition there is need for a study on the relationship between investment and external borrowing.

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