

## Capital Control Liberalization And Monetary Policy In Kenya

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**Abstract:** *Economist have always considered capital as the central element of the process of economic development, the study aimed to establish the effects of capital control liberalization on monetary policy in Kenya. The Economists view that foreign investment benefits developing economies by increasing the availability of capital still holds, based on this view, the capital deficient countries heavily resort to foreign financing as the primary source to achieve rapid economic growth and through their positive impact over productivity and the general economic wellbeing of the host country. Kenyan economy has accumulated a large external debt and are now facing serious debt servicing problems. The growth experience of East Africa has received worldwide attention this is because Africa is seen as a new center for growth and can be an investment destination for other regions. This study is motivated on the assumption that this discussions ignored the experiences of developing countries in their early phase of industrialization. In addition there is a lack of proper attention on the analysis of the issue of capital inflows in the context of neo-liberal economic reforms and financial deregulation. Large swings in capital flows into and out of emerging markets can potentially lead to excessive volatility in asset pricing and supply of credit in the economy. In order to lessen the impact of capital flows on financial instability, a number of studies and policy makers have proposed the use of capital controls. This paper considers the benefit of re-introducing capital controls as a potential instrument of monetary policy in Kenya. This paper reviews the Kenyan experience with large capital inflows over the past 15 years (June 2000-June 2015). The findings revealed that capital inflow had positive effect on monetary policy in Kenya.*

**Key words-**Capital controls, Market Liberalization, Monetary policy

### INTRODUCTION

The capital controls on; portfolio and equity inflows, capital inflow, foreign exchange measures, macro-economic strategies can be administrative or market-based. Administrative controls include outright prohibitions on foreign borrowing or lending, quantitative limits on these transactions, and the requirement that such transactions receive prior to government approval. Market-based control measures include taxes on cross-border capital transactions, differential bank reserve requirements for resident and nonresident accounts. Such controls also include the requirement that some proportion of capital inflows be deposited in a

non-interest-bearing account at a central bank (an unremunerated reserve requirement), which effectively serves as a tax on inflows. Unlike tariffs on goods and services, which are subject to the multilateral General Agreement on Tariffs and Trade (GATT), countries are generally free to impose or remove capital controls without reference to international agreements, (klein 2011).

The 1990s witnessed a radical increase in private capital flows to developing countries that led to a strong shift of mood among economists, policy makers and investors regarding the long-term outlook of Emerging Markets. In this respect, capital

inflows and accompanying neoliberal reform programs along the Washington consensus were expected to release foreign exchange and credit bottlenecks and generate capital market deepening. This would also minimize moral hazard and rent seeking, and finally support long-term investment and growth prospects of these economies (Hall, 2009).

The transmission of monetary policy depends on the openness of the capital account and the exchange rate regime. The trilemma from the Mundell-Fleming model states that countries cannot simultaneously; (i) fix their exchange rate, (ii) have an open capital account and (iii) pursue an independent monetary policy (Marrakchi, 2013). Only two out of these three objectives are mutually consistent. If the capital account is closed, then domestic interest rates would transmit to domestic demand, irrespective of the exchange rate regime. However, if the capital account is open, then domestic monetary policy was determined by the exchange rate regime and the degree of substitutability between domestic and foreign financial assets (Grenade & Moore, 2007). Under a floating exchange regime, monetary policy can work either through the interest rate and liquidity channel or through the exchange rate channel (Saxena, 2006).

In the present era of globalization, one of the most difficult challenges for governments and for those who advise them is to understand the constraints under which policies must be designed in a world of increasing economic interdependence (Obstfeld, Shambaugh, & Taylor, 2004). Nowhere are these constraints more pressing than in the arena of monetary policy design in open economies, where the recent spate of economic crises in developing countries, from Mexico in 1994 to East Asia in 1997 to Argentina in 2001, highlighted the costs to be paid when the exchange rate regime unravels, (Kamer, 2004).

According to (Siddiqui, 2014), the mainstream economists and international financial institutions view that the foreign investment in developing

countries would benefit those countries by increasing the availability of capital. This would have a positive impact over productivity and the general economic wellbeing of the host country they examine the link between capital inflows, financial development and economic growth. Alfaro & Chanda, (2004) argue that countries with developed financial markets are able to attract capital inflows more efficiently. According to them, the potential of foreign direct investment (FDI) to create backward linkages in the absence of well-developed financial markets is severely impeded.

In order for the economies to shield themselves from the vagaries of exchange rates, (Saxena, 2006) sitting Lane and (Lane, 2006) argue that emerging markets should promote local currency debt markets and increase the role of FDI and portfolio equity inflows. In fact, some of these countries (Brazil, Colombia, Thailand, the Czech Republic, Mexico and Malaysia) have been successful in issuing domestic currency denominated bonds in the international market. The importance of foreign capital, among others is that, these flows and capital mobility more generally, allow countries with limited savings to; (i) attract finance for productive investment projects, (ii) foster the diversification of investment risk, (iii) promote inter-temporal trade, and (iv) contribute to the development of financial markets. The proponents of foreign capital argue that foreign capital can supplement domestic investment and thus lead to higher growth rates. It can also reduce the potential balance of payments constraints on growth (Alfaro & Chanda, 2004).

Broadly two arguments have been put forward with regards to capital control; Firstly, it is said that capital inflows to developing countries are largely influenced by factors from the supply-side. The government's premarket reform policy will encourage foreign investors to invest. Secondly, the easy monetary policies in the developed countries encourage the exporting of capital into developing countries. This is largely due to more

easy and larger access to liquidity. It is expected that in developing countries the returns would be higher (Adil, 2003).

In a situation when monetary policies in developed countries is tightened, the differential falls and capital inflows can slow down and even start flowing in reverse, but (Ahmed, Zlate, & Ahmed, 2013) finds such discussions ignore the experience of developed countries in their early phase of industrialization. There is also a lack of attention paid to the analysis of the issue of capital inflows in the context of neoliberal economic reforms and financial deregulation. Capital controls may mitigate financial fragility; they are less effective for meeting macroeconomic targets (Chang, Spiegel, Chang, Liu, & Spiegel, 2015).

Paoli and Lipinski, (2013) note that while capital controls may be welfare-enhancing from the point of view of an individual country, they may trigger adverse responses from other nations and end up reducing welfare. Their analysis therefore demonstrated the merits of international policy coordination in the use of capital controls. For instance China's prevailing policy regime features capital controls, exchange rate targets, and sterilized interventions. Under these restrictions, the optimal Chinese monetary policy involves a tradeoff between sterilization costs and domestic price stability. This tradeoff is illustrated in a Dynamic Stochastic general equilibrium (DSGE) model calibrated to Chinese and global data. The model reveals that, following a negative shock to foreign interest rates similar to that which occurred during the global financial crisis, optimal policy calls for a reduction in sterilization activity, resulting in monetary policy easing and an increase in inflation (Chang et al., 2015).

The main theoretical argument against the validity of long-term Purchasing power parity (PPP) comes from the structural models of inflation. Stephen & Sanmi, (2012) sitting (Bela, 1964), made an important contribution to the development of the arguments. In the long term, PPP has,

nevertheless, received considerable empirical support. Flood & Taylor, (1996) shows that cross-sectional data yields very high correlations between changes in nominal exchange rates and relative national price levels over 10 or 20 year horizons. A number of studies from the mid-1980s and onwards have also tested if divergence from PPP between national price levels can be explained in terms of the Balassa-Samuelson effect.

The literature does, however, not provide a unanimous agreement on how to interpret the evidence. Froot and Rogoff, (1995) argue that the Balassa-Samuelson effect may be relevant in the medium term, but that the spreading of knowledge, together with the mobility of physical as well as human capital, generates a tendency toward absolute PPP over the very long run. It is, nevertheless, worth noting that empirical support for long-term PPP is particularly weak for countries, such as Japan and Argentina, where real output has undergone sharp changes relative to real output of the rest of the world.

### Statement of the Problem

Epstein, (2009) citing Frenkel (2002) argues that the destabilizing effects of unregulated capital inflows (e.g. unsustainable expansions in credit and liquidity, exchange rate appreciations and appreciation of financial and real assets) are exacerbated in developing countries when financial markets are small, and not sufficiently diversified. The adoption of the IMF's Structural adjustment programme (SAP) in 1992 resulted in the transition from fixed exchange rate regime to floating exchange rate regime in Kenya. Ever since, the exchange rate of Kenyan Shilling vis-à-vis the U.S dollar has attained varying rates all through different time horizons. On this basis, the consistency, persistency, and severity on the monetary policy is an issue to be relooked into after the capital control liberalization (Connell, Maturu, Mwega, Ndungu, & Ngugi, 2010).

The central Bank of Kenya (CBK) has over the years used monetary policy to stabilize the infla-

tion and output using interest rates and reserve monetary simultaneously after the liberalization of the Kenyan Market in 1990's, however literature puts it that the two instruments simultaneously will not be effective in hitting monetary policy targets and are evidently displayed as short term tools that have not been working in Kenya. Kenyan market promote local currency debt markets and has increased the role of FDI and portfolio equity inflows to ensure strength in the market or implement the controls, despite the importance of the link between monetary and exchange rate policies in economic management, Kenya's policy makers have little real information on which to base their decisions (Ndung'u, 2000). Policymakers in all countries, including countries that generate large capital flows, should take into account how their policies may affect global economic and financial stability (IMF, 2012).

There is a contention that volatility of the exchange rates and capital inflows in Kenya are some of the main sources of economic instability around the country with the aggressive FDIs that are taking shape in the country, this is becoming a major issue in that Kenya as she has experienced the highs of up to 105 shillings for a dollar in October 2015, expunging public debt levels of approximately 2.5 trillion this figure growing with a figure of 400 billion in a period of 6 months, by June 2015 and a growing interest rate in the market. For a number of years economists have debated the optimal speed and sequencing of economic reform recommending for the lifting of capital controls and the opening of the capital account of the balance of payments (Edwards, 2007).

According to John (2012), inflation and the money supply were positively correlated as established in his study on effectiveness of monetary policy tools in countering inflation in Kenya, Kamaan, (2014), in the study on the effect of monetary policy on economic growth in Kenya, Established that one standard deviation monetary policy shock proxied by the central bank rate has negative and insignificant effect on output Gichuki, Oduor, &

Kosimbei, (2012) in the study on the choice on the optimal monetary policy instrument for Kenya recommended that CBK adopt a pure interest rate instrument policy strategy, in contrary, this study intends to establish the effect of capital control liberalization on monetary policy.

According to United Nations Conference on Trade and Development World Investment Report 2014 FDI inflows in 2013 stood at Kshs. 45.18 billion (\$514 million) a 98 per cent growth from Kshs22.7 billion (\$259 million) in 2012 attributed to oil discovery. But as literature states it, that if the capital account is open, then domestic monetary policy was determined by the exchange rate regime and the degree of substitutability between domestic and foreign financial assets, should Kenya markets promote local currency debt markets and increase the role of FDI and portfolio equity inflows to ensure strength in the market or implement the controls (Gitau, 2014). Hence this study intends to study the effects of the capital control liberalization and how they have affected the monetary policy in Kenya with the view of policy recommendations.

## 2. Theoretical Review

### 2.1 Neo Classical theory

The term 'classical economics' was coined by the German Political philosopher and economist Karl Marx (1954), who stated that by classical political economy, for many purposes. Preferences can remain specified only up to a certain abstract structural features, more specifically, rational individuals are assumed to respond to any increase in the price of a good by consuming less of it. This simple relative price proposition turns out to be surprisingly powerful in predicting behavior in economic stings and includes specifically the basis of institutional analysis: institutions yield different social outcomes because they alter incentives that agents face. Two fundamental propositions about the effect of the quantity of money on the economy predate the emergence of monetary economics as a recognized discipline of study. The first is



that increases in the quantity of money that are not accompanied by corresponding increases in real output eventually lead to inflation (Milonakis, 2009).

An increase in some inputs relative to other fixed inputs will in a given state of technology cause total to increase; but after a point the extra output resulting from the same additions of extra inputs is likely to become less and less. This falling off of extra returns is a consequence of the fact the new doses of the varying resources have less and less of the fixed resources to work with (Olicy & Swift, 2006).

Liberalizing policies are intended to make the market system less incomplete and less imperfectly competitive by removing some restrictions on free trade and competition. The desirability of such policies is the topic of the third theorem of neoclassical welfare economics, concerning the gains from trade and other forms of liberalization. Considering (i) Efficiency of the Invisible Hand, (ii) Optimal Allocations, (iii) Gains from Liberalization as the theorem; claims that liberalization makes Pareto improvements possible, but they cannot be guaranteed unless those directly harmed by liberalization are suitably compensated. The first theorem shows that perfect markets generate Pareto efficient allocations. Under several important qualifications, the second theorem shows that any particular Pareto efficient allocation can be achieved through perfect and complete competitive markets with appropriate lump-sum redistribution of wealth (Hammond, 1992).

With globalization and international capital flows, financiers roam every corner of the world searching for the last drip of profits. This class has gained enormous power by undermining others, in particular labor. Today, capital does not need to move at all; the simple threat of moving undermines the fallback position of labor. Thus, to correct this imbalance of power a set of progressive policies is needed to control international flows and to achieve sustained full employment and

greater equality of income and wealth. According to this view, capital controls limit the ability of international financiers and multinationals to curtail labor. Also, they advance the objective of full employment at least in the short to medium term (Epstein & Epstein, 2000).

Following neoclassical theory, capital controls are just bad policies because they remove the discipline of the international market which, as the National Center for Policy Analysis (1998) explains, always stands to reward countries that implement effective pro-growth policies. Nonetheless, governments of many countries have used capital controls. There are different forms of controls; negative interest rates, controls on foreign investment, lending restrictions, dual exchange rates, just to mention a few. For example, in Venezuela to cope with inflows during mid-1990s, exchange controls were used. Romania closed its foreign exchange market in 1996, South Africa postponed the elimination of its remaining controls in 1996 (Rowden, 2011).

Prohibition of prepayments of foreign loans was the tool used in Brazil in 1994. In terms of direct controls, Chile and Brazil are two good examples. Chile imposed a one-year minimum maintenance period for nonresident inflows, while Brazil prohibited some nonresident transactions, (Gu & Baomin, 2009) sitting Goh (2005) explains, Malaysia relied on controls to regain monetary autonomy. Friedman and Schwartz's attribution of causality from money to business cycles was criticized by (James, 1970), who claimed that they had committed the post hoc ergo propter hoc fallacy assigning a causal relationship to two events on the basis of which happened first. In a rejoinder, (Friedman, 1970) argued that temporal precedence was only one of several criteria from which they inferred the direction of causality and that the case for a significant role for money in leading to business cycle fluctuations was clear independent of the precise timing of changes (Nagel, 2003).

## 2.2 Prospect theory

The theory was established in 1977 and developed in 1992 by Kahneman and Tversky it as a psychologically more accurate description of decision making, compared to the expected utility theory, it is a behavioral economic theory that describes the way people choose between probabilistic alternatives that involve risk, where the probabilities of outcomes are known. The theory states that people make decisions based on the potential value of losses and gains rather than the final outcome, and that people evaluate these losses and gains using certain heuristics. The model is descriptive: it tries to model real-life choices, rather than optimal decisions, as normative models do.

The theory describes the decision processes in two stages; during editing, outcomes of a decision are ordered according to a certain heuristic. In particular, people decide which outcomes they consider equivalent, set a reference point and then consider lesser outcomes as losses and greater ones as gains. The editing phase aims to alleviate any framing effects. It also aims to resolve isolation effects stemming from individuals' propensity to often isolate consecutive probabilities instead of treating them together. The editing process can be viewed as composed of coding, combination, segregation, cancellation, simplification and detection of dominance. In the subsequent evaluation phase, people behave as if they would compute a value (utility), based on the potential outcomes and their respective probabilities, and then choose the alternative having a higher utility (Barberis, 2012).

Some behaviors observed in economics, like the disposition effect or the reversing of risk aversion/risk seeking in case of gains or losses (termed the reflection effect), can also be explained by referring to the prospect theory. An important implication of prospect theory is that the way economic agents subjectively frame an outcome or transaction in their mind affects the utility they expect or receive. The original version of prospect

theory gave rise to violations of first-order stochastic dominance. That is, prospect A might be preferred to prospect B even if the probability of receiving a value  $x$  or greater is at least as high under prospect B as it is under prospect A for all values of  $x$ , and is greater for some value of  $x$ . Later theoretical improvements overcame this problem, but at the cost of introducing intransitivity in preferences. A revised version, called cumulative prospect theory overcame this problem by using a probability weighting function derived from rank-dependent expected utility theory. Cumulative prospect theory can also be used for infinitely many or even continuous outcome (Conso, 2010).

## 3. Methodology

This study used a mixed research design approach guided by a complex factorial and analysis research design. Factorial design is used in a study where the effects of varying more than one factor are determined, they are specifically important in several economic and social phenomena where usually large number of factors affect a particular problem.

For the primary data, the population for the study was generated from the management level (Top, Middle and Low Level Management) employees at the Treasury since this is the body entrusted with the monetary policy formulations and implementation. The capital control elements considered were: Capital Inflows and Foreign for the period June 2000- June 2015 from the CBK for the secondary data.

To check for the aspects influencing the correlation of elements differentials under monetary policy considered by this study, the variability was plotted on the time differentials for both the short and long run periods of June 2000 – June 2015. Time scope was considered appropriate to exclude the data from the pre-liberalization regimes, post-liberalization era was considered appropriate due to availability of data on monthly basis for the considered elements.

In assessing the effects of liberalization of capital control on monetary policy in Kenya, the study applied the Stochastic Discount Factor (SDF) methodology; this is convenient as it imposes a reasonable amount of structure on the sufficiency of the data for identifying the variability in monetary policy features at post capital control period leaving the model unconstrained the study modeled with the macroeconomic factors in a way that the conditional mean of increased capital inflow (in assumption of excess returns) in period  $t+1$  given the available information at time  $t$  satisfied the no policy effects (no-arbitrage) specification for unexpected shocks (excess returns) as a function of own variance plus its dynamic covariance with macro factors.

$$E_t[er_{t+1}] = \beta_1 Var_t[er_{t+1}] + \sum_{i=2}^{k+1} \beta_i Cov_t[Z_{i,t+1} : er_{t+1}] \dots \dots \dots i$$

Where  $\beta_i$ 's ( $i = 1, 2, \dots \dots K + 1$ ) are the coefficient of factors to be estimated

Further simplified to:

$$\sigma^2 = \omega + \alpha_1 a_{t-1}^2 + \beta_1 \sigma_{t-1}^2$$

**4. Foreign Exchange**

Kenya Shilling End Period Exchange Rates\1  
United States dollar

Coefficient	Estimate	Std. error	T value	Pr(> t )
omega	0.671730	0.206079	3.25957	0.001116
alpha1	0.414034	0.106096	3.90244	0.000095
beta1	0.506767	0.080104	6.32639	0.000000

Fitted equation is

$$\sigma^2 = 0.671730 + 0.414034a_{t-1}^2 + 0.506767\sigma_{t-1}^2$$

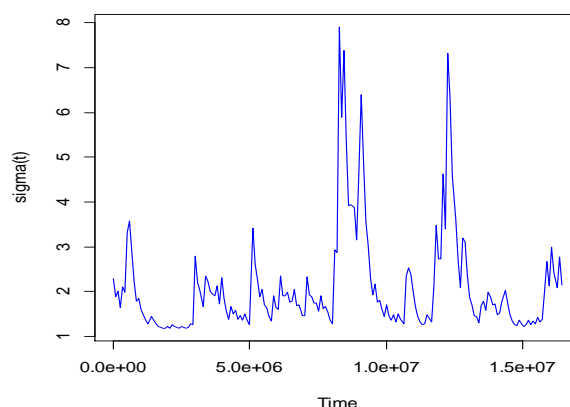
The significance of beta1 (p value=0.0000<0.05) shows persistence of volatility

The significance of alpha1 (p value=0.000095<0.05) shows existence of conditional volatility

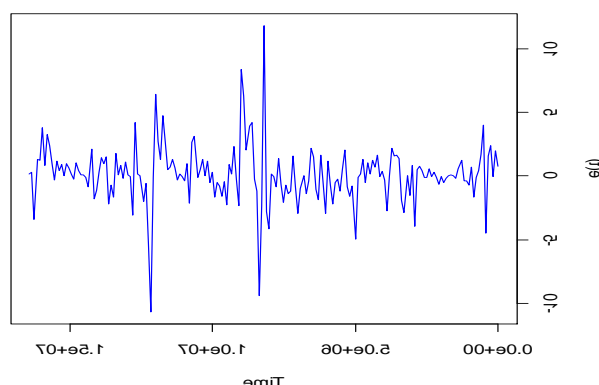
Box-Ljung test data: coredata(ret^2)  
X-squared = 38.339, df =12, p-value = 0.0001351  
The Box-Ljung test shows that fitting a garch(1,1) model was adequate (X-squared = 38.339, df =12, p-value = 0.0001351<standard p value of 0.05)

LogLikelihood : -393.6053

Information	Criteria
Akaike	4.1634
Bayes	4.2315
Shibata	4.1626
Hannan-Quinn	4.1910



**Figure 4.1: Plot of conditional volatility**



**Figure 4.2: Plot of residuals**

Figure 4.19 shows the sample ACF of the return which suggests no significant serial correlation, figure 4.20 shows the sample ACF of the absolute log returns i.e.  $|r_t|$ , whereas Figure 4.20 shows sample shows the sample ACF of the squared returns  $r_t^2$ . These two plots clearly suggest that the monthly returns are not serially independent, combining the four plots, it seems that the monthly returns are indeed seriously.

**4.20.1 Volatility of Capital Inflows**

Coef- ficient	Esti- mate	Std.erro r	T value	Pr(> t )
ome- ga	3.16794 3	0.5242 12	6.0433	0.0000 00
al- pha1	0.07816 5	0.0224 18	3.4868	0.0004 89
beta1	0.64278 2	0.0407 66	15.767 4	0.0000 00

Fitted equation is:

$$\sigma^2 = 3.167943 + 0.078165a_{t-1}^2 + 0.642782\sigma_{t-1}^2$$

Log Likelihood : -577.0648

Box-Ljung test data: coredata (ret^2), X-squared = 62.752, df =12, p-value = 7.078e-09

The significance of beta1 (p value=0.0000<0.05) shows persistence of volatility

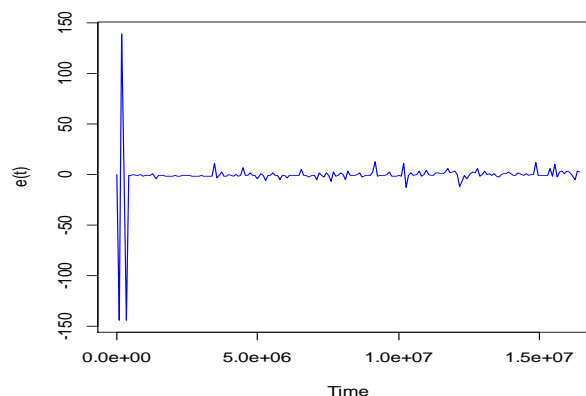
The significance of alpha1 (p value=0.0005<0.05) shows existence of conditional volatility

The Box-Ljung test shows that fitting a garch (1,1) model was adequate (X-squared = 62.752, df =12, p-value = 7.078e-09<standard p value of 0.05)

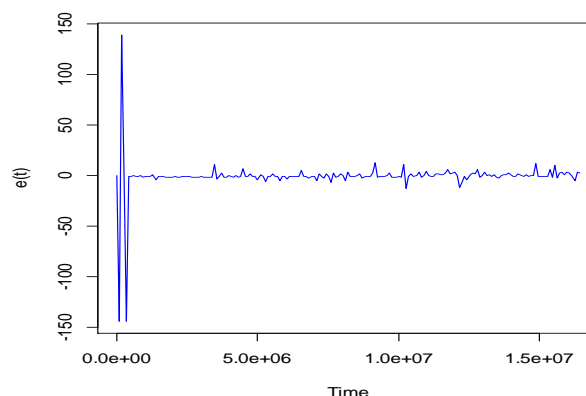
**Information**

**Criteria**

Akaike	6.0844
Bayes	6.1526
Shibata	6.0836
Hannan-Quinn	6.1120



**Figure 4.3: Plot of residuals**



**Figure 4.4: Plot of conditional volatility**

The ACFs suggest significant serial correlation or in other words conditional heteroscedasticity in the standardized residual series. Big percentage changes occurred occasionally, but there were certain stable periods as shown in Figure 4.10 and 4.11. Figure 4.12 shows sample residence debt levels and clearly the series has no serial correlation. This findings are consistent with that of (Davis & Presno, 2014) on Capital Controls as an Instrument of Monetary Policy saying Large swings in capital flows into and out of emerging markets can potentially lead to excessive volatility in asset prices and credit supply thus need for the use of capital controls.



## CONCLUSIONS

Use of capital controls provides emerging economies with the option of implementing, simultaneously, an independent monetary policy and a viable external intervening sector. This can be seen to be feasible when countries face the threat of capital inflow as well as speculative threats on the domestic currency when expectations or the perception of risk becomes less favorable. In Kenya, the liberalization on capital controls has increased the volume of inflows and changed its composition, but has not prevented the depreciation of the currency. It should be noted that, the use of capital controls represents a practical alternative that can allow governments to maintain a stable and competitive exchange rates, while at the same time pursuing a monetary policy that leads to sustainable stability and reasonable levels of inflation thus recommending a policy implementation to govern on capital inflow

Central banks, especially those in emerging economies, should be able to set an interest rate that is consistent and suitable with the goals of the Kenyan economic policy. Policy makers in Kenya should be able to address the threat of higher inflation and higher interest rates, and at the same time be able to respond to the economic risk such as recession with lower interest rates. Similarly, a healthy foreign sector should result to an appropriate foreign exchange rate policy that allows for a stable and competitive real exchange rate in the economy of the country. Challenges may also arise when international investors want to move into the country, especially when the possibilities are arising to profit from a gap between local and foreign interest rates as experienced in Kenya recently. These situations occur when, in an attempt to stabilize prices, the central Bank and the Treasury decide to increase interest rates.

There is great interdependence between monetary policy and exchange rates by imposing a combination of short-run and long-run restrictions. Identifying recursively a standard structure comprised

of macroeconomic variables and monetary policy, monetary policy can react to all shocks, but the macro-economic variables react with a delay to monetary policy shocks.

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