

Central Bank's Response to Economic Crises from a Developing African Economy Perspective: Lessons from Kenya's Experience*

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Abstract

Much of the debate on the policy responses undertaken with respect to the global financial crisis has largely focused on advanced economies, leaving out African economies' perspective. This paper examines the Central Bank of Kenya's policy responses in mitigating the economic effects of the global as well as domestic crisis that preceded the effects of the global crisis in the early 2008. We note that whereas the policy interventions were initially effective in restoring confidence, lowering the short term interest rates and maintaining macroeconomic stability, the loose monetary policy stance could not be sustained following increased inflationary pressures and unprecedented depreciation of the exchange rate. The abrupt shift to a tight monetary policy stance led to a sudden rise in both short term and long term interest rates, thus partly counteracting the gains that had been achieved. Additionally, an assessment of the effectiveness of monetary policy using VAR analysis indicates weak monetary policy transmission mechanism. There are important lessons that can be drawn from Kenya's experience: the need for a clear exit strategy particularly when adopting a major policy shift, strengthening of the monetary transmission mechanism in a way that make monetary policy more effective and, a wholistic approach to addressing structural weaknesses and vulnerability of most African economies to shocks, since monetary policy on its own is not adequate.

1. Introduction

The importance of effective regulation and a sound financial system cannot be overemphasized in a highly and uncertain globalized world of today. A sound financial sector not only fosters economic growth by mobilizing resources for investment, but also provides a framework for undertaking effective monetary policy. Problems and inefficiencies in financial systems can reduce the effectiveness of monetary policy, deepen or prolong economic downturns, and, in case of large scale problems, trigger capital flight. Moreover, financial weaknesses or crisis in one country can rapidly spill over across national borders, as clearly evidenced by the recent 2008 global financial crisis, which had far reaching effects in many countries across the world.

Economic crises not only affect the level of economic activities but can also cause financial panic, which lowers monetary policy efficiency with more damaging effects on the economy. A central bank's main objective during a crisis is to contain the damage and limit the impact of the crisis on the real economy. This can be achieved through various means such as enhancing confidence and calming the market, ensuring uninterrupted flow of credit, reducing uncertainty; ensuring that markets for short term credit function properly, among others. Additionally, central banks also have an important role in reducing the probability of a crisis occurring by undertaking pre-emptive measures that among other things reduce systemic risks. The role played by central bank as a key regulator of the financial sector is, therefore, critical.

Many central banks in the developed economies reacted to the global crisis by reducing interest rates to historically low levels, complemented by use of unconventional monetary policy measures such as quantitative and credit easing. However, because of differences in monetary policy frameworks, development level, political interference, quality of institutions and degree of vulnerability to global macroeconomic shocks, the nature of central banks' responses to crises and the extent of their effectiveness in the African economies are bound to differ from that of developed economies. Also important is the question on how much "policy space" the developing countries have to adopt autonomous and effective countercyclical macroeconomic policies consistent with the long term development objectives (Jordan 2012). Moreover, there is no consensus on how quick and aggressive policy actions should be nor on what policy responses are most effective.

Much of the debate on the policy responses undertaken with respect to the financial crisis and their effectiveness have largely focused on the US, Europe and other advanced economies (see Taylor and Williams 2009; Carboni and Carboni 2012; Andrea and Ait-Sahalia et al 2012). African countries' perspective is still lacking. This is despite the fact that the degree of impact and the depth of responses varied across countries, depending on the interplay of domestic and institutional factors. The extent and differences across central banks' reactions to the crises should, therefore, be understood in the light of the varying design of their operational frameworks for monetary policy and the different structures of respective financial systems (Lenza et al., 2010). Kenya is a developing African economy whose experience is a bit unique in the sense that by the time the impact of the financial crisis became manifest, the country was already reaping from the adverse effects of the domestic political crisis occasioned by post-election violence that erupted in January 2008 after the country held its parliamentary and presidential elections in December 2007. The disputed outcome of the electioneering process led to civil unrests that disrupted economic activity, blocked supply chains, led to loss of property and a drastic slowdown in the level of economic activities affecting investment and employment. It would therefore, be misleading to discuss the effect of the global financial crisis in Kenya in isolation from the domestic crisis that arose from the post-election violence. This paper examines the Central Bank of Kenya (CBK)'s policy responses to the domestic and global financial crises, the outcomes, challenges and lessons to be drawn from Kenya's experience. The paper largely focuses on the period 2007 to 2011 within which the two crises occurred.

The rest of the paper is organised as follows; section 2 gives a brief background of the crises while section 3 outlines an overview of the economic effects. Section 4 discusses the monetary policy and other measures undertaken including the outcomes. The last section concludes and outlines lessons learnt.

2. Background of the Crises

2.1 The Domestic Crisis

The domestic crisis was politically triggered by the post-election violence following the contested outcome of the presidential and parliamentary general elections held in December 2007. From the onset of multi-party democracy in 1991, political party formations in Kenya were based on ethnic backgrounds, and consequently, voting patterns in general elections would largely be along ethnic lines. Following the peaceful and well conducted elections in 2002, the new (NARC) Government that took over (from KANU) initiated an economic growth recovery programme that revamped the economy from the doldrums to realize a historic real growth rate of 7.1 percent in 2007. The economic recovery

witnessed could easily back Collier and Hoeffler's (2009) assertion that democratic processes are certainly compatible with good economic performance the world over. However, in their analysis of effects of elections, Chauvet and Collier (2009) observe that elections have cyclical and structural effects and conclude that badly conducted elections have detrimental effects on the economy and vice versa. This was clearly evidenced in Kenya after the disputed general elections of December 2007. The economy slipped into a recession as the key sectors that form the backbone of the economy such as agriculture and tourism were adversely affected. The impact of the violence on the economy was widespread as many people were displaced in the agricultural rich zones, supply chains were disrupted and overall confidence in the economy deteriorated. This adversely impacted on the economy and derailed it from a strong growth path that had earlier been witnessed. The Kenya shilling depreciated substantially against the US dollar and other currencies, having been fairly stable for a considerable period of time. The official foreign exchange reserves were drawn down from USD 3,355 million in December 2007 to USD 2,769 million by January 2009. In addition, the activity at the domestic stock market recorded dramatic decline as foreign investors exited the stock market in search for safer markets.

2.2 The Global Financial Crisis

There is a general consensus that the 2007/2008 global economic and financial crisis is the worst since the Great Crash of 1929 and the Great Depression that followed. A lot has been documented on the origins and causes of the crisis (see Acharya, et al. 2009, Greenlaw et al. 2008, Morgan 2009, Adrian and Shin 2010, among many others). However, most of the causes are generally traced to the low interest rate policies adopted by the Federal Reserve and other central banks after the collapse of the technology stock bubble in 2000 and the 9/11 terrorist attack in 2001. In addition, the appetite of Asian central banks for (debt) securities contributed to lax credit. These factors helped fuel a dramatic increase in house prices in the United States and several other countries such as Spain and Ireland which had adopted loose monetary policy (Adrian and Shin 2010, Brunnermeier 2009, Greenlaw et al. 2008, and Taylor 2008).

Starting in the summer 2007, the global financial crisis was linked to the incentive problems in the U.S. mortgage industry. The low interest rate regime together with other policy incentives in the US helped to boost demand for houses that resulted in increased house prices. In 2006, this bubble reached its peak in the United States and house prices started to fall. The bubble was much larger in the US though it also affected other countries.¹ Nadauld and Sherlund (2008) provide an account of the developments in the

¹

housing market preceding the crisis and observe that the fall in house prices led to a fall in the prices of securitized subprime mortgages, affecting financial markets worldwide. During the fall of 2007, the prices of subprime securitizations continued to fall and many financial institutions started to come under strain.

However, the climax came in September 2008 when Lehman's collapse forced markets to re-assess risk. While Lehman's bankruptcy induced substantial losses to several counterparties, its more disruptive consequence was the signal it sent to the international markets that credit risk in the banking sector and financial industry was a serious concern. Reassessing risks previously overlooked, investors withdrew from the markets and liquidity dried up. In the months that followed and in the first quarter of 2009 economic activity in the United States and many other countries declined significantly. Consequently, unemployment in these countries rose dramatically as firms undertook downsizing measures.

Many other factors such as subprime mortgages, weak regulatory structures, and high leverage in the banking sector are cited to have exacerbated the effects of the crisis (Allen and Carletti, 2009). Senbet (2008) summarises the factors that caused the global financial crisis to five factors: First, the housing boom and the sub-prime lending; second, excessive risk taking by banks and other financial institutions (also associated with lax regulation); third, easy money and overconfidence affecting participants in the financial sector; fourth, rating agencies and grade inflation; and fifth, complex and opaque securitization. The failure of major financial institutions such as Lehman Brothers and Merrill Lynch created a crisis of confidence leading to global panic, flight to quality from traditionally safe assets such as money market funds and commercial paper, and eventually to drying up of private capital. Due to increased globalization, the US crisis spread to highly exposed economies.

3. An Overview of the Economic Effects of the Crises on Kenya

The economic impact of the politically instigated domestic crisis was immediately felt in the key economic sectors that drive the economy, particularly agriculture, tourism and manufacturing. Like most African economies, Kenya's economy is primarily agro-based, with agricultural sector contributing about 24 percent of the GDP. Before the post-election violence, the economic recovery had been impressive and the economy was on a steady growth path, with real GDP growth rate rising from 5.1% in 2004 to 7.1% in 2007, and was poised to grow at even higher growth rate in 2008, sustaining the growth momentum to 10% in the medium-term as envisaged in the country's blueprint aimed at transforming Kenya into an industrialized nation, dubbed *Vision 2030*. However, as a result of

developments following the domestic crisis, output growth declined sharply from a real GDP growth rate of 7.5 percent in the first quarter of 2007 to a negative growth rate of 1 percent in the first quarter of 2008. The shilling depreciated against the US dollar from an average of Ksh. 63.30 in December 2007 to Ksh 70.62 per US dollar in February 2008. Coupled with the rise in the international prices of crude oil in the early 2008, the supply side constraints put pressure on domestic prices, with overall inflation rate rising from 5.7% in December 2007 to a peak of 18.6% in May 2008.² The high inflation continued in 2009, largely as a result of increases in prices for food commodities owing to the drought that was experienced early that year.

On the other hand, the effects of the global financial crisis on the domestic economy were to a large extent, bound to depend on the structure of the economy and the level to which it is integrated into the global economy. These factors influence the extent to which macro prices (stock prices, interest rates and exchange rates) are affected and how these in turn affect the real economy. The global economic and financial crisis impacted on Kenya's economy mainly by reducing external demand for Kenya's exports.

The onset of the global crisis in the last quarter of 2008 reinforced the negative effects of the domestic crisis. The first round effects included declining stock market and volatility in the foreign exchange market. Before the shilling could fully recover, it depreciated against the major foreign currencies, from September 2008 to January 2009, owing to the impact of the global financial crisis. The second round effects resulted from a decline in global economic activity which led to a decline in demand for Kenya's exports of goods and services. This further affected the economic recovery process and economic growth trajectory.

Given the sensitivity of the tourism sector, the impact of domestic and global crises was almost instantaneous. In the first quarter of 2008, the violence and bloodshed associated with the political crisis kept off tourists and as a result, tourist arrivals in the country declined substantially by about 62% from 96,336 in December 2007 to 36,970 in February 2008 when peace was restored. Before the sector could fully recover, the impact of the global financial crisis set in and decreased the demand for tourism among holiday makers, though the impact was less severe. As the adverse effects of the global economic crises dissipated, the number of tourist arrivals picked up once more.³

² The inflation numbers reported at that time before the methodology was changed from arithmetic mean to geometric mean were much higher—e.g. inflation for May 2008 was reported to be 31.5%.

³ On average, about 69 percent of Kenya's tourists come from Europe and 6 percent from the US.

Besides tourism, Kenya's key exports are agricultural commodities i.e. horticulture (mainly cut flowers), tea and coffee. According to the Tea Board of Kenya, Kenya exports about 95 percent of its tea produce and much of the product is grown by small scale farmers. Kenya supplies over 35 percent of cut flowers and ornamentals to the EU, which is estimated to consume approximately 50 percent of the world's flowers. Following the reduction in global demand for cut flowers, the labour intensive horticultural industry, had to cut around 1200 jobs, as it suffered a 35 percent drop in exports of flowers in April 2009, compared with the year before. While large-scale exporters were performing fairly well, small scale farmers were the most affected by the shrinking markets, reduced earnings and rising costs of production. Additionally, tea and coffee output declined by 11.89 percent and 30.82 percent between the fiscal years 2006/07 and 2007/2008, which was mainly attributed to displacement of labour following the post election disturbances in tea and coffee-growing zones. The decline in demand for these commodities in the global market occasioned by the global financial crises came at a time the tea and coffee subsectors were just starting to recover from the effects of post election violence. The depreciation of the shilling against the US dollar and other currencies was further magnified by the reduced foreign exchange inflows from exports of goods and services such as tourism and horticulture.

With respect to the financial sector, Kenya's banking sector is fairly insulated from foreign finance in the sense that banks hardly have derivatives or asset-backed securities in their portfolios. African banks largely retain loans that originate from their balance sheets and the market for securitised or derivative instruments is either small or non-existent. It is thus not surprising that unlike the other sectors, Kenya's banking sector remained resilient to the adverse developments in the global financial crisis. However, the sector recorded some negative, though not significant effects. Due to increased perception of risk and a decline in economic growth, non-performing loans increased by 14.0 percent from Ksh 56.3 billion in June 2008 to Ksh 64.2 billion by June 2009. Although the banks were less exposed, they tightened their risk assessment of customers seeking loans with a number of banks increasing their lending rates and /or restricting lending to particular sectors as a result of the perceived risks emanating from the crisis. As opportunities for lending narrowed, banks channelled more of their investment funds to the risk-free government securities.

Kenya's financial sector is mostly dominated by commercial banks, though the level of bank penetration is still low. Although foreign owned banks may be viewed as likely sources of financial vulnerability due to their exposure to foreign finance, stress tests and financial soundness indicators showed that the foreign banks operating their subsidiaries in Kenya were stable and sound as there was no evidence that the share of foreign banks (in terms of core capital) changed fundamentally between 2007 and 2010.

Further, there is no evidence that the value of bank collateral reduced to the level that could affect the stability of the banking system. On the contrary, property prices increased substantially in 2008 and 2009. During this period, the banking sector improved tremendously in terms of product offerings and service quality, stability and profitability. As at end of June 2009, the banking sector maintained high capital adequacy ratios, adequate liquidity and low non-performing loans in relation to gross loans. The total shareholders' funds, deposits and assets expanded by 25.4 percent, 9.5 percent and 15.0 percent, respectively. Liquidity remained strong, with the ratio of liquid assets to total deposit liabilities at 40.9 percent, which was well above the statutory minimum requirement of 20 percent. The overall performance of the banking sector has since remained strong and sound⁴. Financial institutions have continued to outperform firms in other economic sectors, reporting enviable profits despite the high interest rates and inflation, leading to high cost of credit.⁵

4. Monetary Policy Inventions and Financial Sector Measures

Most Sub-Saharan African (SSA) countries including Kenya adopted expansionary monetary and fiscal policies in response to the effects of global crisis, in line with a similar trend witnessed worldwide. International food and fuel price shocks that preceded the global financial crisis had put upward pressure on domestic inflation in most SSA countries. As the price shocks subsided, there was a slowdown in inflation, thus creating more room for the easing of monetary policy (Kasekende and Brownbridge 2010). However, the challenge that countries like Kenya have faced is not whether monetary easing was necessary but whether the extent of the expansion was appropriate and effective in yielding the desired effects. Following the derailment of the growth trajectory occasioned by both the domestic and global financial crises, there is no doubt that there was need for countercyclical monetary and fiscal policies to resuscitate the economy and restore growth.

First and foremost, was the urgent need to address the waning confidence in the economy occasioned by the aftermaths of the domestic and there after global financial crisis. The Central Bank responded to the crises by loosening monetary policy complemented by other intervention measures. It was envisaged that the expansionary monetary policy would facilitate release of resources that would eventually be channelled to the real sector to finance economic recovery. However, to be more effective, this needed to be complemented by a fiscal economic stimulus to stimulate demand. Thus, the Government initiated an infrastructure bonds programme to finance public investments in targeted infrastructure project and the first infrastructure bond was issued in February 2009. It was envisaged that lower interest

⁴ Stress tests results reported by the Banking supervision Department of the Central Bank of Kenya show that the sector is strong, sound and resilient to withstand extreme shocks.

⁵ 2009 and 2010 overall banking sector reported average annual profits of over Ksh.70 billion

rates would facilitate the government to spend more on infrastructure without crowding out the private sector. An economic stimulus package of Ksh 22 billion (about USD 280 million) directed at creating employment and funding rural-labour intensive projects (dubbed “*kazi kwa vijana*”⁶) was incorporated in the 2009/2010 fiscal budget. The package was expected to stimulate consumption levels, thereby generating the necessary demand to boost production in the economy. However, the actual implementation of fiscal stimulus package lagged behind and was marred by implementation bottlenecks relating to bureaucracy and delays due to government procurement procedures and other setbacks. In contrast, the flexibility in employing monetary policy tools enabled a quick response by the central bank in mitigating the effects of the crises.

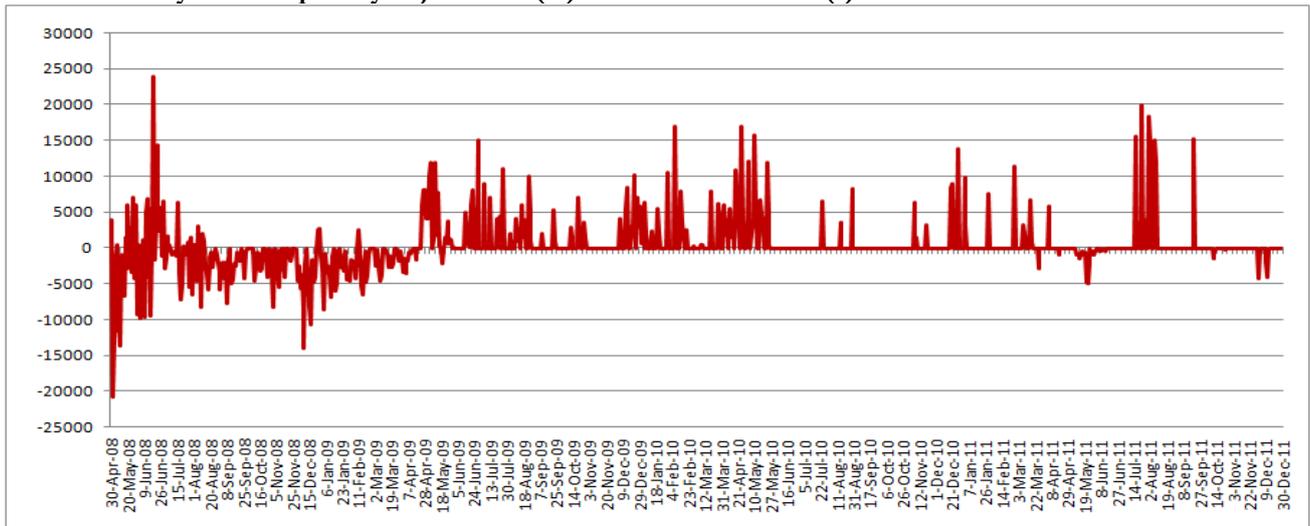
The monetary policy implemented by the central bank was geared towards ensuring availability of liquidity to enhance private sector credit for financing economic activities. The use of traditional monetary policy instruments was complemented by additional policy tools and other measures to enhance the effectiveness of monetary policy actions and support the functioning of the financial markets. In developed economies like the UK and USA, non-standard measures were adopted with the intention of easing financing conditions further in cases where the scope to lower the interest rates further was constrained by a lower bond (Lenza et al., 2010). We briefly discuss some of the policy measures in detail below.

4.1 Expansionary monetary policy

Although CBK follows a monetary targeting framework, it uses a policy rate, i.e. the Central Bank Rate (CBR) which is set by the Monetary Policy Committee (MPC) to signal monetary policy stance. The rate is raised or lowered depending on the prevailing conditions. Following the onset of the global financial crises in September 2008, the Bank lowered its policy rate from 9.00 percent to 8.50 percent and the Cash Requirement Ratio (CRR) from 6.00 percent to 5.00 percent in December 2008, as a policy signal for lower interest rates in order to enhance credit supply in the economy. In July 2009, the CRR was further reduced to 4.50 percent, releasing about Ksh 5 billion (about USD 65 million) to the banks to lend. The availability of liquidity was further enhanced by consistently lowering the CBR up to 6.75 percent in March 2010. The lowering of the policy rate was complemented by quantitative measures operationalised through open market operations, injecting (on a net basis) more liquidity to the banking system than the withdrawals. This was the case for the better part of the first half of 2008 just after the domestic political crisis, and from the second half of 2009 following the global financial crisis (see Chart 1).

⁶ Means “jobs for the youth”

Chart 1: Daily Net Liquidity injections (+) and Withdrawals (-)



Source: CBK

For quite a long time, the Bank had adopted a tight monetary policy stance characterized by regular mop-ups of liquidity. Cheng (2006) contend that tight monetary stance appear to have been a dominant feature of the Kenyan economy. The consistent liquidity injections that followed the crises period was, thus, one of the most historic policy shift in the country's conduct of monetary policy – a clear indication of countercyclical policy. It was historic in terms of both the duration and the amounts of liquidity injected.

Even after injecting the liquidity in the market, a distributional imbalance of the liquidity in the banking system was noted, largely as a result of segmentation in the banking sector, particularly between the large and small banks. Consequently, other policy tools e.g. horizontal (inter-bank) repurchase agreements were introduced in September 2008 to deal with distortions and enhance even distribution of liquidity in the banking sector. Through this facility, commercial banks can use treasury bills as collateral to secure credit from other banks to meet liquidity requirements.

The clarity with which central banks are able to communicate the monetary policy stance especially during periods of crisis cannot be overstated. Provision of liquidity was complemented with a clear communication strategy that continuously kept the market informed of the monetary policy stance being

pursued and other measures or issues that emerged. This was particularly critical in fostering stability of the market and defusing anxiety and unnecessary panic at the onset both the domestic and financial crises.

4.2 Financial sector policy measures

Besides the direct monetary policy interventions aimed at enhancing liquidity in the market, efforts were directed towards other measures⁷ that would arguably, enhance the depth, operation and efficiency of the financial market and ultimately enhance monetary policy effectiveness. Additionally, these measures were also envisaged to assist in bringing down the cost of credit, which is still regarded to be relatively high. These include creation of credit reference bureaus with the licensing of the first credit reference bureau in the first quarter of 2010 to facilitate the lowering of the cost of credit after it emerged that challenges in the realization of collateral and the sufficiency of information for pricing risk were among the factors that impeded efficiency in the banking sector and gave rise to higher cost of credit. The existing models of pricing risk do not reflect a competitive market structure as would be expected.

CBK has also been pursuing a policy of broadening financial inclusion to the majority of Kenyans. This has been pursued through several channels including: the introduction of agency banking (use of third party agents to offer specific banking services) in a bid to reach the unbanked population especially in small towns and rural areas; embracing ICT-related innovations such as mobile money transfer and banking services and increasing access to investments in government securities by reducing the minimum investment in Treasury bill from Ksh 1,000,000 to Ksh 100,000 to encourage small investors to participate in the risk free government debt and offer competition to large investors. As a fiscal agent to the Government, the Bank in collaboration with the Treasury has been spearheading reforms in the domestic government securities market to broaden the investor base, promote secondary trading and develop an appropriate yield curve for government securities. Additionally, a Microfinance Act was operationalised in 2008 by putting the deposit taking microfinance institutions under the regulatory purview of CBK.

5. The Outcomes

By and large, it has been acknowledged that the aggressive monetary policy measures undertaken by central banks in the developed economies starting with the US were effective in lessening the severity of the economic downturn following the global crisis (Mishkin 2011). Ait-Sahalia et al (2012) examine the impact of macroeconomic and financial sector policy inventions in the US, UK, the Euro area and Japan

⁷ Some of which are still on-going.

using event study methodology. They contend that the policy interventions were associated with reductions in interbank risk premia, with market responses depending on the broader context in which market participants interpreted the policy news. However, with respect to African economies, Kasekende and Brownbridge(2010) conclude based on 10 SSA countries (including Kenya) that the attempt to stimulate demand through monetary policy was not fully successful, as bank lending to the private sector fell sharply in 2009 to an average of 16 percent, from an average of over 30 percent in the few previous years. Following the increased liquidity, most banks, as was also evidenced by Kenya's case increased their accumulation of reserves with the central bank and the purchase of government securities in their portfolios. Efforts to further increase bank credit to the private sector were hindered by inefficiencies in the transmission of monetary policy from short term interest rates to long term (lending) rates. Kasekende and Brownbridge (2010) show that for five countries (Ghana, Kenya, Tanzania, Uganda and Zambia), the fall in the Treasury bill rate left bank lending rates virtually unchanged, and attribute the stickiness in the lending rates to lack of competition in the banking sector.

5.1 An Exploratory Analysis

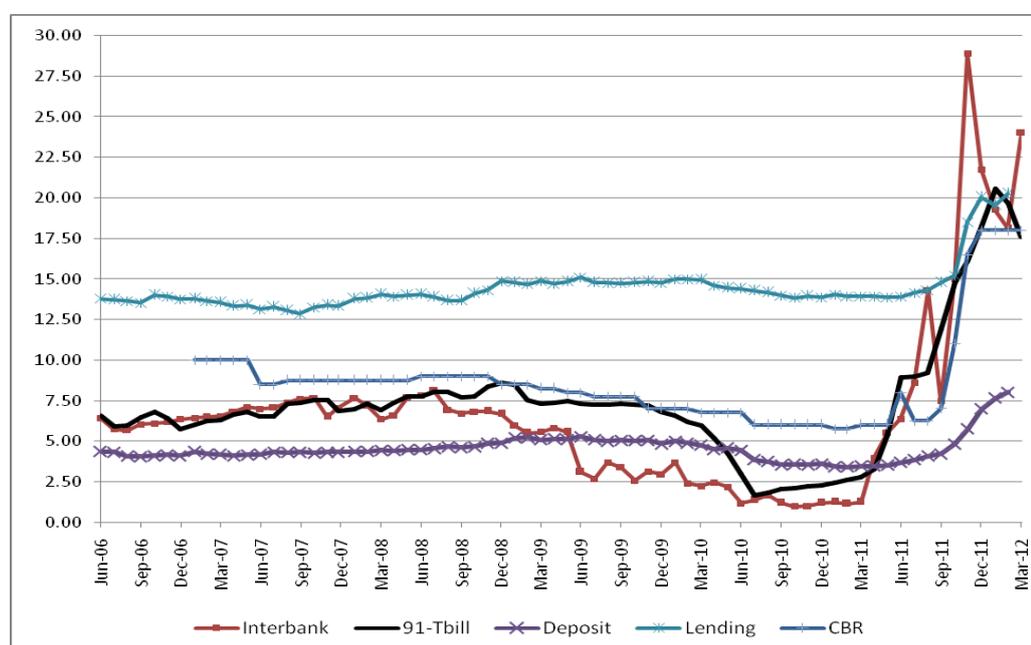
Interest rates and exchange rates

Our analysis shows that although the monetary policy expansion through successive cuts in the CBR and injection of liquidity led to a decline in the short term interest rates (the REPO, interbank and 91 day Treasury bill interest rates). However, there was no significant reductions in the commercial banks' lending rates during the period of the decline (i.e. 2008 to 2010), leading to high interest rate spreads (Chart 2). The 91-day Treasury bill rate declined by 261 basis points from 8.588 percent in December 2008 to 5.980 percent in March 2010. Similarly, the interbank interest rates and the REPO rate declined by 444 basis points and 393 basis points, to 2.214 percent and 2.431 percent, respectively over the same period. On the other hand, the average lending rates increased from 13.3 percent in December 2007 to 14.1 percent in March 2008 before declining slightly to 13.7 percent in September 2008. The rise was mainly attributed to the effects of post-election violence, i.e. a rise in default risks. The rates could, in fact have risen higher if the re-assurance that inflation was not likely to rise further once the supply bottlenecks were addressed was not communicated to the market participants. However, the decline was short-lived as the lending rates increased to 15 percent by June 2009, with banks exercising cautious lending following the global financial crisis.

It has been observed that lowering the policy rate may have a limited effect on credit markets if the standard monetary policy transmission mechanisms are impaired (Ghosh et al., 2009). In the case of Kenya, Misati et al., (2011) found an incomplete pass-through of the policy rate (CBR) to lending rates,

both in the short term and the long term. Their findings showed that it takes approximately between 11 and 24 months for the policy rate to be transmitted to long term rates in Kenya. Based on simulations from the CBK macroeconomic model, Were et al (2012) provide further evidence which show that whereas the impact of a change in the policy rate on short term rates such as interbank is strong, the transmission to the lending rates is weak. The ineffectiveness of monetary transmission from short to long term rates should partly be understood in the context of the structure of the banking sector in which only a few banks dominate the market and the perception of risk is high. Basically, the need to understand and strengthen the transmission mechanism to the long term rates is of essence.

Chart 2: Trends in Short Term Interest Rates

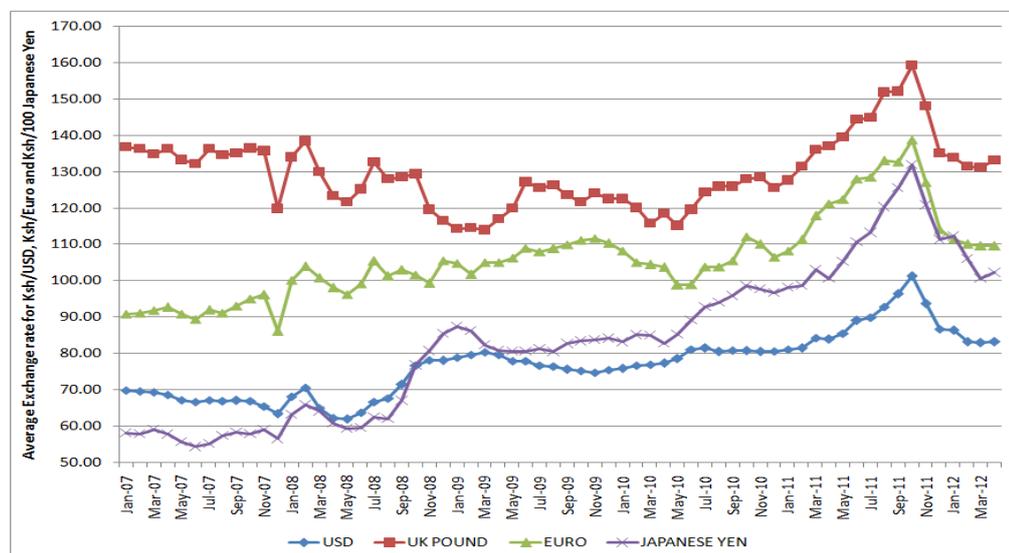


Source: CBK

Chart 2 shows the vivid turn around in the interest rates, from a remarkable decline to a sudden, sharp rise starting around mid 2011. This followed a shift in the monetary policy stance from an expansionary policy to a tight monetary policy, in response to build-up in inflationary pressure and a rise in exchange rate volatility. By 12th October, 2011, the Kenya shilling depreciated to its historical lowest level of 107 against the US dollar, compared with an average of 81 shillings per US dollar in January 2011 (see Chart 3). This reflected a depreciation of about 32 percent in nominal terms over the period and drew remarkable concern from both policymakers and the general public. The fall in the shilling attracted so much attention to the extent that while on one hand the Central Bank explored varied avenues and

monetary policy tools to tame the exchange rate volatility, the legislative assembly instituted a special committee to investigate and establish the factors that were causing the depreciation⁸.

Chart 3: Trends in Kenya Shilling Exchange Rates against Major Currencies



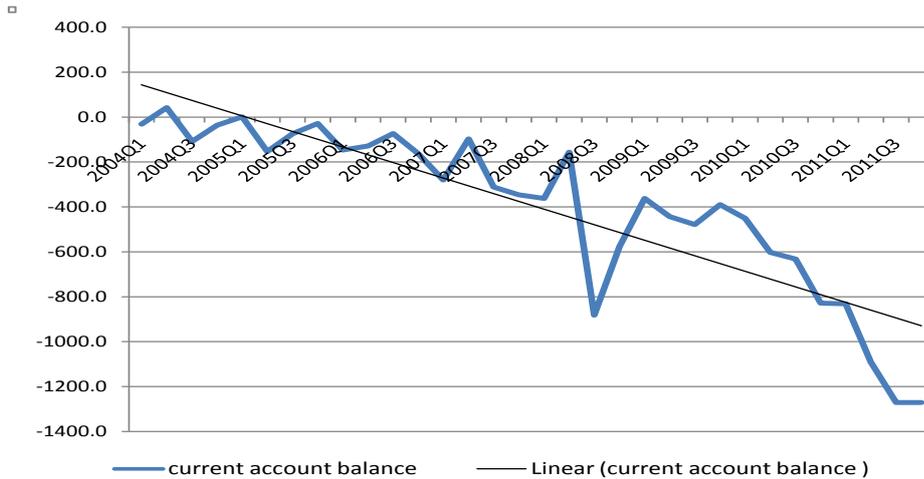
Source: Central Bank of Kenya

On its part, the Central Bank took a number of measures to address the inflationary pressures and the sharp depreciation of the shilling. The MPC was compelled to raise the CBR from a low level of 6.25 percent in early September 2011 to a high level of 18 percent in December 2011, which is currently the highest MPC has ever set. Other measures to stabilise the shilling included interventions in the foreign exchange market through sale of foreign exchange and an audit of the foreign exchange activities of commercial banks, leading to a review of the foreign exchange guidelines with a view to mitigate against speculative behaviour.

Although much of the debate on the fall of the shilling has focused on the role of the monetary policy in reference to the monetary easing, structural weaknesses especially the huge import demand relative to export earnings leading to a widening current account balance (chart 4) has a bearing on the exchange rate. Even though balance of payment (BOP) support from the IMF (amounting to USD750 million in the next three years) has helped strengthen the official foreign exchange reserves and eased BOP pressures, the growing external imbalance still remains a challenge.

⁸ The Committee recommended amendments to the CBK Act that touch on the structure and operations of the Bank.

Chart 4: Current Account Balance (Millions of US\$)



In response to the high interest rates signalled by the CBR, all other market interest rates increased significantly (Chart 2). For instance, the interbank rate and lending rates rose sharply from 7.46 percent and 14.79 percent to 24.02 percent and 20.34 percent, respectively, between September 2011 and April 2012. Although the lending rates are sticky downwards in response to the policy rate, they are quite flexible upwards, leading to high interest rate spreads. Kenya has one of the highest interest rate spreads.⁹

Although a combination of policy responses and regulatory measures adopted by the CBK and the Government has yielded the desired results of stabilising the exchange rate as well as easing inflationary pressures, the turn of events that saw the sharp depreciation of the shilling and an upsurge in interest rates has attracted a lot of attention and raised a number of questions, such as to whether the tightening of the monetary policy should have started much earlier, perhaps in anticipation of the subsequent turn of events. However, there is no consensus on how quick or aggressive policy actions should be, since the manner and extent of policy actions are bound to differ depending on the institutional and economic structure of the economy, not to mention the nature of the economic problem at hand. Nevertheless, Jordan (2012) argues that as a result of the measures implemented during the crisis, central banks took much more risk onto their balance sheets and attracted a great deal of public and political attention, which can threaten the principle of independence.

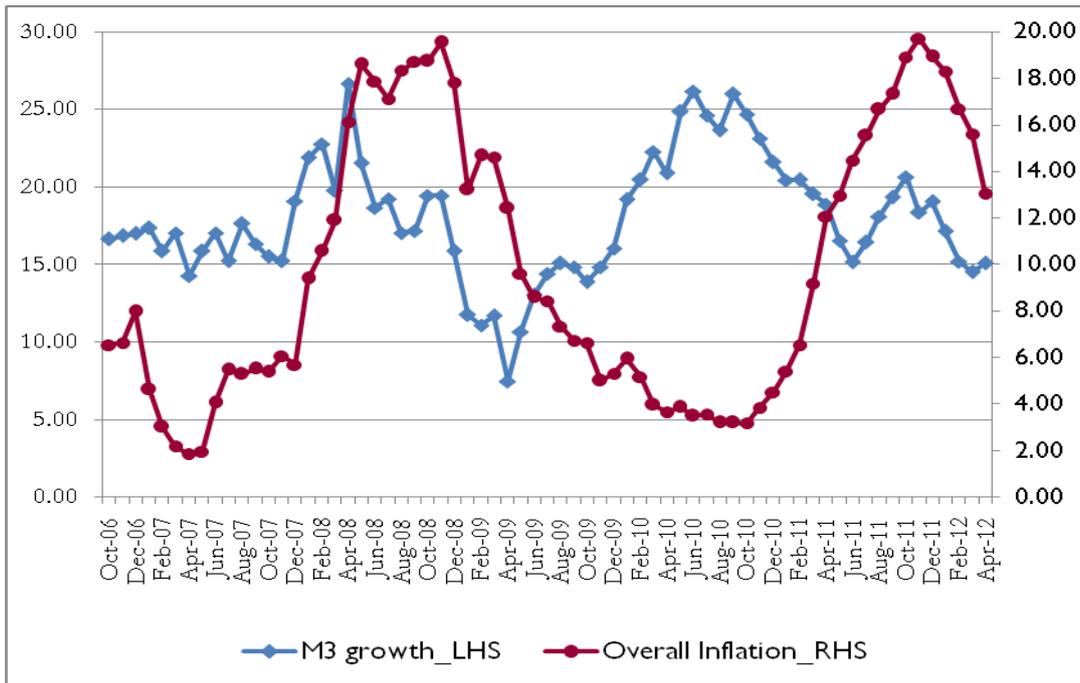
⁹ The uproar about the high interest rate recently led to a motion in parliament calling for capping of lending rates but it was defeated.

Inflation, money supply and credit growth

Like most central banks, the primary objective of the Bank is to formulate and implement monetary policy directed to achieving and maintaining stability in the general level of prices. Inflation in Kenya is often characterized by cycles and is highly susceptible to supply shocks relating to weather conditions and international price shocks. This is characteristic of inflation in most African economies which are agriculture-based. Chart 5 shows trends in inflation (and money supply growth), with notable peaks and troughs.¹⁰ The first peak relates to the high inflation experienced in the early 2008, largely occasioned by the supply-side factors caused by the domestic political crisis. Disruption of the supply chains particularly in the high potential agricultural areas resulted in shortage of food supply in other parts of the country. The inflationary pressures were reinforced by the subsequent rise in international oil prices and domestic weather-related supply constraints. The initial response of loosening the monetary policy stance to support growth recovery did not pose a threat to inflation which had mainly been triggered by the supply-side factors following the aftermaths of the domestic crisis. Following the restoration of political stability and resumption of growth, inflation started declining, maintaining a downward trend as from late 2008 to end of 2010, at the time during which growth in money supply was rising (chart 5). However, from December 2010, the inflation rose persistently from 4.5 percent to a peak of 19.7 percent in November 2011 before starting a consistent decline. This particular rise in inflation was largely fuelled by the drought conditions experienced in early 2011 leading to high prices for staple foods like maize and other essential commodities. The depreciation of the Kenya shilling against the dollar further exacerbated the inflationary pressures, which persisted despite the decline in money supply growth. Recent empirical studies on inflation in Kenya have shown that the impact of money supply growth on inflation is minimal and has a lagged effect (Were and Kaminchia 2011, Misati et al 2012).

¹⁰ Although Kenya is not a formal inflation targeting country, the central bank works towards achieving inflation target of 5 percent, which was recently raised to 9 percent following increased inflationary pressures.

Chart 5: Monetary Aggregates and overall Inflation



Source: CBK

In terms of credit, Table 1 below shows that credit to private sector grew by 20.34 percent in 2010 and by 30.87 percent in 2011 from a growth rate of 13.86 percent in 2009. The decline in credit expansion in 2009 is largely attributed to strict benchmarks that were adopted by the banks over fear of contagion effects from the global financial crisis. However, the expansion of credit particularly in 2011 was faster than output, leading to concerns about built up in demand-related inflationary pressures. However, following the tightening of monetary policy, credit growth has since declined. The increase in credit to government from 10.1 percent in 2008 to 32.03 percent in 2009 and further by 35.45 percent in 2010 is largely attributable to the launch of infrastructure bonds in February 2009 that offered a tax-free investment of Ksh 18.5 billion.

Table 1: Summary of Changes in Monetary Aggregates

	2005	2006	2007	2008	2009	2010	2011
Broad Money growth (%)	9.14	17.00	19.07	15.88	16.05	21.61	19.07
Credit to Private sector growth (%)	9.31	14.26	22.61	28.56	13.86	20.34	30.87
Credit to Private sector ratio to GDP(%)	25.43	25.35	27.51	30.76	31.19	34.84	38.44
Credit to Government growth (%)	-5.50	16.48	-2.87	10.10	32.03	35.45	12.17
Official Foreign exchange Reserves (USD million)	1,798.82	2,415.27	3,354.85	2,875.46	3,847.39	4,001.68	4,247.60
Months of Import Cover (based on 36 months average imports)	3.98	3.89	4.84	3.36	4.08	3.85	3.74

Source: CBK

5.2 An Empirical Assessment

We estimate a simple vector autoregression (VAR) model, which is the most commonly used framework in assessing the effectiveness of monetary policy shocks, particularly in the empirical literature on monetary policy transmission mechanisms. For instance, using VAR analysis, Boivin and Giannoni (2003) provide evidence suggesting that there was a reduction in the effect of monetary policy shocks in the post-1980 period compared to the period 1959 to 1979. With respect to the response to the financial crisis, Carboni and Carboni (2012) show that the innovations in the policy rate could not have an impact on inflation because of the zero lower bound for the interest rates. We focus on the impulse response functions in order to analyse the behaviour of the variables following a monetary policy shock. The structure of the unrestricted VAR is given as:

$$y_t = \lambda + A(L)y_{t-1} + \varepsilon_t$$

Where y_t is a vector of variables, λ is a vector of constants, $A(L)$ is a coefficient matrix, L is the backward operator and ε is a vector of serial uncorrelated disturbances. We built into the system, the standard variables in following order: real GDP(RGDP), CPI, Money (M3), the policy rate (CBR) and exchange rate(EXR). All variables except CBR are in natural logs. The estimations are conducted using monthly data for the period January 2004 to December 2011.¹¹ The number of lags (two lags) was determined using Akaike, Schwarz and Hannan-Quinn information criteria. The stability of the VAR was also tested and confirmed.

¹¹ The sample was not be very large but is within acceptance range to provide us with some estimates. Monthly GDP is obtained by interpolating quarterly GDP.

For robustness, the impulse response functions are first conducted on the basis of the first four variables (RGDP, CPI, M3, CBR,) and with all the variables including EXR¹². The corresponding impulse response functions are reported in Chart 1A and Chart 2A in the Appendix, respectively. The results are consistent across the two charts. For instance Chart 2A (fourth column) shows that following a monetary policy shock (i.e. unexpected rise in the policy rate), real GDP begins declining after 10 periods(months) whereas there is no significant impact on domestic price. The monetary aggregate M3 declines but the impact is not quite significant. The exchange rate appreciates after about two months. Cheng (2006) also found an appreciation following a monetary policy shock using Repo rate. The results seems to confirm the fact that interest rate channel is weak, particularly in controlling inflation. A shock in the monetary aggregate M3 has even much weaker impact on all the variables considered.

6. Conclusion and Lessons Learnt

Although much has been said about the global financial crisis, African countries' experience has largely been overshadowed. Kenya is a developing African economy, but whose experience is a bit unique in the sense that the economy was struggling to recover from the aftermaths of politically instigated domestic crisis by the time the effects of global financial crisis became apparent. The paper examines policy measures undertaken by the CBK in response to the domestic and global crises, the outcomes, challenges and lessons to inform future policies and actions.

To a great extent, the measures undertaken were effective in restoring confidence and resuscitating economic growth particularly after the economy sunk into a recession after the domestic crisis and the global financial crisis that followed. A quick monetary policy response was needed as it set the pace for the implementation of fiscal policy measures such as the fiscal stimulus package in order to coordinate the policy responses and facilitate economic recovery. For the better part of period 2008 to 2010, the short term interest rates and the rate of inflation declined. A rise in private sector credit was also witnessed, though the lending rates did not decline significantly. However, the challenge that arose was on how to sustain the gains that had been made, over the medium to long term. 2011 witnessed a marked rise in inflation owing to increases in international oil prices and decreased rainfall. Additionally, the exchange rate depreciated to unprecedented levels towards end of 2011 forcing a turnaround from a loosened to a tight monetary policy. This led to sudden rise in both short term and long term interest rates, thus partly counteracting the gains that had been achieved.

¹² These are standard variables in empirical literature on assessing monetary policy transmission mechanisms using the VAR framework. Some studies include exchange rate while others don't. The ordering followed is also consistent with that in the literature including studies on Kenya e.g. by Cheng (2006).

There are important lessons that can be drawn from Kenya's experience with the crises. There is no doubt that central banks have a role to play in mitigating the negative effects associated with economic crises, e.g. through pursuance of countercyclical policies. That notwithstanding, it is worthwhile to map out a clear exit strategy from the beginning when adopting a major policy shift to avoid undesirable and unexpected outcomes. This is importantly so in the context of African economies where policy space to manoeuvre may be limited. Moreover, the cost of cleaning up can be high and counterproductive, and hence the importance to keep in mind the trade-off between the gains (e.g. lower interest rates) and undesirable outcomes that may be associated with the policies undertaken.

Secondly, the external environment that SSA economies face is increasingly becoming volatile. The vulnerability of the African economies to external shocks coupled with structural weaknesses in these economies is likely to affect the conduct and effectiveness of monetary policy. Consequently, monetary policy alone on its own is not adequate in addressing the vulnerability of the macro economy to supply-side and external shocks. In economies that are largely agro-based with large informal sectors like Kenya, fluctuations in real output and inflationary pressures are likely to be caused by supply side shocks than aggregate demand shocks. A wholistic approach is paramount in dealing with structural imbalances such as high dependence on imports and agriculture. Aggressive measures and incentives to promote high value exports and counter the over reliance on imports would go a long way in enhancing the foreign exchange earnings and boost growth. Thirdly, there is need for appropriate monetary policy framework and policy instruments that would make monetary policy more effective. Use of monetary policy for active management of aggregate demand based on current monetary framework is bound to be set by challenges. Fourth, strengthening of the monetary transmission mechanism in a way that make monetary policy actions have a predictable impact on variables of interest is a challenge that needs to be addressed. Compared to industrialised and even emerging economies, the monetary policy transmission mechanisms in African economies is still relatively weak and has hampered the transition to modern policy frameworks such as inflation targeting. The ineffective monetary policy transmission mechanisms have been attributed to shallow and less integrated financial markets and limited competition in the banking sector, among others. The financial sector reforms needed go beyond monetary policy implementation. More reforms are needed to deal with the structural rigidities, increase the level of competition and address underlying bottlenecks that affect the operations and hamper the efficiency of the financial sector.

Last but not least is the political autonomy of the central bank. It is important to safeguard the role of the central bank and ensure that it has ample policy space to manoeuvre and take appropriate actions

without undue influence from the political system—i.e. ensure that the governing bodies are appointed and operate without political interference.

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Appendix

Chart 1A: Impulse Response Functions (RGDP, CPI, M3 and CBR)

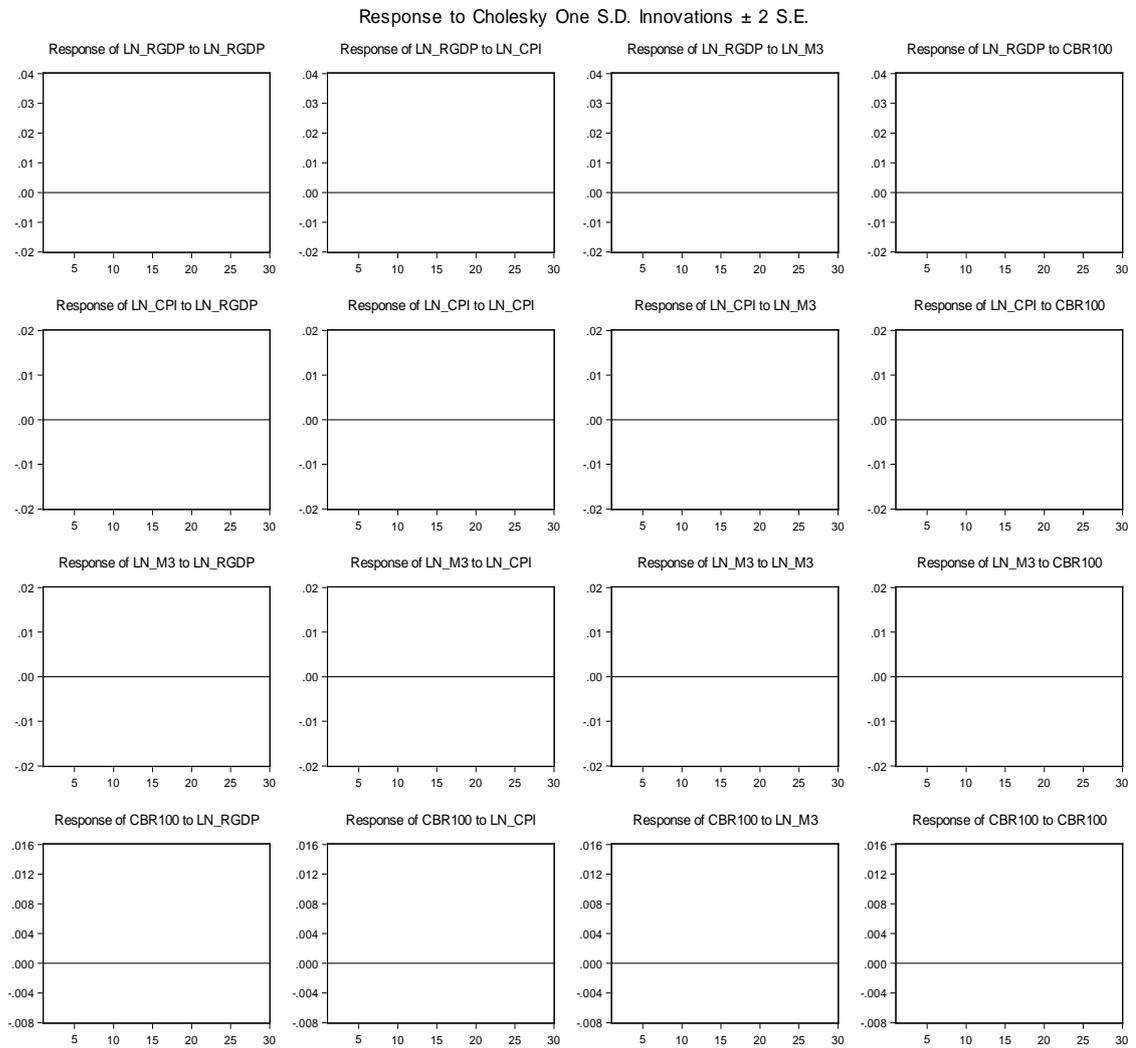


Chart 2A: Impulse Response Functions (RGDP, CPI, M3 and CBR)

