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# THE DEPLOYMENT AND EXIT FROM UNCONVENTIONAL MONETARY POLICY IN THE WAKE OF THE GLOBAL FINANCIAL CRISIS: EVIDENCE FROM EGYPT

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## Abstract:

This research investigates the effectiveness of unconventional or alternative policy measures by central banks in emerging market economies to cushion the blow of the global financial crisis. Unconventional tools mainly took the form of utilising central banks' balance sheets to expand interbank transactions on the money market and to furnish non-banking financial institutions as well as corporations with the much needed liquidity. Then, the paper elucidates that the Central Bank of Egypt did not resort to the costly tool of injecting equity into the balance sheets of Egyptian banks since they were decidedly sheltered from the global crisis. Next, the paper zooms into investigating the effects of the global economic downturn on the Egyptian economy and the efforts of both the fiscal and monetary agents in quelling the impact of the slowdown. In this context a dynamic stochastic general equilibrium (DSGE) model is estimated on data for Egypt taking into account the sources of major exogenous shocks, transmission mechanisms, and the level of its financial development.

**Key-words:** monetary policy, interest rate policy, nonconventional monetary policy, balance sheet policy, public borrowing, exit strategies.

**JEL Classification:** E40, E50, E52, E58, E60.

## 1. Aims and scope of the paper

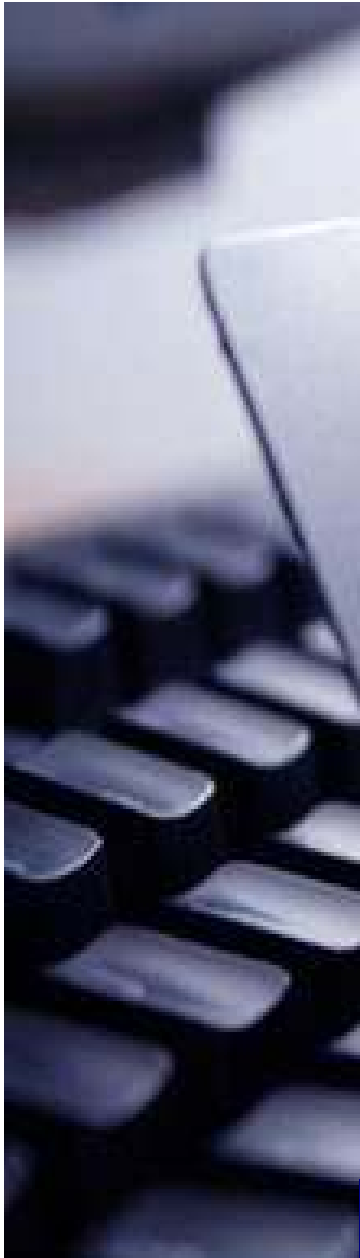
The main question that the paper attempts to answer is the legitimacy and cost effectiveness of adopting unconventional policies with regards to their efficacy in meeting the ultimate monetary goals of price stability, GDP growth and financial stability in Egypt.



## 2. Review of the Literature

After prolonged decades of dedication to Keynesianism, the seventies marked a major paradigm shift towards monetarism (Hall 1993). Since the same period stood witness to the suffering of emerging market economies (EMEs) from galloping and hyperinflation, interest-rate policy and inflation targeting became the central methods for cushioning business cycle fluctuations in these nations (Bernanke and Mishkin 1997). But, one major consequence of these policies has been asset-price volatility and housing bubbles, which culminated in significant booms and busts (Hodson and Mabbett 2009, Borio et al. 1994). An example of these recessions is the American slowdown of the 1990s that was a direct outcome of the decline in the prices of commercial real estate units (Bernanke and Lown 1991). Other examples are the equity market crashes in Asia. Similarly, the nineties marked a series of bank failures in emerging market economies due to imprudent lending that was in large part triggered by inflated asset prices (Salvatore 1998). A large volume of literature elucidates that asset price crashes are unavoidable since they are patently inherent in the herd-behaviour of speculators (Campbell 1999). History recalls that asset price haemorrhages and the ensuing economic downturns could not be adequately circumvented through the establishment of sound legal systems, transparent accounting systems and prudent regulatory supervision; monetary policy is the most important instrument that can reduce the virulence of deflationary contractions (King 2004). It is for this reason that central banks have been awarded increasing levels of independence. DeBelle and Fischer (1994) distinguish between instrument and goal independence of central banks. However, in the case of need, it becomes imperative to coordinate policies between both the fiscal and monetary agents (McCallum 1995).

With these mounting concerns about asset price bubbles and bursts, economists started simulating such markets and building hypothetical models aiming at preparing underpinning policy frameworks in anticipation for a severe crisis. Bernanke, Gertler and Gilchrist (1999) introduced the financial accelerator model where asset market crashes were simulated. The proposed model served to emphasize how balance sheets constrain the ability of firms to obtain investment funds. More recent literature empirically studied the extent of success of the conventional interest rate policy in correcting business cycles (Christiano, Eichenbaum and Evans 2005; Smets and Wouters 2007). With the gloom of an imminent asset market crash, the proposals of alternatives to conventional monetary policy arose. Most of these schemes were triggered by the fear of interest rates being constrained at their lower bound of zero (Bernanke, Reinhart and Sack 2004). But for countries where the interest rate is way above its zero bound level, it is best to revert to models such as those proposed by Clarida et al. (1999) who set up a dynamic general equilibrium (DSGE) model and derive the optimal monetary policy both under discretion and under a rule. Svensson (2000) builds a forward-looking aggregate demand–aggregate supply model for a small open economy, and examines how inflation targeting can affect the inflation gap, the output gap and the real exchange rate.



### 3. Methodology of research/ approach

This paper uses cointegration tests to study the impact of the shifts in the monetary policy rule by the Central Bank of Egypt in response to the global financial crisis.

The shift and reshuffling of the operational targets, nominal anchors and ultimate goals are tested using the DSGE model to measure the monetary policy discretion to various macroeconomic changes.

The following are equations of the model:

$$\pi_g = a_0 + a_1 x_t - a_2 s_t + a_3 \pi_{t+1/t} + \varepsilon_1$$

$$M_d = c_0 + c_1 x_t - c_2 P_{t/t-1} + c_3 s_t + c_4 i_r + \varepsilon_3 \quad x_t = b_0 + b_1 i_r + b_2 M2 - b_3 s_t + b_4 x_{t+1/t} + \varepsilon_2$$

$$M_s = d_0 + d_1 B - d_2 R - d_3 M_0 + d_4 i_r + \varepsilon_4$$

#### 4. Findings and data

After using cointegration tests, the following is the structural form of the model:

$$\pi_g = C(1)x_{t-1} + C(2)\Delta s_t + SV_1$$

$$x_t = SV_2 i_r + SV_3 M2 - SV_4 (s_t - s_{t-1}) + SV_5$$

$$M_d = SV_6 + SV_7 x_{t-1} - SV_8 (\pi_{t-1}) + SV_9 (s_{t-1}) + SV_{10} (i_{t-1}) + SV_{11}$$

$$M_s = SV_{12} (B_{t-1} - B_{t-2}) - SV_{13} (R_{t-1} - R_{t-2}) - SV_{14} (MO_{t-1}) + SV_{15} (i_{t-2}) + SV_{16}$$

$$i = SV_{17} (M2_{t-1} - M2_{t-2}) + SV_{18} (s_{t-1}) + SV_{19}$$

## 5. Results and Discussion

The results show that choice of the operating targets by the CBE are quite fitting for affecting nominal anchors, yet the core inflation measurement as an intermediate target is not helpful to meet the most important fundamental target of price stability.

Interest rates are more suitable for long run impact on all ultimate goals of output, inflation and job creation.

The priority of the operating targets is the overnight rate followed by the LRR, while the nominal anchor is selected as M2 and the effective exchange rate.

Therefore, the CBE needs to discontinue using LRR as the operating target and must confine it to the overnight rate.

A vertical, blurred image of a laptop keyboard, showing the keys in shades of blue and grey, positioned on the left side of the slide.

## 6. Concluding Remarks

This paper attempted to use cointegration tests to study the impact of the shifts in the monetary policy rule by the Central Bank of Egypt in response to the Global Financial Crisis. While the aggressive balance sheet policies that have been followed by many central banks round the world could have a significant destabilizing impact, exposing central banks to financial risks, the CBE was able to execute exit policies in a timely fashion. The shift and reshuffling of the operational targets, nominal anchors and ultimate goals is essential as a policy discretion to various macroeconomic changes.

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