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POLICY BRIEF

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THE CENTRE FOR RESEARCH ON FINANCIAL MARKETS AND POLICY®

Monetary policy risk-taking transmission channel: A case of banking industry in Kenya

Executive Summary

Monetary Policy Transmission with reference to credit market has witnessed lot of attention. Recently, much of the inquiry has been on the Risk-Taking Channel which is more indirect as opposed to the direct Lending Channel. The indirect nature of the Risk-Taking Channel is justified by the fact that a policy rate change is immediately transmitted to money-market instruments of different maturity and to other short-term rates, such as interbank deposits and this quickly affects the interest rates that banks charge their customers for variable-rate loans, including overdrafts. The risk appetite of banks revealed in their lending behaviour is a summation of several factor with changes in the policy rate being one of the factors. Therefore, an examination into how the policy rate changes affect banks risk taking behaviour is key and especially in the context of policy tightening. Such examination however needs to consider the role of the banks' non-interest-bearing deposits and equity levels.

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1. Context and Importance

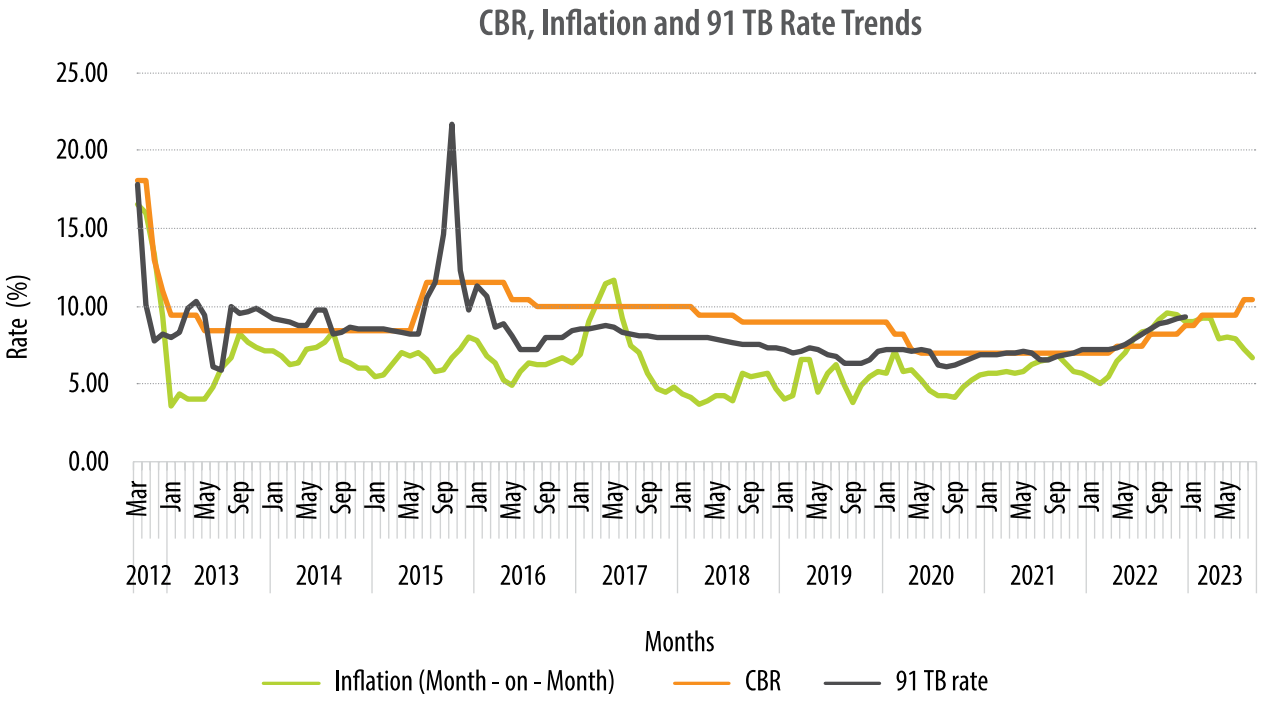
The pursuit of understanding of the linkage between financial markets and the real economy has dominated macroeconomists and policy makers ever since the advent of the global financial crisis of 2007/08. More importantly on this linkage is the growing literature on the relationship between monetary policy and banks risk taking behaviour. The stylized argument short-term interest rates and banks risk taking are negatively related. A contractionary monetary policy leads to tightening of the credit standards by commercial banks hence the rise in interest rates. However, despite this stylized fact on the short-term interest rates - banks risk taking nexus, the question is whether such relationship is always guaranteed? Understanding bank's risk-taking behaviour in the context of monetary policy development is of paramount importance given Economists argument of prolonged loose policy stance having increased banks risk appetite resulting into 2008 financial crisis.

Further, monetary policy developments may induce banks' excessive expansion of banks' balance sheets through leverage. An accommodative monetary policy may results banks growing their balance sheets via collateralized borrowing. In this case, banks would strive to manage their leverage levels as measured by the ratio of total assets to equity. The opposite scenario would be expected in times of monetary policy tightening. However, we note that this move by banks could have far-reaching implications in that growth of bank balance sheet through collateralized borrowing could build up financial imbalances over time. The implication is reduced market liquidity as well as declines in marked-to-market values and forced asset sales. We note that the existence of such a relationship is mostly dependent on the time factor. It's notable that the extent to which low or high interest rates are held will affect the nature of the relationship between interest rates and banks risk appetite

A look at the monetary policy risk transmission channel posits that the policy rate determines the bank's deposit rate and affects bank incentives to take risk through two opposite channels. First, there is a pass-through effect whereby higher deposit rate translate into higher lending rates. So the reward for the bank in case of success is higher. Second, there is the classical risk shifting effect associated with the higher cost of liabilities. However, regarding the pass-through effect channel, its strength, is hinged on the leverage/capital of banks. Going by this argument then the classical risk-shifting effect is stronger and minimizes the net effect of a change in the policy rate for the less capitalized banks.

A review of the relationship between policy rate and inflation rate over time in Kenyan context reveals that largely the policy rate has managed to anchor inflation within the recommended threshold by the Central Bank of Kenya apart from few incidences where the inflation rate has been over the threshold. A hike in the policy rate and sustaining it at a certain mark overtime is followed by successive reduction in the inflation rates for several month after implying that the policy rate pronounced at a certain time continues to transmit overtime hence an evidence of policy transmission lag. The relationship between CBR, Inflation and 91 treasury Bill rate indicates that the market is always ahead of the policy rate. A rise in the 91-treasury bill rate is likely to fuel inflation hence making the policy transmission lag last longer. The rise in the 91-treasury bill rate arising from policy tightening affects costs of funding hence bank lending in the long run.

Figure 1: Monetary policy evolution, Inflation and 91 TB Rates in Kenya, 2008 – 2013



The novelty of this study is hinged on the important monetary policy Risk – Taking Transmission Channel. The view of the risk-taking channel is that a change in the policy rate is immediately transmitted to money-market instruments of different maturity and to other short-term rates, such as interbank deposits and this quickly affects the interest rates that banks charge their customers for variable-rate loans, including overdrafts. Less empirical work on the risk-taking channel of monetary policy tightening does exist in comparison to the bank lending channel of monetary policy tightening which is extensively researched.

2. Methods and Results

To examine the risk-taking channel of the monetary policy among commercial banks in Kenya. The paper proposes to use the Panel Vector Autoregressive model. The model estimates the effects of the bank liabilities and equity on the risk-taking appetite in the context of monetary policy developments. In this model, the bank risk taking is regressed on monetary policy rate, bank equity measure, bank liability measure and the control variables. For the Monetary policy development, central bank rate will be used. For the bank equity measure the tier 1 ratio was used. The application of tier 1 ratio is informed by the fact that banks with more equity, would be less responsive to monetary policy tightening and the opposite is true. This would imply banks with more equity would less reduce their risk appetite in cases of monetary policy tightening compared to banks with less equity. Regarding the bank liability measure, the ratio of non – interest bearing deposits to total assets was used. The analogy here is that banks with more non – interest bearing deposits would reduce by less their risk appetite in cases of monetary policy tightening compared to banks with less non – interest bearing deposits.

Bank risk taking appetite is measured using the bank's minus z – score and the loan loss provision. Within the model, the interaction of policy rate with Tier 1 ratio is applied on the account that Tier 1 ratio influences banks loan supply shifts. On the other hand, the policy rate interaction between non – interest bearing deposits is anchored on the understanding that under monetary tightening, banks can use their non-interest-bearing deposits and capital as a buffer and banks with less leverage or more non –interest bearing deposit should react less to a monetary policy tightening.

The eestimation results found monetary policy tightening and equity levels reduces the bank risk taking behavior thus evidence of monetary policy risk-taking transmission channel. However, the contrary was reported with regard to bank liability: non –interest bearing deposit "pseudo assets". However, interaction between policy rate, equity and "pseudo assets" was found to increase bank risk appetite significantly. This study is important since under the risk-taking channel view, a change in the policy rate is immediately transmitted to money-market instruments of different maturity and to other short-term rates, such as interbank deposits and this quickly affects the interest rates that banks charge their customers for variable-rate loans, including overdraft

> **This implies that a change in the policy rate is immediately transmitted to money-market instruments of different maturity and to other short-term rates, such as interbank deposits**

3. Policy Recommendations

The policy recommendations drawn and targeted regarding this topical issue on Monetary policy risk-taking transmission channel in the contest of Kenyan banks include:

i. **Relook into banks' capital structure.** The interaction between monetary policy rate and Tier 1 ratio is found to be significant in explaining the risk-taking monetary policy transmission channel. Therefore, bank can leverage on its equity levels to overcome the lending restriction that might be paused by monetary policy tightening. Therefore, banks should ascribe to relook on their capital structure to be more equity funded as opposed to be debt funded since during the policy tightening, equity is cheaper compared to borrowed funds for lending.

ii. **Deposits mobilization.** Pseudo assets measured by the non – interest bearing deposits increases bank risk appetite during the period of policy tightening. This finding points into the need for bank's proactiveness in mobilizing non – interest bearing deposits to build up on their loanable funds to leverage on them for lending during the periods of policy tightening.

iii. **Effectiveness of Policy Rate in managing of bank's risk appetite.** Policy rate tightening was found to reduce bank risk appetite but the interaction of policy rate with bank's balance sheet assets and liability items posit reduced responsiveness to policy. This implies that a change in the policy rate is immediately transmitted to money-market instruments of different maturity and to other short-term rates, such as interbank deposits and this quickly affects the interest rates that banks charge their customers for variable-rate loans, including overdrafts. In addition are the bank innovations whereby not all policy changes warrant banks hiking the lending rates especially for existing loans for the fear that a performing loan may turn into non – performing. In this case banks would rather lengthen the loan tenure as opposed to hiking the loan rate. Therefore, the monetary policy authority needs to give the policy stance enough time to fully transmit given the indirect nature of the Risk – Taking – Channel on monetary policy transmission.

4. References

1. Ndwiga, D. 2023. Monetary policy risk-taking transmission channel: A case of banking industry in Kenya. KBA Working Paper Series (WPS/. . ./2023).

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