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The Bank of Tanzania Research Newsletter is an annual publication aimed at disseminating research results of recent studies conducted by the BoT Staff.

The views expressed in this Newsletter are solely those of the authors and do not necessarily reflect the official position of the Bank of Tanzania or its management.

Evidence of Transaction Dollarization in Tanzania

Pantaleo Kessy, Johnson J. Nyella and Nicas Yabu

In the recent past, there have been claims that a significant portion of Tanzania's businesses and service providers are using foreign currencies for pricing purposes as well as carrying out transactions. The objective of this study is to investigate the extent and causes of transaction dollarization in Tanzania. Specifically, the study attempts to gauge the extent to which the U.S. Dollar is used in quoting prices of goods and services (foreign currency functioning as a unit of account) and carrying out transactions (foreign currency functioning as a medium of exchange) in the domestic economy.

A total of 2,450 businesses and service providers were interviewed in six adminis-

trative regions, namely Dar es salaam, Arusha, Mbeya, Mwanza, Morogoro and Dodoma. In addition, in-depth interviews were also conducted to some merchants and service providers of particular interest.

The findings of the study indicate that 3.2 percent of the respondents quoted prices of all or some of their goods and services in foreign currency while the remaining 96.8 percent quoted prices exclusively in Tanzanian Shilling. The findings also suggest that about 0.1 percent

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of businesses interviewed demanded payments exclusively in U.S Dollars, about 3.1 percent accepted payments in both the U.S Dollar and Tanzanian Shilling and 96.8 percent demanded payments exclusively in Tanzanian Shilling.

The level of transaction dollarization in Tanzania is very small, limited to specific locations and products/services, and in most cases is done for bona fide reasons.

Finally, the evidence obtained from the survey suggests that price quotation in U.S Dollar is limited to specific locations and applies to specific products/services. In most cases price quotation in foreign currency is done to facilitate transactions with foreign customers. The study recommends that Tanzanian authorities should be cautious in seeking to reduce dollarization through direct measures because the level of transaction dollarization in Tanzania is very small and also evidence from other countries suggests that enforcing de-dollarization through direct measures can potentially be counter-productive.

The Interaction between Finance, Financial Stability and Economic Growth

Joseph L Masawe, with Johnson Nyella, Pantaleo Kessy, Augustino Hotay and Wilfred Mbowe

There is strong evidence suggesting that financial development is crucial for economic growth. However, financial crises of the last decade have highlighted the importance of financial sector stability for attaining high and sustained economic growth. This study provides evidence on the linkages between financial sector development, financial stability and economic growth. The study uses trend analysis approach to investigate the relationship between financial sector development and growth on one hand; and financial sector stability and growth on the other hand.

The findings support the view that finance plays an important role in economic growth. Specifically, economic growth measured by income per capita is positively related to various measures of financial sector development, such as domestic credit to private sector, broad money supply, domestic savings, and market capitalization, all measured as shares of GDP. Also the study shows that financial instability causes loss in economic growth. Evidence from the East Asian financial crisis (1997/98) and the global financial crisis

(2007/08) attests that growth in both advanced and developing economies slumped during these episodes. The important lesson from these findings is that financial development is a necessary but not sufficient condition for high and sustained economic growth.

In order to ensure financial sector development and stability, the study underscores the following: first, there is a need to promote macroeconomic stability with special attention on creating as much fiscal space and foreign reserve buffers as possible in order to strengthen the resilience of economies against the impact of shocks associated with financial crisis. Second, developing countries should endeavor to build regional markets through integration and cooperation in order to reduce the vulnerability of their economies from global market shocks. Third, regulators and supervisors need to stay ahead of financial innovations by continuously upgrading the skills and instruments for financial regulations and supervision.

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Central Bank Responses to IMF-Supported Programme Conditionality and Macroeconomic Volatility in Tanzania

Nicas Yabu

Traditionally, the IMF has been focusing its advice to developing countries on how to achieve macroeconomic stabilization and rapid economic growth. One of the key elements of the IMF-supported programmes is the conditionality attached to the use of the IMF resources by the recipient countries. This paper investigates the extent to which in the course of achieving the IMF quantitative targets, particularly, reserve money and net international reserves, amplified macroeconomic volatility in Tanzania. Two approaches were used: the GARCH model to estimate macroeconomic volatility and the Error Correction Model to estimate the extent to which such volatility was caused by IMF conditionality.

The findings revealed that the IMF-supported programme conditionality amplified volatility in exchange,

interest and inflation rates. Also contributing to this, were fluctuations in government budget deficits.

The paper suggests that the IMF needs to design

IMF-supported programme conditionality amplified macroeconomic volatility in Tanzania

conditionality, which are manageable by recipient countries within a specified period. Also recipient countries need to implement their economic policies on a steady basis in order to be able to achieve the agreed targets feasibly.

The Relative Importance of Foreign and Domestic Shocks for Macroeconomic Fluctuations in Tanzania

Camillus Alphonce Kombe

Accounting for the impact of external shocks to a domestic economy's aggregate fluctuations is a subject of considerable interest in the field of open economy macroeconomics. This interest has intensified over recent years due to the ongoing world economic integration, coupled with global events such as the recurrence of economic and financial crises.

Whilst domestic shocks account for a larger part of domestic macroeconomic fluctuations, nonetheless, external shocks originating from real activity, commodity prices, interest rates and oil prices exert significant influence on the variability in domestic output, inflation and money stock.

This paper examines the influence of global economic disturbances to Tanzania aggregate macroeconomic fluctuations, using a VAR model, where interest rate, economic growth, inflation, and oil prices were modelled as foreign block, while output, inflation, money stock and the real exchange rate were specified in the domestic block.

The findings indicate that macroeconomic fluctuations have been affected by both domestic and foreign shocks. While domestic shocks accounted for a larger part of domestic macroeconomic fluctuations, external shocks originating from real activity, commodity prices, interest rates and oil prices exert significant influence on Tanzania's real output, inflation and money stock.

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In addition, the findings indicate that domestic monetary policy reacts to domestic inflation and output. This implies that in addition to fighting inflation, monetary policy also plays the role of stabilizing the economy in the short-term.

A number of policy implications arise from these results. First, building the response capacity of the economy to exogenous shocks remains critical for macroeconomic stability. In this regard, enhancing the domestic resource base with a view to reducing the import-dependent nature of investment and production is necessary. Second, developing sustainable

export growth strategies that include export diversification is necessary in order to lessen the dependence of external resource inflows such as grants which are subject to changing conditions in donor countries. Third, stable macroeconomic environment is necessary in order to mobilize domestic resources and diversification of inflows of foreign direct investment. This underscores the need for prudent monetary and fiscal policies as well as the recognition of the critical role that may be played by the exchange rate policy with respect to macroeconomic adjustment, and the effectiveness of monetary policy.

Interest Rate Pass-through: An Empirical Investigation on Tanzania

Wilfred E.N. Mbowe

The influence of monetary policy on the economy depends on the degree and speed to which central bank policy signals are transmitted to commercial banks' lending and deposit interest rates. This study sought to provide insights on the pass-through of monetary policy rate to commercial banks interest

Monetary policy rate pass-through to commercial banks' lending and deposit rates is incomplete both in the short and long-term.

rates in Tanzania. In particular, it assessed the degree and speed of adjustment of commercial bank interest rates to monetary policy rate changes using error correction technique.

The findings suggest that there is an incomplete interest rate pass-through both in the short and long-term. While the pass-through to the lending rate is statisti-

cally insignificant, that to the deposit rate is very weak and happens with a lag.

The implications of these findings are that with very low or absence of policy rate pass-through to commercial banks' lending and deposit rates, the effectiveness of the monetary policy transmission to the economy through the interest rate channel may be limited. Therefore, in order to enhance the effectiveness of the monetary policy, the monetary authority should seek to evaluate and address factors that weaken transmission of monetary policy effects to commercial banks' interest rates. The monetary authority should also adopt forward-looking approach to monetary policy implementation with a view to capturing the delayed nature of the pass-through as well as incorporate market players' expectations.

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The Bank Lending Channel of Monetary Policy Transmission: A Dynamic Bank-Level Panel Data Analysis on Tanzania

Wilfred E.N. Mbowe

Monetary policy can influence economic activity in the short to medium term, through a number of channels, including interest rate, bank lending, balance sheet, and exchange rate channels. An important requirement in the design of appropriate monetary policy is to understand the major transmission channels for the specific economy.

Monetary policy influences commercial banks' lending behavior in Tanzania.

This study uses dynamic system GMM to investigate whether or not changes in the monetary policy influence bank lending behaviour in Tanzania. It also assesses the extent to which commercial banks' capitalization, liquidity, size and ownership structure influence the

effectiveness of the monetary policy.

The findings support the hypothesis that the bank lending channel exists in Tanzania, and that, the bank size and capitalization levels could influence the effectiveness of monetary policy. The lending channel seems to be stronger through domestic and privately-owned banks than public and foreignowned banks.

Two key implications are highlighted in the paper. First, the monetary authority should monitor developments in the money market interest rates to ensure that commercial banks credit supply is in line with the monetary policy objectives. Second, the monetary authority policy response should factor in possible asymmetric response of commercial banks, particularly those related to bank characteristics such as size, capitalization and ownership structure.

Monetary Policy Framework in Tanzania: A Proposal to Review the Policy Rate

Johnson Nyella

The quantity of reserve money has been used by the Bank of Tanzania as operating target of the monetary policy since mid-1990s. While this framework has been used to deliver considerable contribution to macroeconomic stability, it has a number of shortcomings.

Interest rate based monetary policy can be operationalized within the REPO and reverse REPO framework.

First, the framework does not consider feedback from the money market and second, the reserve money target is obscured and has little relevance to market players.

The paper recommends operationalization of an interest rate based monetary policy within the REPO and

reverse REPO framework. In this regard, the announced policy rate target would become a maximum bid rate when mopping up liquidity and a minimum bid rate when injecting liquidity. It further argues that, adoption of interest rate based monetary policy will help to stimulate the transmission mechanism of monetary policy.

Concerning the method to be used to set the rate, the paper recommends that the medium- or long term trend of the interbank cash market rates be employed as a proxy for desired interest rate, complemented with information regarding deviation of actual inflation from targeted inflation and deviation of actual real income growth from potential real income growth. Also the paper recommends linking the rates charged on the standing facilities namely, the discount and Lombard windows, to the policy rate with a penal margin.



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