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Monetary Policy, Bank Lending, and Inflation in the Post-Pandemic Recovery Era: A Case of the East African Community

Executive Summary

This paper explores the interplay between monetary policy, bank lending, and inflation in the East African *Community (EAC) post-pandemic recovery period.* Analyzing macroeconomic data from January 2021 to June 2023, using a panel Vector Autoregressive model, reveals insights. Increasing the central bank rate reduces available bank loans, while also initially decreasing the consumer price index, though it remains positive. Consumer price index shocks initially decrease bank loans, which later recover positively. Commercial bank lending rates rise with central bank rate increases. Additionally, US Fed funds rate hikes lead to reduced commercial bank foreign assets but increased central bank rates and lending rates. These results underscore the vulnerability of the bank lending channel to domestic and external shocks, compromising credit creation capacity in response to tight monetary policy in the EAC.

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1. Context and Importance

Recent global economic events, such as the Russia-Ukraine war and the increase in aggregate demand after the pandemic, have led to a rise in inflation in the East African Community (EAC). This has prompted central banks to adjust monetary policy to subdue it, which may reduce bank credit. Modugu and Dempere (2022) argue that in Sub-Saharan Africa (SSA), weak financial system stability, inconsistent monetary policies, and a lack of alignment between fiscal and monetary policies are hindering access to loanable funds that are necessary for the real economy to grow. Considering the recent inflationary surge, EAC countries central banks responded by pursuing a tight monetary policy, to bring inflation back to its target regimes. From Figures 1 and 2, it is evident enough that inflation in the East African region spiked around the same period from the beginning of January 2022 and it began easing towards the mid of 2023. While we observe that the EAC counties responded to inflationary pressures at different intervals. Illustratively, Rwanda responded immediately, followed by Kenya and then Uganda albeit Tanzania maintained a uniform policy rate throughout. I can therefore conclude that the EAC countries attempted to pursue a contractionary monetary policy to achieve their inflationary targets.

Therefore, the primary objective of this study was further to explore the relationship between monetary policy, bank lending, and inflation in the EAC during the post-pandemic recovery period. In other words, to revisit the bank lending channel of transmission of monetary policy regarding the EAC in the post pandemic era. To accomplish this goal, the study answered this research questions. How has the contemporary domestic monetary policy and inflation affected bank lending in the EAC?

Figure 1: Trends of Central Bank Rates in selected countries of the East African Community.



Source: Authors construction using data from the Central Banks of each country.



Figure 2: Trends of inflation in the selected countries of the East African Community.

2. Methods and Findings

The study used high-frequency secondary monthly data from January 2021 to June 2023 and 4 cross-sectional country panels. The study covers 4 countries namely Uganda, Kenya, Tanzania, and Rwanda out of 7 EAC countries due to the inaccessibility of the study data variables from the other 3 countries (Democratic Republic of Congo, South Sudan, and Burundi). Nevertheless, the period of the study is important because it captures the Post-Pandemic Recovery era that the study focused on. This period is also characterised by an unprecedented surge in the consumer price index and the central bank rate not experienced in a long time in the EAC region. However, it is noted that the Bank of Tanzania held the central bank rate unchanged at a 5% rate throughout the same period. Data on the variables including bank loans, central bank rates, and consumer price index are obtained from the EAC respective Central Banks, Finance Ministries and National Statistics Bureaus while data on the US federal funds rates was obtained from the Federal Reserve Bank of St. Louis. Some variables including consumer price index, net foreign assets, commercial bank net foreign assets and bank loans were converted into natural logarithms for normalization and the rest were left in percentages (see Annex 6 for more details). Furthermore, variables such as bank loans, net foreign assets and commercial bank assets were first standardized into constant US dollars across the countries.

To investigate the objective and research question of this study, I adopted an unrestricted panel VAR model (PVAR) first developed by Holtz-Eakin et al. (1988) that involves running a Vector autoregression (VAR) model using panel data. Why the PVAR approach? Koengkan and Fuinhas, (2020) document the following merits of using a panel VAR model: (a) considers all study variables endogenous simultaneously, allowing for endogenous interaction between variables. (b) PVAR is useful in instances where there is little theoretical information about the relationship between variables to guide the model specification. (c) PVAR model addresses the problem of endogeneity between variables. (d) Due to its potential cross-sectional performance, the PVAR model is also suitable for small samples. In addition, Love and Zicchino, (2006) allude that the PVAR procedure allows for unobserved individual heterogeneity for all the variables by introducing fixed effects which enhances the consistency of the estimation. More so, they found also the PVAR suitable in the identification of the possible causal relationship

between the variables. Finally, PVARs are suitable for analysing the transmission of idiosyncratic shocks across units and time (Canova and Ciccarelli and Valderrama, 2012). This has been vindicated by studies (Canova et al. 2012; Ciccarelli and Valderrama, 2012) that have investigated the transmission of shocks across different countries. This is helpful in exploring the effects of external shocks like the US Fed hikes on bank lending in the EAC.

The study findings for the aggregated EAC indicate that a one standard deviation positive shock in the central bank rate adversely affects bank loans in the banking sector. This therefore reinforces vindicates the bank lending channel of the transmission of monetary policy in the EAC. Further, a one standard deviation positive shock is a decline in the consumer price index, although it remains positive. Also, a one standard deviation shock in consumer price index leads to a decrease in bank loans in first periods but later, bank loans pick up and gain a positive stance while central bank rates remain positive throughout the 12 periods. Conversely, commercial bank lending interest rates increase when the central bank rate increases by one standard deviation, there is a decrease in commercial bank foreign assets (loans and deposits), but an increase in the central bank rate and lending interest rates.

On the other hand, the disaggregated results from the EAC country-specific impulse responses indicate that a one standard deviation positive shock in the central bank rates led to a decline in bank loans. While thew effect of a one standard deviation positive shock in consumer price index on bank loan varied in the different countries. For instance, in Uganda, it pushed bank loan upwards and maintained the positive region, in Kenya, the effect was felt after four mons when bank loans moved upwards in the positive region. In Tanzania, it first dropped in the negative region in second month but picked up in the third month to the positive region until it became insignificant in the sixth month. Further, in Rwanda, it dropped in the second month to the negative region and picked up in the seventh month to the positive region. Furthermore, external shocks had spillover effects in specific countries. In Uganda, a one standard deviation positive shock in the US Fed funds rates pushed the central bank rates upwards but the

negative was more pronounced after the fourth month. It also adversely banks foreign assets (loans and deposits). Similarly, in Kenya, a one standard deviation positive shock in the US Fed funds rate pushed the central bank rates upwards until after the eighth month when it became negative. Bank loans were also pushed upwards until the fifth month when they moved to the negative region. While the foreign bank assets were pushed downwards to the negative region but with increasing tendencies albeit the negative effect was more pronounced. In Tanzania, a one standard deviation positive shock in the US Fed funds rate instantly pushes up central bank rates in the first period, but they decline in the second period negative wards throughout the 12 months. A positive shock of the US Fed funds rate first pushes up commercial foreign assets in the first period but then they fall in the second period, that pattern is observed until the eleventh period. Finally, in Rwanda, a one standard deviation positive shock of the US Fed funds rate instantly pushes the central bank rate upwards and it begin declining until the tenth month when it becomes negative. Bank loans remain afloat in the positive region with one standard deviation positive shock in the US Fed funds rate. Interestingly, lending rates, commercial bank foreign assets and net foreign assets only drop in the negative region in the second and pick up in the third period from where they remain positive throughout the twelve months.

3. Conclusion and Policy Recommendations

Using a PVAR model, 4 East African Community countries and monthly time series data from January 2021 to June 2023, the study provides empirical evidence on the underlying dynamic relationships between monetary policy, bank lending, and inflation during the post-pandemic recovery era. In this study, I sought to investigate the effects of the recent developments in domestic monetary policy affected bank lending and inflation. Also, to explore the effects of the external shock like the hawkish US monetary policy affect commercial banks' lending and interest rates in EAC? Results from the impulse response functions analysis indicate that a one standard deviation positive shock on central bank rates pushes bank loans downwards causing a reduction in the amount of credit available for lending. Similarly, a one standard deviation positive shock in the central rate eased inflation as seen by a reduction in the consumer price index albeit it remained positive. On the other hand, I observed that the US Fed funds rate had spillover effects on the domestic financial sector of the EAC. A standard deviation positive shock in the US Fed funds rate led to a reduction of domestic commercial bank's foreign assets (loans and deposits). Further, a positive shock in the US Fed funds rate induced the EAC central banks to adjust their monetary policy upwards, this was followed by the commercial bank lending rates. These findings emphasize the bank lending channel of transmission of monetary in EAC is susceptible to domestic and external shocks thus commercial bank's capacity to create credit is compromised in response to a tight monetary policy stance. They further provide novel evidence on

the effects of the US Fed funds rate on the financial sector of developing countries, in particular, the East African Community bloc. As such, despite the central bank's primary objective being price stability, central banks should be cautious of the risks in the effectiveness of monetary policy that compromise bank lending and thus far stability. As such, there is need to enhance supervision of bank capitalization in particular from a monetary policy perspective in order to assess the transmission of monetary impulses and negate bank instability. In addition, central banks should monitor with caution external shocks that affect bank foreign assets. Having observed that the hawkish US Fed Funds rates has an effect on the foreign reserves held in US dollar at the commercial banks and subsequently credit creation in US dollars.

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