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POLICY BRIEF

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THE CENTRE FOR RESEARCH ON FINANCIAL MARKETS AND POLICY®

Does Capital Matter in Banks' Responsiveness to Policy and Economic Shocks?

Executive Summary

There is sufficient evidence that points to the social benefits of capitalization and related requirements. Financial market history (locally and globally) is long entrenched with examples of the repercussions from inadequate funding stability and poor financial health. The resilience of the global banking system has been put to the test in recent years with bank collapses, the pandemic, increasing attention to climate change concerns and recent shifts in monetary policy. All these call for an urgent revisit of banks' response through the lens of their capitalization. Does capital matter in banks' responsiveness to policy and economic shocks? A resounding yes. I use bank level data and find evidence of peer-driven heterogeneity not only in how banks respond on average, but also the peer-specific role that capital plays. The findings are expected to inform policy circles on funding structure considerations in policy formulation and evaluation, and emphasize the continued role of capitalization as a tool of prudential stability, especially for smaller banks.

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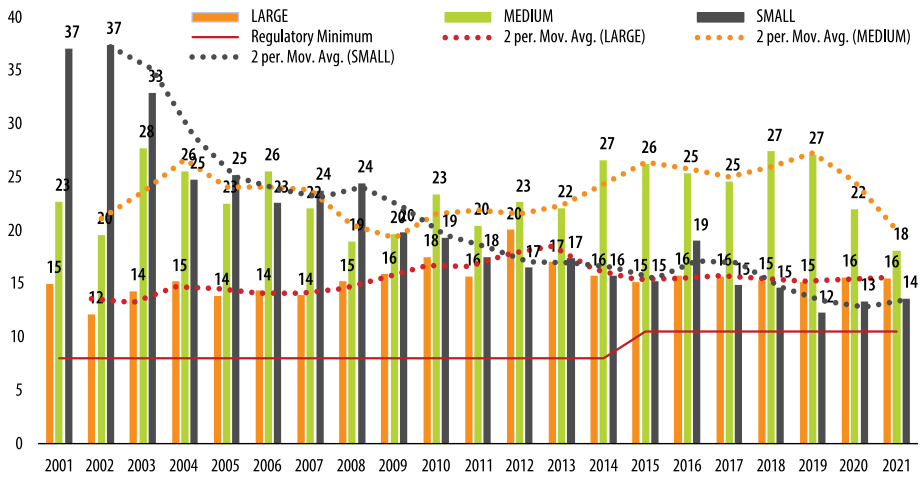
1. Context And Importance

Kenya presents a well-capitalized banking sector on average, as seen in Figure 1 below. There is quite some variation in capitalization patterns:- across banks, across peer groups (Large, Medium and Small Banks) and over time. Large banks displayed an increasing trend in their median Tier 1 Capital ratios between 2007 and 2012, after which a decline is observed to 2021, settling at about 5 percentage points above the regulatory minimum. Medium banks display higher median capital ratios mostly in the range of 20-30%. For small banks, we observe high median capital ratios in the early 2000s, followed by a strong trend in decapitalization. A granular assessment of this trend reveals that prior to 2015, small banks had a disproportionately higher growth in Risk-Weighted Assets as compared to Tier 1 Capital amounts. Since 2015 - a defining year for this peer group, the decline in the Tier 1 Ratio was linked to reduced balance sheet activity on both the asset and capital end.

Figure 1: Tier 1 Capital Ratios of Kenyan Commercial Banks (by Peer Group)



The role of capital in efficient bank intermediation is clear from the global history of financial crises and shocks. Thakor (2014) states that bank capital can be viewed as a sort of "braking distance", in that better capitalized banks have a longer distance to failure, increasing its probability of survival. Ultimately, a conversation of how banks respond to policies and shocks is incomplete without an assessment of the role capital plays. Several academic papers agree with this role when it comes to monetary policy (Kishan & Opiela (2000, 2006), Van den Heuvel (2002), Gambacorta & Mistrulli (2004), Gambacorta (2005), Halvorsen & Jacobsen (2016), Sáiz et al (2018)), recasting the well-known bank lending channel of monetary policy. There is also support that capital dictates banks' response to broader economic shocks including output shocks, natural disasters, etc (Meh & Moran (2010), Berger & Bouwman (2013), Budnik, et al. (2019), Steven & Oliver (2022)).

In this study, I analyse the how a bank's lending activity and operating profitability growth responds to monetary policy, economic shock and interbank market liquidity shifts, given the level of capitalization. The specific objectives in this study are as follows: First, I assess the average effect of monetary policy and GDP shocks on the loan-to-asset composition of banks across peer groups. Secondly, the analysis examines the role played by capital in banks' response. Finally, the role of capital in banks' net operating income growth following shifts in interbank market dynamics is examined. This gives room to explore insights from country-specific developments in the banking sector between 2015 and 2019, including the collapse of three banks and interest rate controls.

2. Data, Methods and Results

The analysis is based on a sample of 27 commercial banks in Kenya across three peer groups defined by the Central Bank of Kenya (large, medium, and small banks) using financial statement data between 2001 and 2021. To motivate the present analysis of capitalization on the back of monetary policy, GDP growth shocks and interbank market liquidity, one simply needs to refer to recent banking sector contexts, both globally and locally. Central banks have made consecutive policy/interest rate hikes in the post pandemic drive to reduce inflation. The pandemic itself weakened the growth profile of the global economy, with recovery on track, but still weak (Gourinchas (IMF, 2023)). The Kenyan banking sector also experienced critical periods of volatility and squeezes between 2015 and 2016, following three banking collapses[1] that reflected in the flow of liquidity in the interbank market (where the interbank spread averaged at 19.8% in Q3 2015 compared to 11.8% and 7.1% in Q2 and Q1 2015 respectively). As such, the empirical specification[2] uses interactions between lagged capitalization[3], lagged monetary policy variables (the Central Bank Rate and bank reserves with the CBK), lagged GDP shocks, and the lagged change in the interbank spread to understand why bank capital matters, not just for the financial health, but as a support mechanism of how banks respond to shocks in the subsequent year.

Statistically, capitalization and other bank-specific variables are normalized around peer averages and overall sample averages, respectively, for the average (typical) bank to have zero values. In this way, the analysis allows an examination of how the bank's capitalization affects the balalance sheet activity and operating profitability. To further differentiate this role across Peer groups, an alternative specification incorporates this peer layer to the interaction of capitalization and the economic variables.

First, consistent with empirical literature in this area, capitalization is important in how banks respond to policy, GDP shocks and shifts in interbank market liquidity. Small, lesser-capitalized banks are more sensitive to monetary policy and shifts in interbank market liquidity. Interestingly, large banks with higher capitalization, are more sensitive (positive interaction) to GDP shocks, showing that their lending activity is prone to business cycle effects. Capitalization not only supports the lending activity of small banks, but also insulates them from the negative linkages between interbank market illiquidity (higher interbank spreads) and operating income growth. Closely related to bank capitalization, it is also observed that bank liquidity in the form of lower loan-to-deposit ratio is crucial in how banks respond to an increase in reserves with CBK, which drains funding liquidity.

Overall, capital plays a key role in maintaining (and in some cases amplifying) balance sheet activity and insulating operating profitability from liquidity shifts.

3. Policy Implications

This study spotlights the role of bank capital. An overarching theme exists, that the role depends on the nature of the shock, the size/peer group of the bank and the period. The implications are twofold: first, capital/funding structure is an important consideration in forming a clearer picture of the transmission of monetary policy and how banks fit into this narrative, especially small banks. Here, we are looking at peer group whose total asset base has doubled between 2011 and 2021, underscoring the significance of their increasing tangibility in the credit market. Ultimately, there is a seeming tension between - on the one hand - the funding stability and insulation afforded to smaller banks by higher capital (especially when the interbank market is relatively illiquid) and - on the other hand – their role in the effective transmission (and desired effect) of expansionary/ contractionary policies via the banking sector.

Second, in the same theme, the results from this study reveal that deeper insights and asymmetries not only lie in the funding structures, but in the peer groups as well. The role of capital differs depending on the type of shock, and most importantly, the size of the bank. For banks and policy makers, this calls for a critical acknowledgement of the tailored roles capital and related requirements - both present and future, play in different banks. Even so, this study and its findings open the floor for continued exploration into the role of capital differs depending on whether the policy stance is expansionary or contractionary, whether the business and financial cycles are in an upturn or a downturn.

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2. The study relies on the System GMM ( )to estimate the parameters in the model specification
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