

Bank Liquidity-Profitability Trade-Offs as an Adjustment to Systemic Shocks

Executive Summary

Over the last two decades, the Kenyan banking sector has exhibited three interesting trends. First, the loan-to-deposit ratio (LTD) has been declining. Second, returns on assets and equity, as well as capital, have also been declining even when market liquidity is considered to be sufficient and profitability deemed healthy. Third, aided by expansionary fiscal policy, the share of government securities in banks' portfolios has been on the rise at the expense of loans and advances. This policy brief has the dual objective of establishing whether episodes of market shocks necessarily trigger the choice between more liquidity than more profitability and ascertaining whether the post-shock recovery path is one of liquidity giving way to non-liquid assets growth and, therefore, more profitability that is accompanied by positive economic outcomes. Two important findings emerge. First, during a shock, there are liquidity-profitability trade-offs. Second, the extent of those trade-offs is sensitive to bank-specific attributes, especially bank size. The results imply that the transition process towards recovery requires a policy environment that is facilitative of real lending rates adjustments corresponding to the attendant risks as opposed to a sticky regime. Without policy disincentivising the crowding-out that is prevalent when asset quality is weakening, the transition after a shock to profitability that is aligned with the positive finance-growth nexus may be prolonged.

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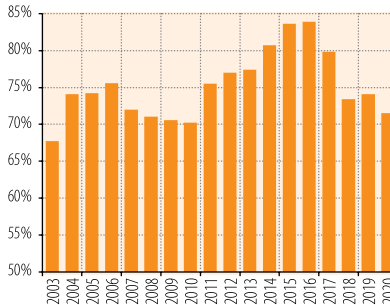
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1. Context and Importance

Over the past two decades, the banking sector has been characterised by three interesting trends with significant policy implications. First, the loan-to-deposit ratio (LTD), a liquidity proxy, has been declining, especially between 2006 – 2010 and 2016 – 2020 (Figure 1), reflecting a general increase in overall market liquidity.

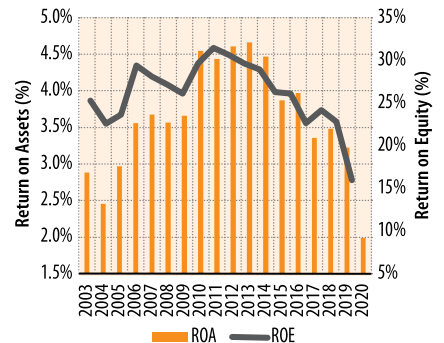
Figure 1: Trends of liquidity and profitability in the Kenyan banking sector

1a. Evolution of Bank Loans-to-Deposits Ratio



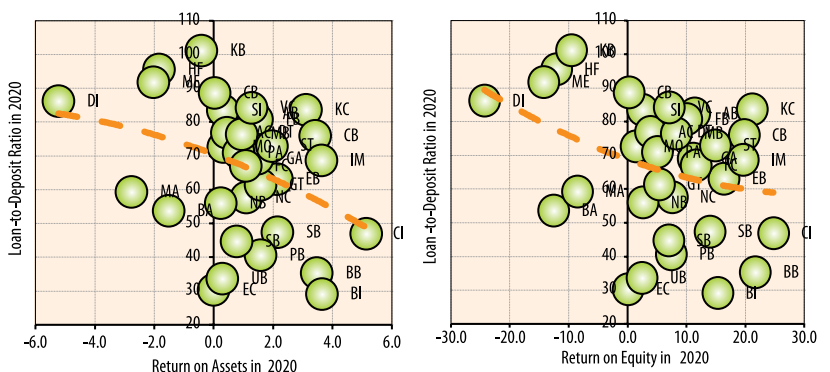
Source: KBA Database

1b. Evolution of Bank Loans-to-Deposits Ratio



Second, the decrease in LTD coincides with a decline in profitability, measured by both the return on assets (ROA) and return on equity (ROE). These trends are a pointer to the existence of a liquidity-profitability trade-off reinforced further by an inverse association between the loan-to-deposit ratio and profitability, as indicated in Figure 2.

Figure 2: Liquidity-Profitability Trade-Offs in the Kenyan banking sector



Source: KBA Database



When NPLs as a share of total gross loans have been on the rise, increased investment in government securities is seen as a “safe haven” for banks.

Even as the profitability of the Kenyan banking industry is generally characterised as healthy and liquidity levels as sufficient, the heterogeneity across banks results in the differing extents of possible trade-offs. Therefore, the extent to which banks are willing to hold liquidity above regulatory requirements is potentially size-sensitive, partly due to the segmentation in the interbank market being a binding constraint to liquidity distribution. Moreover, this is likely to be attributed to bank's differential response to shocks emanating from outside the banking system. For instance, the response function of banks due to the global financial crisis of 2007 – 2009 and the policy

shock of interest rates control of 2016 – 2019 may potentially be asymmetrical. And even more importantly, its response to the COVID-19 pandemic, a shock still evolving, is dependent on the bank's initial conditions.

It is also evident that prior to the COVID-19 pandemic, when the banking industry was adjusting to the interest rate controls regime, there was a steady increase in the share of government securities at the expense of loans and advances (Figure 3) aided by an expansionary fiscal policy over the period. Given the heterogeneity in the banking industry, the increase in government securities as a share of total assets has been more pronounced amongst medium-sized banks, where it has remained well above of the industry average (Figure 3b). On the back of fairly sticky interest rates where fluctuations are within a narrow band (Figure 3c and Figure 3d) and the fact that the differential between the real yields of government securities and real lending rates has been narrowing at a time when non-performing loans as a share of total gross loans have been on the rise, increased investment in government securities is seen as a “safe haven” for banks.

Figure 3: Banking System Portfolio Adjustments

Figure 3a. Disaggregated Bank Asset Structure

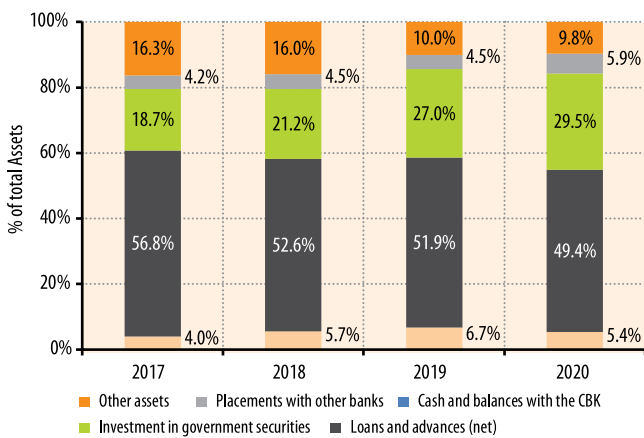


Fig. 3b: Banks' Government Securities' Holding (% of total assets)

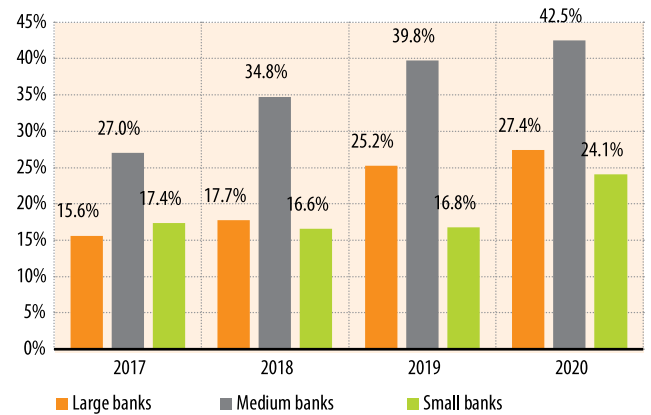


Figure 3c. Real Lending and TB Rates and Asset Quality Evolution (%)

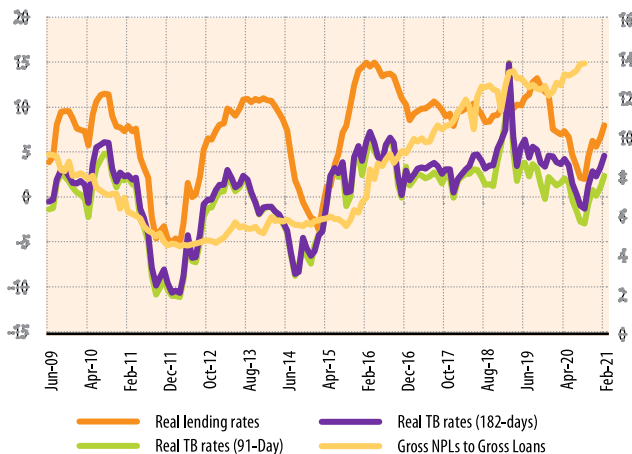
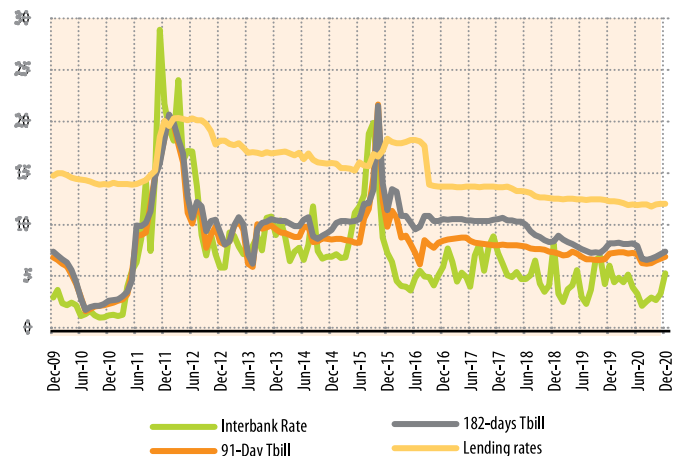


Figure 3d. Interbank Rates, and Government Securities (%)



The observed interest rates regime, the risk averseness that comes with the deterioration of bank assets over time, and the adjustments on the demand side of the finance equation lend themselves to two broad arguments. The first relates to the tendency of banks to hold government securities for precautionary reasons during a shock. The second relates to the argument that banks invest in government securities for capital management purposes. Pursuant to the need to comply with capital adequacy requirements, especially at a time of shock or economic distress, banks could either increase capital or decrease risk-weighted assets. While the former is less likely as investors remain apprehensive, a shift in asset composition by way of reducing the share of loans while increasing the share of government securities that are considered “risk-free” is often the strategy.

2. Findings and Discussions

Using annual bank level data from 2002 to 2020, and going beyond the broad trends painted in **Section 1** above, this brief examines the market response and adjustments in portfolio choices and how that fits with policy reactions. The empirical assessment of this paper leads to two broad conclusions:

- One, during a shock, there are liquidity-profitability trade-offs.
- Second, the extent of those trade-offs is sensitive to bank-specific attributes, especially bank size, with the trade-offs being more pronounced among smaller banks than bigger ones.

The trade-offs ought to be seen beyond being self-preserving but being a necessary adjustment to assure general market stability and subsequent restoration of the positive finance-growth relationship in a calm environment. As a sufficient

condition, the transition process requires a policy environment that is facilitative of real lending rates adjustments corresponding to the attendant risks as opposed to a sticky regime.

3. Policy Implications

Whenever there is an economic shock, the banking system adjusts in a manner that allows for general market stability and subsequent restoration of the positive finance-growth relationship in a calm environment. The adjustments are on the back of the system’s intertwined roles of managing liquidity risk and liquidity creation. The process of banks creating liquidity to help depositors and companies stay afloat, especially when other forms of financing are difficult while simultaneously managing liquidity risk to ensure that they continue to intermediate, is complex and often comes with trade-offs.

The trade-offs ought to be seen beyond being self-preserving, being a necessary adjustment to assure general market stability and subsequent restoration of the positive role of finance on economic growth. Based on this, we recommend that the transition process requires, as a sufficient condition, a policy environment that is facilitative of real lending rates adjustments corresponding to the attendant risks as opposed to a sticky regime. Without policy disincentivising the crowding-out which is prevalent when asset quality is weakening, the transition after the shock to a profitability that is aligned with the positive finance-growth nexus may be prolonged.

Reference

Osoro J., Kiplangat J., 2022. *Banking System Adjustment to Shock: The Kenyan Case of Liquidity-Profitability Trade-Offs*. KBA Working Paper Series (WPS/02/2022).



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