



BOTSWANA

FINANCIAL SECTOR ASSESSMENT PROGRAM

TECHNICAL NOTE ON SYSTEMIC LIQUIDITY MANAGEMENT

March 2024

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BOTSWANA

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January 18, 2024

TECHNICAL NOTE

SYSTEMIC LIQUIDITY MANAGEMENT

Prepared By
**Monetary and Capital Markets
Department**

This Technical Note was prepared by IMF staff in the context of the Financial Sector Assessment Program in Botswana. It contains technical analysis and detailed information underpinning the FSAP's findings and recommendations. Further information on the FSAP can be found at <http://www.imf.org/external/np/fsap/fssa.aspx>

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Glossary

BISS	Botswana Interbank Settlement System
BoB	Bank of Botswana
BoBCs	Bank of Botswana Certificates
BoBAA	Bank of Botswana Amendment Act, 2022
BWP	Botswana Pula
CF	Credit Facility
CiC	Currency in Circulation
ELA	Emergency Liquidity Assistance
FX	Foreign Currency
HQLA	High-Quality Liquid Assets
LAR	Liquid Assets Ratio
LCR	Liquidity Coverage Ratio
MoF	Ministry of Finance
MoPR	Monetary Policy Rate
NBFI	Non-Bank Financial Institutions
NBFIRA	Non-Bank Financial Institutions Regulatory Authority
NOP	Net Open Position
NSFR	Net Stable Funding Ratio
PD	Primary Dealer
PRR	Primary Reserves Requirement
RMP	Reserve Maintenance Period
SCF	Standing Credit Facility
SDF	Standing Deposit Facility
TA	Technical Assistance

EXECUTIVE SUMMARY¹

The challenges of Botswana’s highly interconnected financial system requires an effective systemic liquidity management framework. Commercial banks² funding sources from corporates and non-bank financial institutions (NBFIs) and credit exposures to households create avenues for risk transmission. Corporations and NBFIs (pension funds and insurance companies) constitute the main depositors of the banking sector. Strong linkage also exists between banks and the household sector, as households contribute 21 percent of banks’ total deposits and receive 67 percent of banks’ total lending in the form of unsecured loans.

The liquidity management framework of the Bank of Botswana (BoB) has been strengthened since the April 2022 monetary policy reforms; however, structural excess liquidity and its volatility persist. Monetary policy implementation is transitioning towards an interest rate operating target to support the crawling peg exchange rate regime. The more streamlined use of market-based monetary instruments should better support banks’ liquidity management and promote effective interest rate transmission. Changes in the net government position continue to be the primary driver of the volatile excess reserves, implying room for the BoB to strengthen liquidity forecasting.

The BoB’s liquidity regulations could more effectively facilitate banks’ ability to manage liquidity internally. Banks hold high precautionary balances due to the high penalty rate of primary reserve requirement (PRR) shortfalls, limited alternative funding options in the fragmented interbank market, and early cut-off time for the standing credit facility (SCF). To encourage banks to flexibly use averaging of the PRR effectively as an internal risk absorber, the BoB should align the PRR penalty rate with the credit facility (CF) rate and permit access to the SCF after the closure of interbank market trading.

Although banks maintain liquid assets above the regulatory minimum, these may be insufficient to withstand a high funding liquidity risk. Most banks maintain additional internal buffers above the liquid assets ratio (LAR) requirement and banks’ aggregated LAR have been stable for years. However, this stock measure may not fully capture the vulnerability to the sudden shifts in funding liquidity from lumpy and concentrated deposits. The Liquidity Coverage Ratio (LCR)-proxy test³ revealed that under an adverse scenario with large deposit run-off rates, five banks would face a potential liquidity shortfall. This outcome is reflective of the structural maturity mismatch and funding concentration risk for these banks.

¹ Prepared by Yuan Gao Rollinson. The FSAP mission wishes to express appreciation to the various departments within the Bank of Botswana and the Non-Bank Financial Institutions Authority for their productive cooperation, responsiveness with data, and their full support towards the completion of this assessment.

² Commercial banks include the eight banks licensed in Botswana as of August 2022. The BBS Bank Limited, was licensed as a commercial bank on October 6, 2022, is excluded from the analysis.

³ See the FSAP technical note of Systemic Risk Assessment for Banks.

The FSAP supports the BoB's plan to implement the Basel III liquidity standard for strengthening liquidity monitoring. The LCR is a more informative indicator of liquidity risks, which complemented with the assessment of the NSFR will allow the BoB to evaluate individual bank's resilience against the funding liquidity risk. The BoB is in the process of developing the reporting framework for the LCR and the NSFR implementation and will update the liquidity monitoring regulations accordingly. The BoB should perform an assessment of the readiness of the banking sector to implement the LCR and NSFR, especially allowing the supervisors to gain sufficient experience with calibrating the parameters of the LCR and NSFR before imposing a minimum requirement.

Further support for an effective framework for banks' liquidity management can emanate from streamlining the BoB's collateral framework for refinancing facilities. First, the BoB should unify the fragmented collateral pool for the credit facility and standing credit facility. Second, the BOB should refine its collateral valuation methodology and publish an updated haircut schedule reflecting its risk tolerance and the risk associated with different collateral classes. Although maintaining a fairly conservative pool of eligible collateral comprising mainly government securities, the small haircuts may not reflect market risk for longer maturity instruments in the illiquid market. Moreover, with the inclusion of a wider class of eligible assets for BoB refinancing facilities since the pandemic, the risks associated with these additional assets must be appropriately managed through a strengthened collateral framework.

The absence of a framework for emergency liquidity assistance (ELA) leaves a gap for managing systemic liquidity shocks and should be addressed as a priority. Subject to legal allowances via the implementation of the BoB Amendment Act (BoBAA), the BOB should articulate a regulation and publish comprehensive operational guidelines for ELA. The guiding principles for ELA should be fully applied: (i) available to solvent but temporarily illiquid banks, (ii) ELA should be extended against adequate collateral, (iii) a broader range of assets with requisite legal security and within the BoB's risk tolerance may be considered, (iv) the remuneration of ELA must be adequate as a means of mitigating moral hazard, and (v) ELA should be done at the discretion of the BoB.

Promoting the development of interbank repo market and government securities market help to increase financial sector resilience. The existing interbank market is a fragmented unsecured market comprised of one-way lending from large banks to small banks, which is an important but insufficient shock absorber for liquidity risk. The BoB and the Ministry of Finance (MoF) should coordinate efforts to promote parallel development of both key markets by: (i) ensuring that the legal framework supports enforceability and title transfer to securities; (ii) facilitating information dissemination and development of a reference rate for money markets; and (iii) providing greater price-transparency in government primary bonds auctions.

Table 1. Botswana: Key Recommendations

Recommendations	Authority	Priority ^{1/}
Systemic Liquidity Management and Monitoring		
Improve BOB's liquidity forecasting and align forecast horizon with the reserve maintenance period [¶18]	BoB, MoF	ST
Improve banks' access to refinancing facilities by permitting access to the standing credit facility (SCF) after the closure of interbank trading [¶12–13, ¶22]	BoB	ST
Streamline refinancing facilities by adjusting the PRR penalty rate, retaining the credit facility (CF) for daylight credit only and allowing overnight credit at the SCF rate [¶13, ¶22]	BoB	ST
Introduce the Basel III liquidity standards to enhance liquidity monitoring ^{2/} [¶26]	BoB	MT-LT
Collateral Framework		
Unify BoB's fragmented collateral pool for the CF and SCF through a more streamlined framework for refinancing facilities [¶12]	BoB	ST
Review and publish haircut schedules to include all eligible assets for standard refinancing operations [¶29–30]	BoB	ST
Emergency Liquidity Assistance		
Develop and publish comprehensive operational framework for ELA once BoBAA enters into force [¶33]	BoB	ST-MT
Determine the collateral universe for ELA, identify the requirements to facilitate legal entitlement to collateral, and develop an appropriate risk mitigation framework [¶34–35]	BoB	ST-MT
Market Development: Interbank and Government Securities		
Develop the interbank repo market by ensuring the legal framework supports enforceability and title transfer of securities [¶38]	BoB	MT
Facilitate development of a reference rate for money market and interbank repo market [¶39]	BoB, MoF	MT
Provide greater price transparency in government bond auctions [¶41]	BoB, MoF	MT
^{1/} ST: short term= less than 1 year; MT: medium term = 1 to 5 years; LT: long term = over 5 years. ^{2/} Please refer to FSAP Technical Note on Systemic Risk Assessment for Banks for Key Recommendations for Managing Liquidity Risks.		

INTRODUCTION

1. This technical note examines the Bank of Botswana’s (BoB) operational framework and its ability to address systemic and idiosyncratic liquidity shocks. The assessment begins with the profile and vulnerabilities to market and funding liquidity risk in Botswana’s highly interconnected financial system.. The analysis that follows focuses on measures that allow banks to manage risks internally at the onset of a liquidity shock, followed by their ability to mitigate some risks using the markets. These capacities can improve market resilience to liquidity risk without central bank intervention.

2. The analysis extends to include systemic liquidity management by the BoB and enumerates instruments that may also be useful for managing residual liquidity risks.. There are some risks that cannot be internalized, as they may be economically too costly. Thus, the available risk-distribution options from the central bank would be particularly important to preserve financial stability. These options include: (i) those promulgated through liquidity regulations, e.g., the primary reserve requirement (PRR), (ii) accessibility to refinancing facilities, including a well-defined and effective collateral framework, and (iii) the BoB’s legal authority to implement an effective framework for ELA.⁴

3. The note concludes with recommendations on promoting the development of markets. These markets are needed for on-going risk monitoring and risk management utilizing different instruments, including secured transactions. Markets in Botswana are currently small and underdeveloped. Therefore, initiatives to facilitate the development of the interbank repo market and government securities market should be considered to support resilience to liquidity shocks and to support financial stability in the long term.

ASSESSING LIQUIDITY RISKS

A. Systemic Liquidity Vulnerability in a Highly Interconnected Financial System

4. Strong macro-financial linkage of the financial system creates a potential channel of contagion risks across sectors (Figure 1). Botswana’s banking sector is highly interconnected with other sectors through its deposits holdings and lending. As of March 2022, non-financial corporations account for close to 50 percent of total deposits of commercial banks, while corporations’ borrowing represents 28 percent of commercial banks’ credit; NBFIs⁵ hold 20 percent

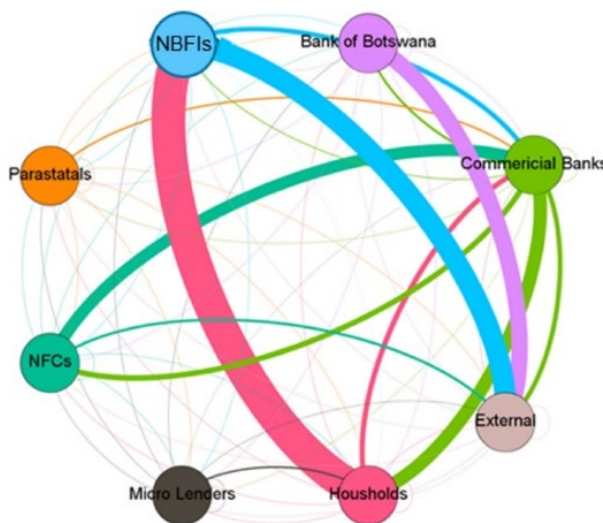
⁴ Once the BoB Amendment Act (BoBAA), 2022 enters into force, the BoB will have an explicit secondary mandate for financial stability, which establishes a measure of legal accountability for the BoB. Also, the BoBAA provides the legal authority for the BoB to provide ELA.

⁵ In Botswana, NBFIs are regulated by the Non-bank Financial Institutions Regulatory Authority (NBFIRA).

of banks’ total deposits; households hold 21 percent of banks’ total deposits, while banks extend 67 percent of total lending to the households (mostly to government employees in the form of unsecured loans).

Figure 1. Botswana: Financial Sector Interconnectedness

(As of March 2022)



Sources: Bank of Botswana, NBFIRA, and IMF staff calculations.

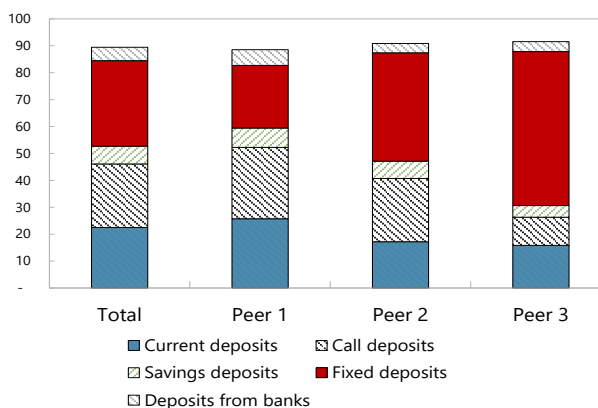
Notes: (1) Node size proportionally represents transaction within a sector, edge width proportionally reflects financial linkages between each sectors; edges have the same color as the node for which the edge represents an exposure. Intersectoral exposures are not included. (2) Pension funds account for over 90 percent of NBFIs total assets.

5. Banks’ funding exposures from other sectors reflect potential risks.

Funding profiles are concentrated—comprising mainly short-term deposits of non-financial corporates from a few large depositors. The largest banks have the dominant share of savings and call deposits, while smaller banks largely rely on price-sensitive fixed deposits (Text Chart). Monitoring is done for deposit concentration among the top-20 depositors for each institution, with some banks establishing internal policies and procedures for managing these concentrations.

Deposit Composition

(as of June 2022; in percent of non-equity liabilities)



Peer groups are determined by the banks’ share of total assets to banking system assets, and Peer 1/2/3 represent 64/22/14 percent, respectively, as of end-June 2022.

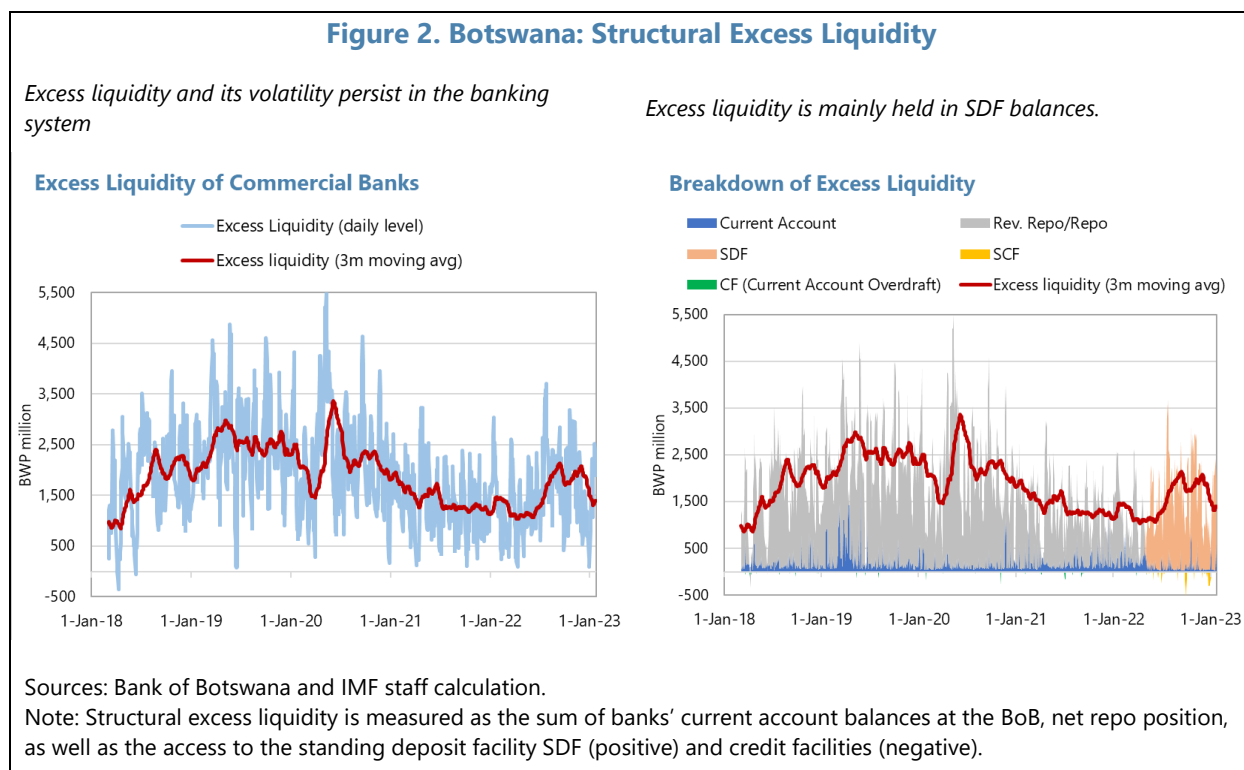
Sources: Bank of Botswana, and IMF staff.

6. The banking system has maintained adequate liquidity positions. The banking system operates with structural excess liquidity for years. At the individual level, commercial banks' liquid assets holdings are adequate and well above the statutory liquid assets ratio (LAR) requirement. On the liability side, the banking system's sources of fundings have stayed relatively stable over recent years. However, banks are largely reliant on the short-term deposit fundings (88 percent of total deposits are with maturity less than 6 months), which tend to be volatile as the wholesale depositors switch on banks often. During stressed period, the wholesale deposits may become more volatile and lead to idiosyncratic funding shortfall for some banks which can create instability for the whole system.

B. Liquidity Management Framework

7. Structural excess liquidity and its volatility persisted in the banking system in 2022.

Daily excess reserves have been volatile over time (Figure 2). Although the magnitude of excess liquidity decreased significantly during the COVID Pandemic, structural excess liquidity persisted in 2022. Daily excess reserves in 2022 averaged BWP 1.5 billion, compared with the average of BWP 1.3 billion for 2021. The peak excess reserves since January 2022 was BWP 3.7 billion in July 2022 and has since declined to BWP 2.5 billion as of mid-January 2023. Accordingly, the COVID measures aimed at ensuring that banks had adequate access to liquidity were not used by any banks (Box 1), allowing the BoB to announce the withdrawal of these exceptional measures in December 2022.



Box 1. Botswana: Monetary Policy Response to the COVID Pandemic

The Bank of Botswana announced measures on April 1, 2020 ([link](#)), as part of its responses to mitigate the adverse impact of COVID-19 on banks' liquidity and funding risks.

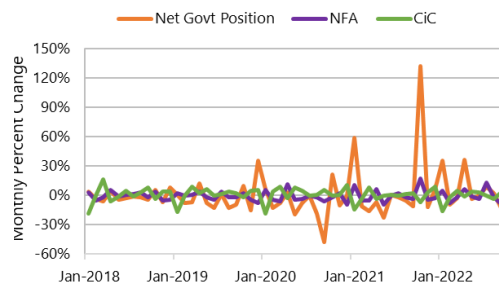
Type of Measure	Intended Purpose	Outcome
Monetary Policy		
<ul style="list-style-type: none"> Reduction in monetary policy rate Provided special repo facilities with maturity up to 92 days (extended from the standard overnight tenor) Cost for liquidity from BoB available at standard interest rate of 4.75 percent, without the punitive interest rate spread of 6.0 percentage points above the bank rate. 	<p>To alleviate any possible pressure on the banks' liquidity and the cost for accessing liquidity.</p> <p>Lowering the cost of funding also alleviated pressure in the event of loss of large wholesale deposits.</p>	There were no banks accessing the announced COVID-19 lending facilities.
<ul style="list-style-type: none"> Extended collateral pool for borrowing by licensed commercial banks from the BoB to include all corporate bonds listed and traded on the Botswana Stock Exchange. 	To extend potential additional sources for accessing liquidity.	

Sources: Bank of Botswana and IMF staff.

Note: Monetary policy rate during COVID referred to the Bank Rate, which was discontinued as of April 28, 2022.

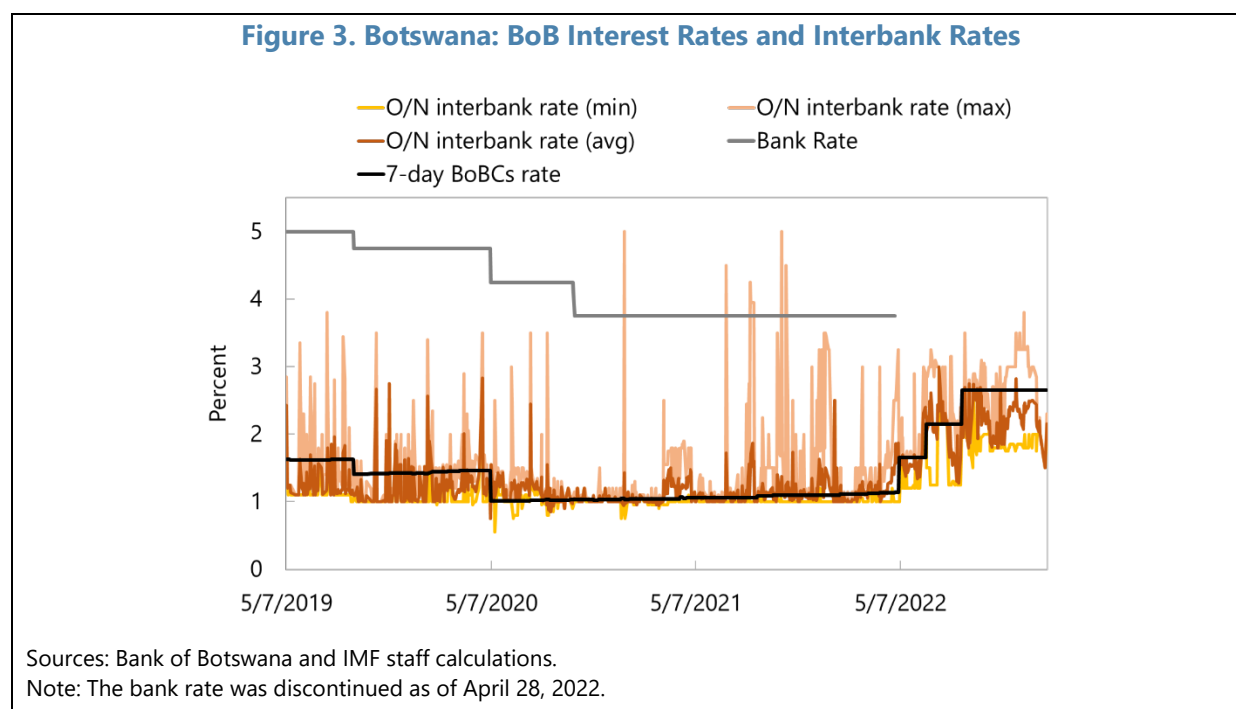
8. Changes in the net government position continue to be the primary driver of the volatile excess reserves in the banking system. Liquidity forecast is conducted by the BoB Financial Markets Department on a weekly basis, including one-week ahead forecast of net government position, net FX position (NFA), Currency in Circulation (CiC), and required reserves. During the 2022 reform, the BoB has improved its CiC forecast and FX activity monitoring. However, forecast of the net government position is currently weak. Moreover, changes in the net government position remain the main driver of liquidity forecast errors, thereby contributing to the volatile excess reserves. The BoB should continue working with the MoF to improve the forecast of government flows. Additionally, the BoB should seek to align the forecast horizon with the reserve maintenance period (RMP) for the primary reserve requirements (PRR) to better calibrate the needed monetary responses to the changing liquidity conditions and estimate banks' demand for reserves. This would mean extending the forecast horizon from 7 days to 30 days, for the similar configuration of the RMP.

Monthly Percent Changes of the Autonomous Factors of Liquidity



Source: Bank of Botswana

9. The monetary policy reform implemented in April 2022 can help with more effective liquidity pricing and promote transmission to the money market.⁶ Monetary policy has moved from a notional framework (using the Bank Rate) to an announced interest rate operating target attached to the BoB certificates of deposit (BoBCs).⁷ Prior to the reform, a spread of 262–338 bps was maintained between the Bank Rate (the intended signal for the monetary stance) and the 7-day BoBCs rate, while overnight interbank rates hovered around the 7-day BoBC rates with large spikes (mostly as a result of longer maturities before December 2020) (Figure 3). This has undermined transmission to other funding markets. Accordingly, the new monetary policy rate (MoPR) that is anchored at the 7-day BoBCs rate should help to reduce volatility. In addition, the greater efforts to streamline its liquidity management framework using OMOs⁸ to effectively manage excess reserves in the banking system should alleviate some liquidity risks for banks.



10. BoB needs to effectively manage the structural liquidity to facilitate the implementation of monetary policy and to better support financial stability. For now, the excess liquidity will drive down the short-term interest rates and possibly facilitate commercial banks' risk-taking, including unsecured loans or high-risk credit to compensate for the income loss. In fact, commercial banks' total loans and advances have steadily increased over the past five years

⁶ BoB Monetary Policy Report December 2022 ([link](#))

⁷ See IMF 2021 TA of Botswana Monetary Policy Implementation and Operations.

⁸ The current suite of open market operations instruments for sterilizing excess reserves include: (i) 7-day BoBCs: the main instrument to offset weekly changes in autonomous factors and (ii) 30-day BoBCs: to fill the gap between the 7-day BoBCs and the 3-month T-Bill. Repo and Reverse repo are used as fine-tuning OMOs conducted on an ad hoc basis, at the discretion of the BoB.

as excess liquidity persists. Such behaviours would amplify credit risks and increase non-performing loans, which in turn undermine effective monetary policy implementation.

11. Yet, in the near-term banks' liquidity positions—and funding may change given imminent changes that will impact the retirement funds.⁹ Although still uncertain, the BoB should be prepared for any shifts in banks' funding sources that may be linked to these NBFIs that provide substantial funding across the banking sector. Funding uncertainty could place pressure on interbank rates, as a first sign of liquidity pressures, even if the aggregate structural liquidity position remains largely unchanged.

12. To help banks manage the liquidity uncertainty, the BoB should improve banks' access to refinancing facilities. The BoB provides three refinancing facilities for banks (Box 2), but as organized, they unduly encumber bank assets for the securities as pre-pledged and blocked securities for the CF¹⁰ cannot be used to expediently access other refinancing facilities. Banks therefore provide additional collateral to the BoB for SCF which transactions are processed under a different agreement (title transfer repo agreement). In addition, banks are prohibited from accessing the SCF after the 4:15 pm cut-off, which is before the closure of interbank market trading. In this context, the cost for assessing the CF as an alternate refinancing option is punitive for reserve shortfalls and where interbank market access may be limited.

13. The FSAP recommends that the BoB should streamline access and processes that support banks' use of refinancing facilities. Banks could be granted access to the SCF after interbank trading, given its purpose to support temporary and unanticipated liquidity shortfalls at less punitive terms than the CF. The SCF also serves a monetary policy implementation role, helping to limit interest rate volatility and improve transmission. The CF—at zero interest rate, can be retained to facilitate continuous settlement in the Botswana Interbank Settlement System (BISS), but its collateral requirements should be reasonably calibrated to limit excessive and undue collateral encumbrances. The SCF rate should also apply to any unfunded balance at the end of the day, which automatically converted to an overnight loan from the BoB.

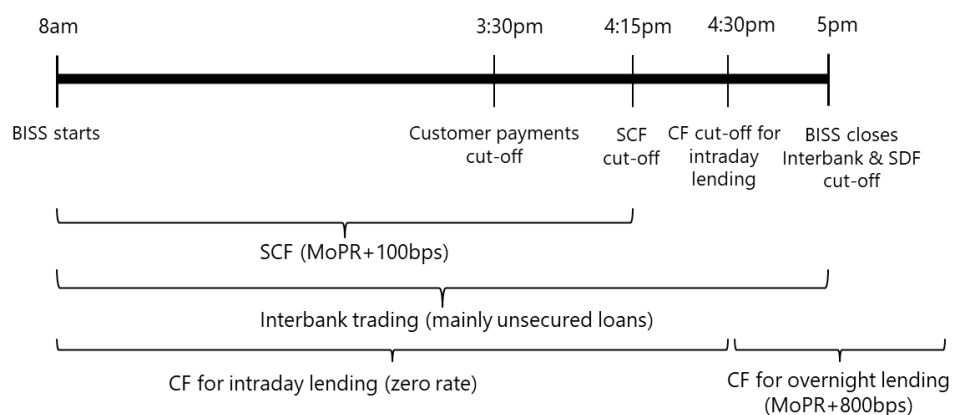
⁹ The retirement funds will need to transition their investments over the near-term to onshore significant assets while concurrently allowing members greater access to accumulated savings. The timeline of the shift is not yet articulated but could result in retirement funds adjusting the maturity structure of deposits with banks to meet any possible demands from members.

¹⁰ The intraday (daylight) usage of the CF enables settlement finality in the Botswana settlement System (BISS), which is distinct from the role for an overnight refinancing facility which serves a broader role for systemic liquidity management and financial stability.

Box 2. Botswana: Bank of Botswana Refinancing Facilities

The BoB provides three refinancing facilities for banks: (i) Standing Credit Facility (SCF), (ii) Credit Facility (CF) are used to prevent overdrafts on the current account (see footnote 10), and (iii) repos (currently inactive and not fully functional). They are available to banks on the following terms:

- **Access and frequency:** banks can access the SCF during the day (until 4:15 pm daily), up to 45 mins before the closure of the interbank market. The CF is available intraday until 4:30 pm daily, after which any use of the CF is automatically converted to an overnight or weekend loan to close out any overdraft on the bank's current account. Repos are offered at the discretion of the BoB, usually based on changes in the aggregate liquidity position.
- **Cost:** As of January 2023, the BoB's penalty rate of PRR shortfall is MoPR+107 percent (20 bps/day). The CF rate for intraday usage is zero, while the interest rate for the use of the CF beyond intraday (overnight and weekend usage) is MoPR+800bps.
- **Collateral:** Collateral management is done using different methods, depending on the type of operation. For the CF, all banks are required to pre-pledge collateral to the BoB for this facility, as it serves as the final refinancing window for banks not to incur overdrafts on their current account. For the SCF collateral is pledged at the time of each transaction.



Source: Bank of Botswana and IMF staff.

Note: BISS refers to the Botswana Interbank Settlement System.

C. Market and Funding Liquidity Risk

14. Statutory liquid assets of the banking system are concentrated in government securities.

As of August 2022, government securities, including BoBCs, T-Bills, and short-term government bonds (maturity less than one year), account for 58 percent of banks' total liquid assets, with the greater share held by larger banks. Cash (mainly in Pula) and due from domestic banks (mainly overnight interbank loans) account for 9 and 15 percent of total liquid assets, respectively. An asset is considered liquid if it can be easily and immediately converted into central bank money with minimal or no loss in value and without excessive costs. In this regard, banks' reserves at the BoB, which are held in the form of cash, should also be considered liquid assets, but are currently excluded from the BoB's statutory liquid assets.

Banks' Statutory Liquid Assets
(as of August 2022)

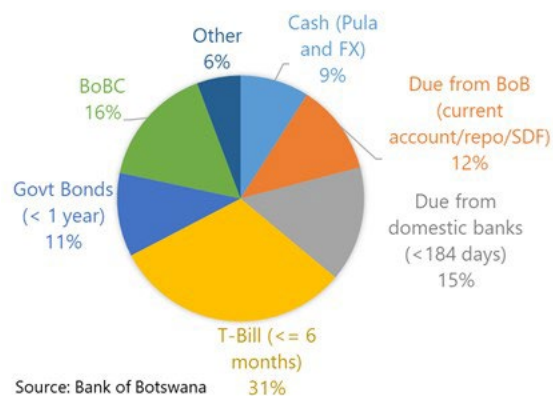
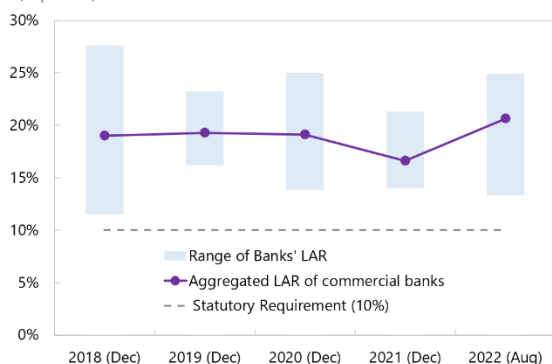


Figure 4. Botswana: Market Liquidity Risk: LAR and LCR Measures

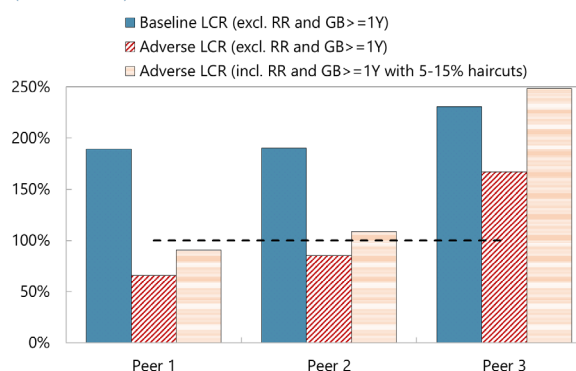
Banks' liquid assets holdings are adequate well above the 10 percent minimum requirement

Statutory LAR(Liquid Assets Ratio) of Commercial Banks
(In percent)



The banking system is vulnerable to wholesale deposits run off, but expanding the eligible liquid assets improves LCR

LCR Results in Baseline and Adverse Scenario
(With all shocks)



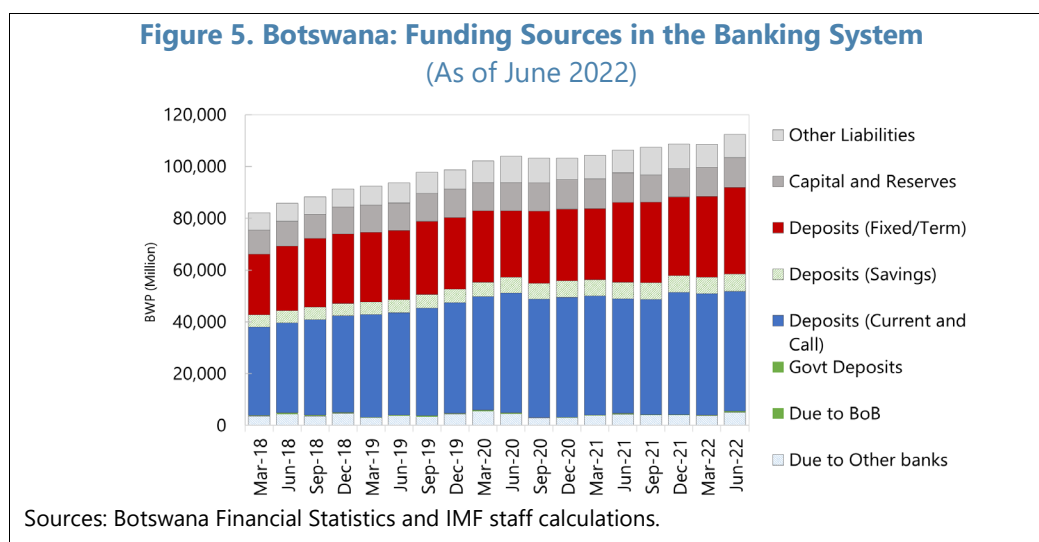
Sources: Bank of Botswana, BoB Bank Supervision Reports, and IMF staff calculations.

Note: (1) LAR of State Bank of India (37.8 percent in 2019, 51.7 percent in 2020) were excluded as it went bankrupt in 2021. (2) Peer groups are determined by the banks' share of total assets to banking system assets, and Peer 1/2/3 represent 64/22/14 percent, respectively, as of end-June 2022.

15. Banks maintain adequate liquid assets above the regulatory minimum, but these may be insufficient to withstand a high funding liquidity risk. The aggregated statutory liquid assets ratio (LAR) ranges from 16.6 to 19.1 during the past five years, and the bank level ranges from

11.5 percent to 27.6 percent (Figure 4). Bank liquidity stress test (LCR-proxy)¹¹ shows that all banks have sufficient stock of High-Quality Liquid Assets (HQLA)¹² to withstand 30-day market liquidity stress period in the baseline, but this may be insufficient for some banks under adverse scenario with large decline in inflows and large deposits run-off (e.g., 50 percent wholesale deposits run-off). However, expanding the class of eligible liquid assets to include required reserves and government bonds with maturity over one year (with 15 percent haircuts), the sector shows slightly improved resilience with LCRs closer to 100 percent for most banks.

16. Banks' heavy reliance on wholesale deposits and short-term funding exposes them to funding liquidity risk in Pula,¹³ despite the aggregate level remaining relatively stable for a long time (Figure 5). As of June 2022, deposits from non-financial corporations and NBFIs account for 46 percent and 23 percent of banks' total deposits, respectively, and are dominated by short-term deposits (maturity less than 6 months). Banks should encourage corporations and NBFIs to lengthen the maturity of their deposits to improve the stability of funding. Idiosyncratic risk exists due to volatile wholesale deposits among banks, since corporations and NBFIs switch deposits on banks often.¹⁴ The implementation of a deposit insurance scheme, which has not yet been operationalized in Botswana, could be helpful to lengthen the maturity of bank deposit.



¹¹ The LCR-proxy test followed the standard Basel III LCR framework (e.g., HQLA to 30-day net outflows). Necessary assumptions are made particularly when breakdown data are unavailable from the BoB's regulatory Basel II reports. Please see details in the FSAP technical note of Systemic Risk Assessment for Banks.

¹² The coverage of liquid assets in LAR and LCR are different, see Figure 8.

¹³ FX liquidity risks for banks in Botswana are assessed to be low and banks have very low FX exposures in FX liabilities average 20 percent as share of non-equity liabilities. Banks' average net open position (NOP) is stable at around 5 percent of capital, remaining well below the overall NOP limit of 30 percent of capital. Moreover, banks are able to access FX liquidity from their foreign parent banks in the face of a potential FX funding shortfall.

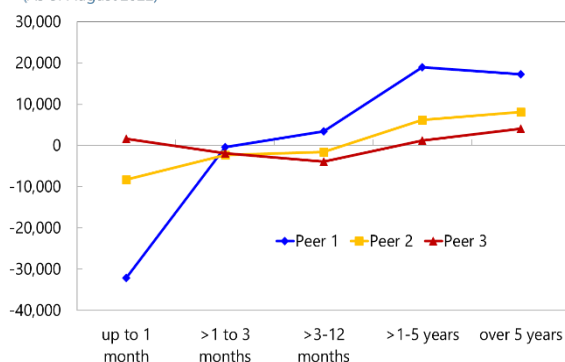
¹⁴ Feedback received from the FSAP's commercial banks' survey. The current framework of statutory report is difficult to track deposits flows of institutional depositors among banks. The BoB could maintain a panel database to track the idiosyncratic deposit run-off among banks.

17. There is a structural maturity mismatch and funding concentration risk for banks.

Banks face a structural maturity mismatch between assets and liabilities (funding being predominantly less than one-year and deployment being largely more than one year). Seven banks have reported negative liquidity gap for maturity bucket less than one year. Banks' heavy reliance on short-term deposits as a source of funding compels them to seek short-term assets to reduce maturity mismatch, particularly for small banks (text chart and Figure 6). There is also a funding concentration risk, as deposits are predominantly among Peer 1 banks for all categories of depositors (Figure 6)—and among a few large depositors across banks.

Bank Liquidity Gap by Peer Group

(As of August 2022)



Sources: Bank of Botswana and IMF staff calculation.

18. The FSAP recommends that the assessment of NSFR will be useful for evaluating individual bank's resilience against the funding liquidity risk. The NSFR test is not included in this FSAP due to the unavailability of data under the current reporting framework. Nevertheless, developing the framework to collect relevant data and implementing funding stability ratios may be useful to identify pockets of funding risks, although the stress test for the largest non-bank financial institutions suggests that under an adverse scenario the market risk impact for NBFIs is low.¹⁵

¹⁵ See the FSAP Technical Note of Assessment of Systemic Risks and Vulnerabilities for Non-bank Financial Institutions.

Figure 6. Botswana: Bank Deposits by Maturity and Holder

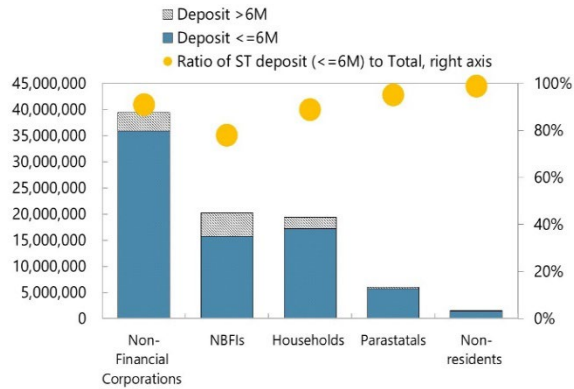
(As of June 2022)

Deposits are dominated by short-term tenors.

The proportion of NBFIs' deposits are slightly higher in the longer-term maturity

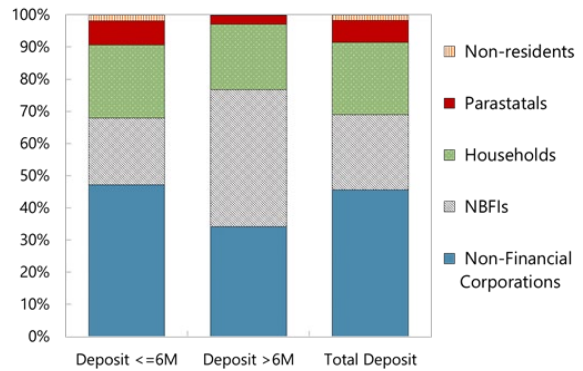
Short-term Deposits by Holder

(Pula thousands)



Deposits Distribution by Holder

(In percent)

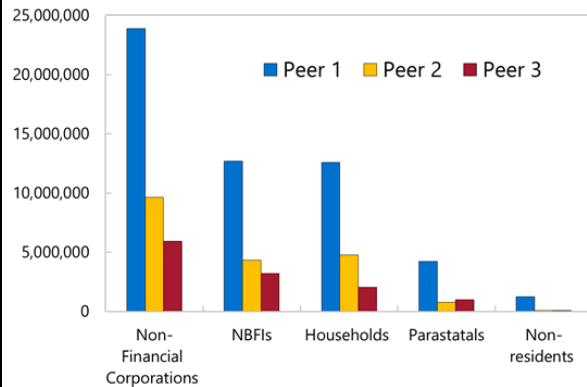


The banking system's deposits are concentrated in Peer 1

Corporations and NBFIs should lengthen the maturity of their deposits

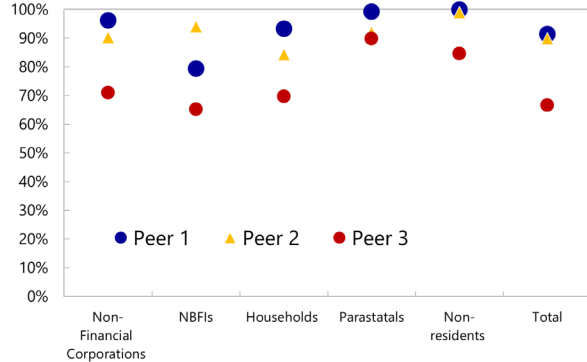
Deposit Distribution by Peer Group

(Pula thousand)



Ratio of Short-term Deposit by Peer Group

(In percent)



Sources: Bank of Botswana, BoB Bank Supervision Reports, and IMF staff calculations.

BoB'S LIQUIDITY REGULATIONS AS RISK ABSORBERS

19. The BoB has implemented two regulatory measures, the primary reserves requirement (PRR), and the statutory liquid assets ratio (LAR), to reduce the banks' exposure to liquidity risk. Under the PRR, commercial banks are required to hold 2.5 percent of Pula deposits in the form of cash at the BoB. The PRR is fulfilled on average over the 30-day reserves maintenance period. The LAR is defined as the ratio of a bank's holding of statutory liquid assets (maturing government and BoBCs of maturity less than one-year) to short-term deposits. The statutory LAR requirement of 10 percent is a daily requirement. The PRR and LAR play a role in ex-ante risk control to mitigate liquidity risks.

A. Primary Reserves Requirement

20. BoB implemented the PRR as a monetary policy tool, which serves as an additional tool for banks to manage their liquidity positions. As a market liquidity support measure during the COVID-19 Pandemic, the PRR ratio was reduced from 5 percent to 2.5 percent in 2020 and has remained unchanged since. PRR is unremunerated as stated in the Bank of Botswana Act.¹⁶ The BoB introduced "reserves averaging" in 2019 to improve liquidity management for banks, providing an alternate source of funding for short-term liquidity shocks within a 30-day period. But banks currently show very little preference for using PRR balances for liquidity management (Figure 7). This suggests that the secondary objective—for the PRR to serve as a micro-prudential tool—dominates their purpose.

21. High penalty rate of PRR shortfall, limited alternative funding options in the fragmented interbank market, and early SCF cut-off time, together have led to banks' high holding of precautionary liquidity (Figure 7). As of January 2023, The BoB's penalty rate for PRR shortfall is MoPR+107 percent (20 bps/day), in comparison to the CF rate of MoPR+800bps (current account overdraft penalty for overnight and weekend usage) and the SCF rate (MoPR+100bps). When facing funding shortfalls, large and medium banks mainly borrow from their foreign parent banks, while small bank mainly borrow from the interbank market in the form of unsecured loans, which typically come with low credit limits and relatively high cost. The early cut-off time of SCF constrains banks' use of the SCF if they exhaust their counterparty credit limits in the interbank market. Consequently, banks are reluctant to use "PRR averaging" as a tool to offset idiosyncratic short-term liquidity shortfalls.¹⁷ As shown in Figure 7, banks tend to front-load required reserves during the maintenance periods and overfulfill the 2.5 percent PRR regulation. Reserve averaging is

¹⁶ Section 40 of [Bank of Botswana Act](#) states, "No interest shall be paid by the Bank on any part of such primary reserves." Unremunerated PRR acts as banking "tax", which may incentivize banks to make riskier loans to offset opportunity cost. It is less disruptive under a low interest rate environment but may generate market dysfunction (less capacity for lending and increased risk-taking in lending) when interest rates are higher. The BoB should carefully consider the pre-defined threshold for remuneration, as a high interest income from the PRR remuneration will encourage banks to hold the maximum PRR rather than effectively manage it to meet daily liquidity need.

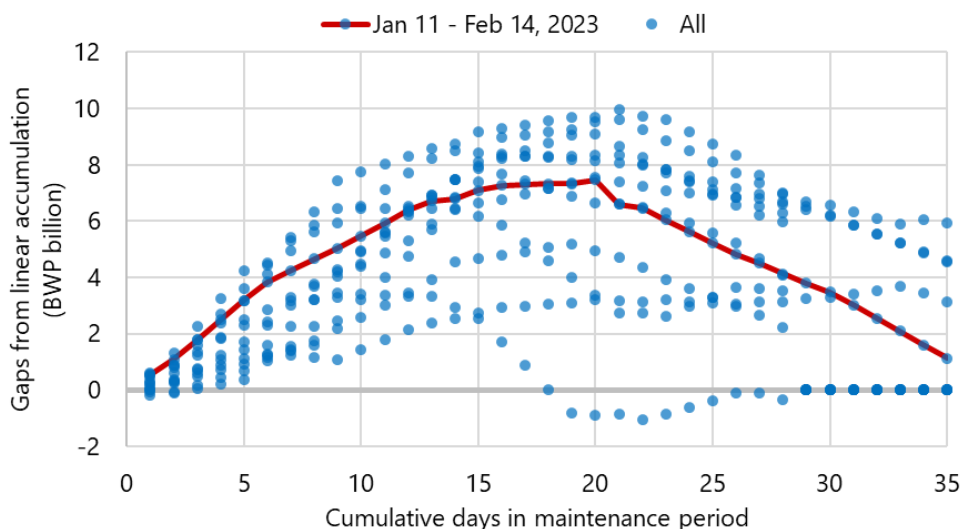
¹⁷ On the other hand, repeated infractions of the PRR could reveal the depletion of unencumbered collateral for monetary policy instruments (including the CF) and lead to supervisory actions in the context of ELA.

relatively new to the banking system, and banks may still be undergoing a period of observing and adapting. Accordingly, for the 12-months of February 10, 2022, to February 14, 2023, banks held a period average of BWP4 billion required reserves above the PRR.

Figure 7. Botswana: Required Reserves Fulfillment Pattern in Botswana

(12 maintenance periods from Feb 10, 2022, to Feb 14, 2023)

In the aggregated level, banks front-load required reserves and overfulfill PRR.



Sources: Bank of Botswana and IMF staff calculations.

Note: (1) Gaps from linear accumulation are calculated as banks' actual cumulative daily reserves minus the expected daily-average level multiplied by the days in each RMP. Positive gaps indicate banks' precautionary holding of required reserves in excess of the 2.5 percent PRR regulation.

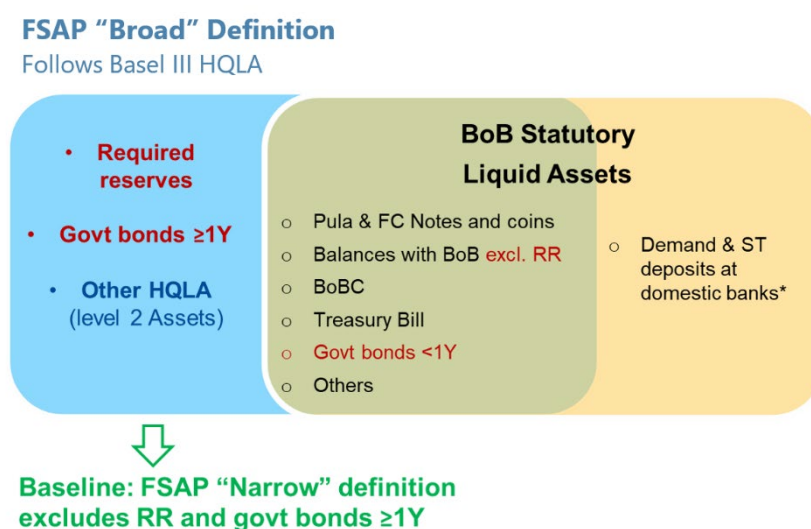
(2) The RMP run from the second Wednesday (inclusive) of each month to the second Tuesday (inclusive) of the following month.

22. To encourage banks to use the PRR effectively as an internal risk absorber, the FSAP suggests the following:

- (i) Align the PRR penalty rate with the credit facility rate of overnight usage and permit access to the SCF after the closure of interbank market trading.** This allows banks to access SCF for liquidity support, at a significantly lower funding cost than the current PRR penalty rate, if they are unable to borrow enough from the interbank market—and encourage banks to effectively manage their required reserves. Align the PRR penalty rate with the CF rate of overnight usage, the role of CF would have changed and the FSAP recommends only using CF for daylight credits to the BISS settlement (see ¶13). Although MoPR + 800bps is still high, it is less punitive than the current PRR penalty rate of MoPR + 107 percent. It will still be above the SCF rate (MoPR+100bps); therefore the adjusted penalty rate ideally should not be used to enforce prudential discipline.

- (ii) Include the required reserves as statutory liquid assets** (Figure 8). Basel III guidance includes the reserve requirement among liquid assets “to the extent the central bank policies allow them to be drawn down in time of stress.”¹⁸ Commercial banks’ holding of required reserves at the BoB have met three pre-conditions for Basel III LCR compliance¹⁹: PRR takes the form of averaging provision during the reserves maintenance period, which covers the LCR 30-day stress period; it is fully accessible to banks on daily basis; it contains only cash balances which have no conversion issue during liquidity stress period. The alternative of not including the PRR for LCR compliance and as HQLA would require banks to hold an additional 2.5 percent of Pula-denominated deposits in the PRR account in addition to the 10 percent LAR requirement.²⁰ The effect is an increase in banks demand for excess reserves, constrain balance sheet capacity for lending; and impose a tax on Pula deposits since these are unremunerated.

Figure 8. Botswana: Coverage of BoB's Statutory Liquid Assets



Source: Bank of Botswana, Basel III LCR guideline.

Note: * refer to “due from domestic banks - demand and/or less than 184 days”, which mainly consists of interbank unsecured loans.

¹⁸ Basel Committee on Banking Supervision, Basel III: the liquidity coverage ratio and liquidity monitoring tools, paragraph 50 (b).

¹⁹ See section III.D of [MCM TA handbook on “Reserves Requirements”](#).

²⁰ LAR and PRR have different deposit base: the deposit base of PRR is the total average Pula customer deposits from the previous month, while LAR is based on the total customer and banking deposits at the end of current month.

B. Statutory Liquid Assets Ratio

23. Banks remain adequate buffers above the 10 percent LAR. Most banks maintain additional internal buffers (ranging from 2 to 6 percent) above the requirement. Banks' aggregated LAR have been stable for years with buffer substantially above the requirement, and the distribution of bank-level LAR ranged from 13.3 to 15 percent as of end-August 2022.

24. The FSAP suggests expanding the eligible assets for satisfying the statutory liquid assets requirement, as well as for future LCR compliance (see Figure 8). In addition, this could support initiatives for enhancing liquidity of long-term securities. The expanded assets should consider:

- **Inclusion of required reserves in the short term** (see discussion on the PRR). Bank-level required reserves (daily average of August 2022) to statutory liquid assets ranged from 6 to 15 percent (Figure 9).
- **Inclusion of long-term government bonds with maturities over one year with appropriate haircuts, in the medium term.** The proportion of long-term government bonds among banks' total securities holdings is typically low, as those long-term bonds' yields frequently do not reflect market's risk appetite or inflation expectation. As of August 2022, Peer 1 banks hold the majority of banking system's government bonds with maturities beyond one year, whereas Peer 3 banks have no holdings beyond five years (Figure 9). Currently long-term government bonds are eligible collateral assets with the BoB (Box 3). In this regard, they can be converted to liquidity as needed using the existing BoB refinancing facilities. Based on Basel III principle, they should be counted towards HQLA for LCR compliance. Therefore, the FSAP recommends the BoB to consider extending the coverage of liquid assets by including long-term government bonds. Meanwhile, appropriate haircuts must be calibrated to reflect their market risks. Given the very limited secondary trading in the current market, the FSAP team acknowledged the difficulty in calibrating appropriate haircuts for the long-term government bonds. This is however a necessary issue that BoB must continue to monitor and improve over the medium term.

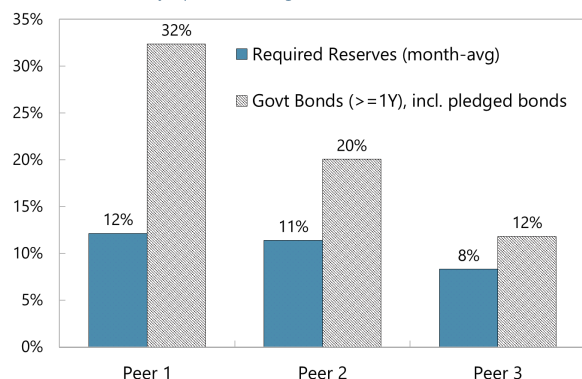
Figure 9. Botswana: Commercial Banks’ Holding of Required Reserves and Government Bonds

Banks’ required reserves and government bonds are significant compared to the size of statutory liquid assets.

Long-term government bonds among banks’ total securities holdings are typically low

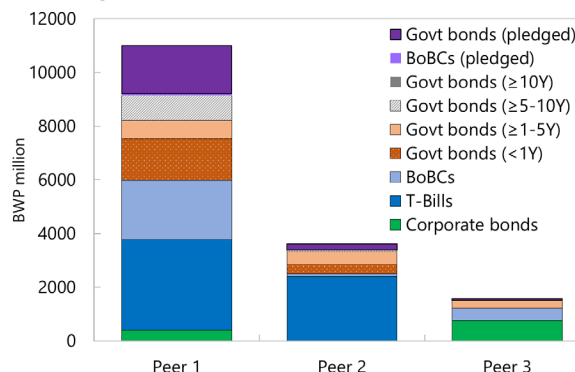
Banks’ Required Reserves and Government Bonds

(Percent of statutory liquid assets, August 2022)



Banks’ Securities Holding

(As of August 2022)



Source: Bank of Botswana.

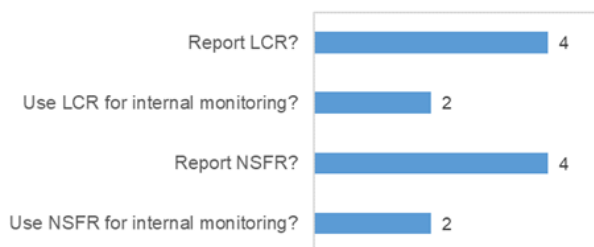
Note: Required reserves data is month-average, while all other data are end-month. Pledged BoBCs and government bonds are for accessing BoB’s refinancing facilities. The maturities of pledged bonds are not available.

25. The FSAP considers the Pula-denominated LAR, excluding foreign securities, is appropriate given the relatively low FX liquidity funding risk. Although 21 percent of total deposits is in foreign currency, banks carry very low FX exposures,²¹ and can use liquidity lines from their foreign parent banks in the face of a potential FX funding shortfall. In this regard, excluding foreign securities from eligible statutory liquid assets would provide a low incentive for banks to seek large amounts of foreign currency securities for meeting the requirement.

C. Implementing LCR and NSFR

26. Banks may already be internalizing the Basel III liquidity measures, although the BoB has not yet implemented them. As part of liquidity risk regulation reform since 2019, the BoB has taken actions to investigate the feasibility of introducing LCR and NSFR to strengthen banking sectors’ resilience to short-term liquidity shocks.²² In the commercial bank survey conducted by the FSAP team, all banks expressed supportive attitudes for this implementation, meanwhile, concerns about comprehending and accurately calculating the indicators have been a challenge for most banks, with smaller banks in particular,

Number of Commercial Banks Responded “Yes” (total = 8)



²¹ See footnote 13.

²² See IMF 2021 TA on Botswana Basel III Liquidity Standards—Impact Assessment, and IMF 2022 TA on Botswana Basel III Liquidity Standards—Regulation Drafting.

indicating a need for more technical guidance from the BoB. Four banks report LCR on a monthly or quarterly basis, but only two banks use LCR together with either LAR or internal liquidity model for monitoring market liquidity. The NSFR status is similar, however, only one of the two banks report NSFR also report LCR. Most banks lack sophisticated tools for funding liquidity risk management, instead depending on liquidity gap analysis (Excel-based table in the statutory report to calculate liquidity gap across different maturity buckets).

27. Compared to the LAR, the LCR is a more informative indicator of liquidity risks, which complemented with the assessment of the NSFR will allow the BoB to evaluate individual bank's resilience against the funding liquidity risk. The BoB should consider the following aspects for introducing Basel III LCR and NSFR framework:

- The initial focus of LCR and NSFR implementation should be on information gathering and liquidity monitoring. The actual implementation process can be started only after the reporting quality and depth have sufficiently improved and banks are able to consistently and accurately report items needed for the indicator calculation.
- Provide clear and detailed instruction to banks on how to calculate LCR and NSFR, and how to use them for internal liquidity management.
- Revise the statutory report framework – currently based on Basel II—to permit the reporting granularity necessary for LCR and NSFR calculation under the Basel III framework (e.g., net loan and advances to different counterparties in different maturity buckets)
- Appropriately calibrate and adjust any national discretion on the regulatory weights (e.g., haircuts rates, run-off rates, and cap ratio of inflows/outflows) based on the assets and funding structure and liquidity characteristic of Botswana's banking system (e.g., reliance on short-term wholesale deposits, structural excess liquidity)
- Gain material experience with LCR and NSFR before imposing minimum requirement.²³ The BoB should target convergence with the LCR and NSFR over a sufficiently long horizon that considers local conditions. Consistent with the experience in countries that have implemented the LCR and NSFR, implementation must be managed at a pace that allows banks and depositors sufficient time to adjust to changes. Given structural excess liquidity in Botswana, banks likely do not have difficulty complying with the 100 percent threshold (see baseline LCR result). However, there are additional potential adjustments, such as the development of bond and capital markets and the investment in deposit product systems that are needed to accurately estimate stressed outflows.

²³ Ferreira, C., Jenkinson, N., & Wilson, C. (2019). From Basel I to Basel III: Sequencing implementation in developing economies. International Monetary Fund.

CENTRAL BANK BACKSTOPS AND RISK MITIGATION

A. Collateral Framework

28. The collateral framework should be based on well-defined eligibility criteria and risk mitigation measures. The eligibility criteria aim at mitigating credit, legal, and operational risks, whereas risk mitigation measures address mainly market and liquidity risks. They are essential to a central bank's ability to pursue its monetary policy and financial stability objectives. The principles that define an effective collateral framework include: (i) legal certainty to ensure transferability of assets, with the absence of legal or operational obstacles for the BoB to liquidate the asset in the event of a counterparty default; (ii) assessments of credit quality and the application of minimum credit standards across all eligible assets; (iii) appropriate valuation that is typically based on publicly available market price references²⁴; (iv) the application of relevant haircuts to mitigate the BoB's exposure to all financial risks.

29. Currently, the BoB has a relatively conservative list of eligible collateral for accessing standard refinancing facilities (Box 3). The current collateral pool is mainly restricted to government securities with small haircuts applied. The BoB applies zero haircuts on BoBCs and treasury bills with residual maturities less than 184 days and applies 1 to 4 percent haircuts on longer term government securities (maximum 4 percent is for maturity over 10 years).

30. But the haircuts on the long-term government bonds may not reflect market's risk appetite, leading to potential risk transmission to the BoB's balance sheet. Assessing the full financial risk from using long-term government bonds as collateral is difficult for the BoB to price because their yields frequently do not reflect market' risk appetite or inflation expectation, partially owing to the very shallow secondary market. Approximately 70 percent of banks' government bonds holdings are for maturities over one year (see Figure 9)—and failing to value them appropriately may exacerbate financial loss. Although corporate bonds are included as eligible collateral since the COVID, they have not been used by commercial banks.

²⁴ Where reliable credible price references are not available, central banks will need to develop theoretical pricing models to value non-tradable or illiquid assets used in its refinancing operations.

Box 3. Botswana: BoB Collateral Framework: Eligible Assets, Haircuts, and Valuation

Eligible Assets:⁽¹⁾

- BoB Certificates
- Government of Botswana Treasury bills and government bonds (all maturities)⁽²⁾
- International Financial Corporations (IFC) Pula-denominated notes
- Corporate bonds listed and traded on the Botswana Stock Exchange⁽³⁾

Haircuts and Valuation:

Eligible Securities	Residual Maturities	Haircuts (percent)
BoBCs	1-184 days	0
Treasury Bills	1-184 days	0
	185 days-1 year	1
Government Bonds	1-184 days	1
	185 days-1 year	1.5
	≥1-5 years	3
	≥5-10 years	3.5
	≥10 years	4
IFC Notes	Not clearly specified (see below)	
Corporate Bonds	Not clearly specified (see below)	

Section 4.9 “Securities Valuation and Haircuts” in BoB’s “Operational Guidelines for the Credit Facility”:

The Bank seeks to value the pledged securities at a fair market value estimate. Haircuts will be applied to the Bank’s fair value estimates essentially, to account for the volatility of the value of the pledged security over an estimated liquidation period. Haircuts are assigned based on asset type and duration. Securities are typically valued daily using prices supplied by external vendors such as Bloomberg and or Thompson Reuters and the Botswana Stock Exchange. However, if pricing is not available from these sources, the bank will use available information to estimate the price.

Source: Bank of Botswana.

Note: (1) The above are the four types of eligible instruments under the category 1; category 2 instrument include government guaranteed and partially guaranteed securities.

(2) Government bonds with maturity over one year are eligible collateral assets but are excluded from the statutory liquid assets (Figure 8).

(3) Corporate bonds have been included since COVID but have not been used by banks.

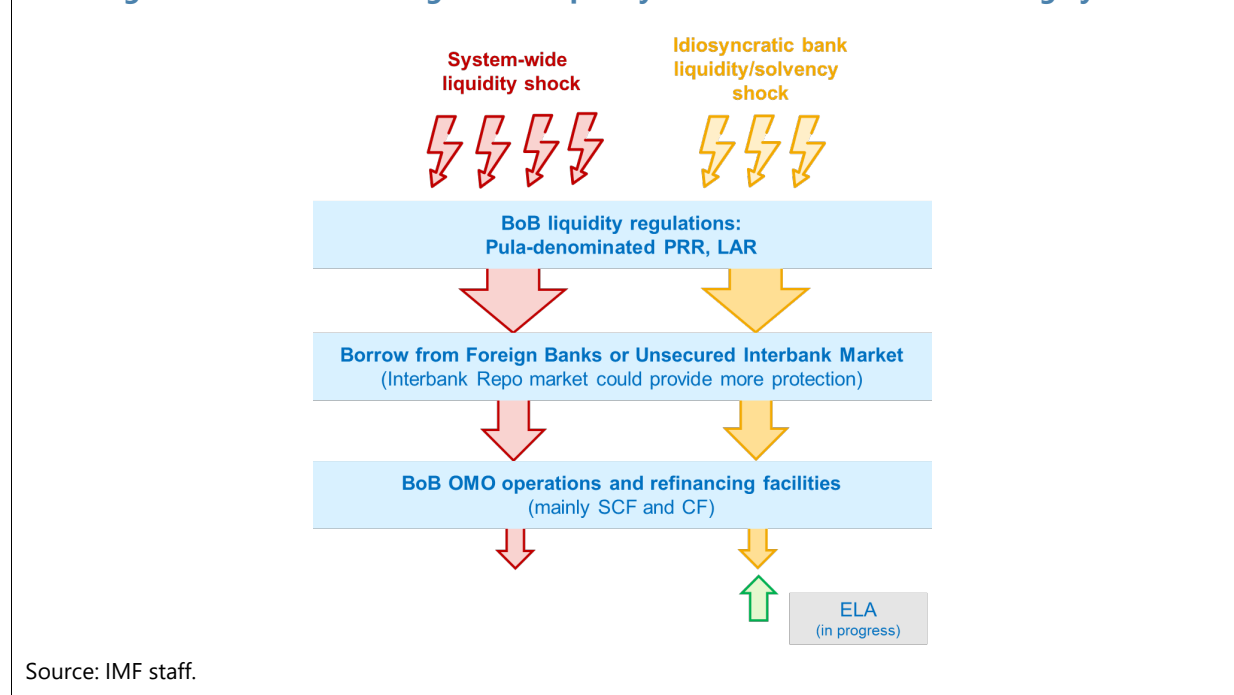
31. The BOB’s collateral framework needs to be clearly specified and enhanced in accordance with the principles outlined above. The goal of the enhancements is to publish a risk management framework for the legal and operational treatment for all eligible collateral that is comprehensive and adequately mitigates financial risks for the BoB’s balance sheet. Key steps required in this regard are:

- *(i) Specifying a collateral valuation policy and acceptance procedure in the monetary operational guideline.* The BoB bases its valuation of collateral assets on prices published by external vendors such as Bloomberg and or Thompson Reuters and the Botswana Stock Exchange. However, if pricing is not available from these sources, particularly for IFC notes and corporate bonds, the BoB should take additional risk mitigation measures – e.g. using model estimates to develop references for similar rated securities/issuers, setting limits on the proportion of such securities used for transactions, and/or, having higher initial valuation margins (add-ons) whenever such instruments are used.
- *(ii) Publishing a clear haircut schedule for all eligible collateral.* This would mean revisiting the haircuts for longer-dated securities and setting minimum credit ratings for corporate bonds. Counterparties should have this information readily available in order to evaluate the trade-offs between interbank market funding, competing for a wholesale deposit versus using the BoB’s refinancing facilities. To protect the BoB’s balance sheet, haircuts on collateral should be reviewed to better reflect maturity, credit, and liquidity risk, and to ensure risk equivalence across the various types of eligible assets.

B. Emergency Liquidity: Funding Shocks and Risk Control Measures

32. The absence of an emergency liquidity assistance framework makes the operational framework vulnerable.²⁵ It creates uncertainty about the BoB’s role as a reliable backstop for financial stability and leaves the financial system exposed to idiosyncratic liquidity risk through contagion (Figure 10). ELA is the provision of liquidity, as a last resort, to a solvent, viable bank facing temporary liquidity stress—with the objective of preserving financial stability. A need for ELA can result from two types of situations: (i) an exhaustion of the collateral eligible for regular central bank refinancing; or (ii) a loss of market access. In the absence of ELA as a safety net, a systemically important bank facing significant funding loss or that has limited securities to access standard monetary operations could jeopardize financial stability. At the same time however, ELA should not be seen as a right. Some banks could presume their access to ELA as a given for the central bank to provide a backstop to prevent failure—such perceptions could give rise to moral hazard.

²⁵ At the time of the FSAP, the BoB Act, 1996 was in force, and this Act made no allowance for ELA. However, the BoBAA was passed in 2022 and would address the absence of an ELA provision in the prevailing BoB Act.

Figure 10. Botswana: Diagram of Liquidity Shocks in Botswana’s Banking System

33. Upon making the BoBAA effective,²⁶ the BoB should plan to operationalize the ELA framework. The key recommendations from the previous FSAP and IMF technical assistance (TA) (Appendix II) for the decisions and operationalization of ELA remain relevant:

- ELA should be discretionary and provided for a limited period to solvent, temporarily illiquid banks that are adequately regulated by the BoB. In addition, the interest rate for ELA loans must be granted against a penalty rate higher than the policy rate.
- A bank requesting ELA must prepare a detailed application, including forward-looking assessment of its liquidity position with an anticipated funding plan that indicates possible recovery to ensure full repayment of ELA loans.
- BoB should devise a detailed and robust collateral assessment and valuation approach surrounding ELA. The BoB could retain the option to provide ELA based on an expanded collateral pool, with larger haircuts on riskier assets to avoid risks from being transmitted to the BoB.
- A prepositioned ELA agreement that defines the conditions and terms for ELA access, including the requirements that should accompany an ELA application from a bank can be considered for efficient execution.

²⁶ The BoBAA came into force in February 2023, and provides the legal basis for the establishment of ELA. However, other legal procedures and operational issues are still being discussed internally.

- A comprehensive bank solvency stress test can be useful to assess banks' eligibility for ELA, (or at least identify whether recapitalization is needed). BoB's current bank solvency test takes a simple form of sensitivity analysis which only assesses concentration and NPL risk (NPLs/total loans ratio), and does not incorporate macro scenarios (e.g., GDP growth, policy/deposit rates, unemployment etc.)
- The assessment of financial stability risks should consider and quantify the linkage among different entities and systemic nature of banks requesting ELA. This should typically include analysis of contagion risk (e.g., FSAP interconnectedness analysis). The Financial Stability Report currently covers only descriptive information on such connections.

34. A broader range of collateral assets could be considered eligible under ELA, at the discretion of the BoB. An ELA request typically arises when a bank has exhausted its eligible collateral for standard refinancing facilities and has exhausted all other funding options. There is no predetermined list of collateral that should or should not be used for ELA operations. The principle of discretionary choice by the central bank applies: the BoB determines the total amount of collateral required (based on the anticipated ELA envelope and margining requirements), then chooses the assets available on the banks' balance sheet. In Botswana, bank loans are the main asset types that could potentially be eligible for ELA.²⁷

35. The acceptance of credit claims as ELA collateral should also be subject to legal and operational principles applied to other collateral. Credit claims require specific criteria and procedures to ensure legal certainty for BoB when realizing ELA collateral. Legal issues need to be assessed regarding whether it is legally and practically possible to transfer the title of a credit claim in Botswana, while in some cases the credit claim debtor's explicit consent is required. Rules and procedures must be developed that are consistent with the law and permit the efficient and effective transfer of credit claims, preferably in electronic form. Given that credit claims are non-marketable instruments, the operational challenge for the BoB is to determine credit quality and pricing of credit claims in the absence of available market prices. The valuation of credit claims as collateral therefore requires dedicated and carefully organized handling procedures.

²⁷ As shown in Figure 9, banks do not hold securities other than domestic government securities and corporate bonds.

C. Market Development²⁸

Interbank Market

36. The unsecured interbank market is an important but insufficient shock absorber for banks' liquidity risk. Unsecured transactions are common as banks have established bilateral credit lines for each other under non-standardized bilateral agreements. It is a fragmented market of one-way lending from large banks to small banks. The bilateral credit lines appear to be low because small banks frequently borrow from multiple banks at different loan rates in the trading day. The unsecured transactions take place without collateral, making banks' access costlier and more difficult for small banks. When interbank loans are insufficient to meet banks' daily liquidity need, the higher cost of interbank funding has compelled banks to raise wholesale deposits at a higher cost.

37. The absence of a functional interbank repo market has contributed to a higher level of precautionary liquidity by banks, which may lead to a more aggressive monetary policy response to liquidity shocks. During stressed period, perceptions of bank credit risk and trust between market participants can change rapidly, resulting in a more fragmented interbank market—especially when it is reliant solely on unsecured transactions. A functional secured interbank market could mitigate the impact of liquidity shocks by protecting lenders with collaterals and promoting the continued circulation of liquidity among banks. In the absence of this major shock absorber, the BoB is more likely to intervene to address liquidity shocks, even when they could be mitigated through private funding backstops.

38. To promote a functional repo market, the BoB should support the legal framework that ensures enforceability and title transfer to securities. A legal opinion regarding the enforceability of the master agreements under Botswana legislation should be commissioned. Regardless of which master agreement is used as the legal documentation for repo trading, parties to such agreements must be fully aware of the extent to which the provisions of the agreement are enforceable under their respective legislative systems. Currently, the BoB and the MoF are preparing amendments to the draft Banking Act²⁹ to make it more supportive of repo transaction.

39. The BoB should facilitate development of information dissemination and a reference rate for interbank market. The BoB publishes the daily interbank trading report the following day, which includes the aggregated trading volumes and weighted average of interest rate for the total volume traded. While this is useful, the information dissemination could be made more valuable by separating out the price and volume by maturity bucket (e.g., overnight, overnight to one week, one week to one month, one month to three months, etc.). This would not only support the

²⁸ See IMF 2022 TA on Botswana Domestic Bond Market Development. Discussion of corporate bonds market is not covered in this note, given that it is underdeveloped and has less relevance to the systemic liquidity management. As of January 2023, only two banks issue corporate bonds.

²⁹ Expected to be publish by March 2023.

development of an interbank market reference rate, but also support the development of a more robust short-term yield curve.

40. The authorities should promote parallel development of the interbank repo market and the government securities market to increase financial sector resilience. An active repo market in Botswana will boost the demand for government securities (as collateral for repo trading), facilitate secondary market trading, and promote efficient price discovery of securities, which will contribute to the growth of the government securities market. A well-functioning government securities market with transparent auctions and efficient market-based pricing, particularly when a robust benchmark government bond yield curve becomes available, will in turn stimulate banks' demand for repo transactions for secured interbank lending. The BoB and the MoF should continue their efforts and coordination to promote the developments of both key markets.

Government Securities Market

41. The authorities should provide greater transparency in government bonds auctions to support the development of government securities market in Botswana. The FSAP suggests the following actions for authorities:

- *Revise the primary dealer (PD) agreement to permit market-based pricing.* The authorities established a PD system with the participation of three commercial banks and two asset managers.³⁰ The PD agreement enforced stringent bidding obligations even if the PDs do not have demand for the given tenor. Consequently, PDs frequently submitted bids that are much below the perceived market rate. This resulted in bid rejections, and the frequent undersubscription or under allocation of auctions, reflecting MoF's refusal to accept market rates. The authorities may consider remove the minimum bidding restrictions per security per auction and define "off-market" prices that would not count towards a PD's bid commitments.
- *Publish a detailed issuance calendar.* Currently, there is no published Medium-Term Debt Management Strategy and Annual Borrowing Plan that could help investors plan their investment into government securities more effectively. Auction participants are only informed one to two weeks in advance of each monthly auction of the specific tenors and volumes to be auctioned. Publication of an annual bond calendar with anticipated issuance types, volumes, and pattern for the upcoming year would be beneficial for the market development.

³⁰ Pension funds and insurance companies are not currently allowed to operate directly in auction but must engage asset managers to do this.

Appendix I. Status of 2017 TA Recommendations on ELA

ELA Recommendations	Status as of January 2023
Review the existing liquidity management capabilities of the banking system, including the effectiveness of current BoB liquidity-providing market operations and the functioning of the interbank market.	Implemented
The BoB should establish an ELA framework to respond to idiosyncratic liquidity needs of banks and internal ELA governance and authorization procedures should be clearly set out.	<p>Not implemented</p> <p>The BoBAA came into force in February 2023, and provides the legal basis for the establishment of ELA. However, other legal procedures and operational issues are still being discussed internally.</p>
Clear criteria as to when and why to provide ELA funding to a bank should be set out, including reliable solvency, systemic importance, viability, and capital assessments to enable correct ELA decisions to be made.	Not implemented
Internally, the BoB should document and duly authorize the ELA principles, guidelines, and criteria to be followed in order to ensure that it is adequately collateralized and not unduly exposed to potential losses.	Not implemented
Devise a detailed and robust collateral assessment and valuation approach surrounding ELA.	Not implemented
Develop clear trigger points and metrics against which the provision of funding by the BoB to a counterparty can be assessed on an ongoing basis.	Not implemented