



TECHNICAL ASSISTANCE REPORT

SRI LANKA

Liquidity Monitoring and Monetary Operations

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PREPARED BY

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PREFACE

The IMF South Asia Regional Training and Technical Assistance Center (SARTTAC) mission visited Colombo and delivered technical assistance (TA) on setting-up of liquidity monitoring tools with the objective of improving daily monitoring of Central Bank of Sri Lanka (CBSL) liquidity in domestic currency. In addition, based on previous Monetary and Capital Markets Department (MCM) TA recommendations on CB Balance Sheet and Monetary Operations (Jan 2023), the mission helped authorities to refine monetary operations instruments, including the Statutory Reserve Requirement (SRR) framework and open market operations (OMOs).

The mission was led by Oleg Churiy (SARTTAC Monetary and Foreign Exchange Operations Advisor) and included Brynjulv Vollan (short-term external expert).

The mission held discussions with the Governor, Senior Deputy Governor, Deputy Governor, Economic Research Department, Domestic Operations Department (DOD), International Operations Department (IOD), Bank Supervision Department, Finance Department, Department of Treasury Operations Ministry of Finance as well representatives of licensed commercial banks. The mission was also present at the Monetary Policy Committee (MPC) press-briefing held on July 6. The mission would like to express its gratitude to Dr. Anil Perera, Director, Domestic Operations Department, and his colleagues for the preparatory groundwork for the mission and for the constructive engagements in all meetings.

LIST OF ACRONYMS

ARIMA	Autoregressive Integrated Moving Average
AWCMR	Average Weighted Call Money Rate
CBSL	Central Bank of Sri Lanka
CiC	Currency in Circulation
DDO	Domestic Debt Optimization
DOD	Domestic Operations Department
DST	Deputy Secretary to the Treasury (account)
EFF	Extended Fund Facility
ELA	Emergency Liquidity Assistance
FX	Foreign Exchange
IMF	International Monetary Fund
IOD	International Operations Department
IRC	Interest Rate Corridor
LAF	Liquidity Assistance Facility
LKR	Sri Lankan Rupee
LSB	Licensed Specialized Bank (Savings Bank)
MCM	Monetary and Capital Markets Department
MPC	Monetary Policy Committee
OMO	Open Market Operations
RMP	Reserve Maintenance Period
SARTTAC	IMF South Asia Regional Training and Technical Assistance Center
SDF	Standing Deposit Facility
SLF	Standing Lending Facility
SRR	Statutory Reserve Ratio
TA	Technical Assistance
USD	United States Dollar

EXECUTIVE SUMMARY

Macroeconomic crisis on top of the pandemic has posed substantial challenges to conducting monetary policy in Sri Lanka. Transition to flexible inflation targeting requires macroeconomic stabilization with structural reforms, coupled with necessary economic adjustments being necessary prerequisites. This process will include phasing out of monetary financing and a commitment by the authorities to reinstate the role of inflation as anchor to stabilize inflationary expectations. Comprehensive steps for modernization of monetary policy implementation framework will also be necessary.

The mission recommends a phased approach for modernizing monetary policy instruments and operations. The progress will depend on the ongoing debt restructuring operation, reducing financial stability risks and market segmentation, macro stabilization, and improving CBSL's balance sheet. The mission presented an illustrative road map for modernizing the monetary policy operational framework. The purpose was to clearly indicate the steps which could be taken immediately and steps which could wait until stability was restored in the financial system.

Central Bank of Sri Lanka should start replacing the current two policy rates with a single policy rate to strengthen the signaling of monetary policy and improve the ability of CBSL to steer market rates towards a desired level. This will also help CBSL to simplify communication by clearly indicating the monetary policy stance. The mission also strongly advises against using restrictions to limit access to standing facilities. Even if regarded as temporary, such restrictions should be avoided as they may disturb a market-based interest rate transmission and erode central bank credibility. The CBSL can consider widening the Interest Rate Corridor (IRC) already at the first stage and start phasing out using monetary instruments to support Sri Lankan Rupee (LKR) bond market development. Central Bank monetary policy instruments should therefore not be made available to non-bank primary dealers for funding their activity in the LKR bond market.

At the second stage of the road map, the mission proposes a transitory model for monetary operations, while still envisaging a certain level of market segmentation. A transitory monetary operations framework will revolve around one week liquidity operations conducted on a predefined schedule. Without the ability to target aggregate liquidity, the CBSL would continue to address liquidity needs of different market segments. With improvement of financial stability situation, the mission proposes adjustments in the reserve requirements framework, including correcting the requirement that currently discriminates local currency against foreign currency. Other modifications include adjusting the Reserve Maintenance Period (RMP) and removing cash as an eligible reserve asset for fulfilling Statutory Reserve Ratio (SRR). At the second stage as the confidence in the market improves, CBSL should start assessing the level of precautionary demand to be used to define the desirable ratio of SRR. The decision on the level of SRR can, however, be postponed to the third stage.

On the later stages when CBSL can target aggregate liquidity, liquidity management should aim at returning to a mid-corridor system as Open Market Operations (OMO)s are calibrated based on liquidity forecast. It is proposed that the future model for monetary operations should align SRR RMPs and the schedule for OMOs with MPCs announcements. Remuneration on SRR was also discussed.

Central bank of Sri Lanka has in place an operational liquidity monitoring and forecasting function. An Excel spreadsheet is updated daily with information from various CBSL units and supplemented with daily detailed reporting from banks. The expected liquidity development and an estimate of excess reserves are provided as a basis for operational decisions by the Market Operation Committee (MOC), chaired at the Deputy Governor level.

Data on liquidity effects of the main autonomous factors are collected at source. While Foreign Exchange (FX) transactions and changes in currency in circulation appear to be well covered in the current framework, the rather unusual banking arrangement for government has to be taken into account. As the main Treasury operational accounts are with two state-owned banks, the Treasury account in the Central Bank is mainly used for debt operations, FX transactions and as a collection account for project accounts. As the state-owned banks pay interest on any surplus funds and provide overdraft facilities, no excess funds are maintained in the CBSL’s Treasury account.

As the financial system stabilizes, a better structured implementation of monetary policy will be necessary to successfully implement an IT system, the liquidity monitoring framework should be strengthened. It will be important that this function continues to be organized with competent and dedicated staff. To enhance clarity and improve the basis for decision-making, a clear separation between monitoring and forecasting should be done. The output from liquidity monitoring should be presented in a more user-friendly and easier understandable format. To this end, the mission proposed an alternative Monitoring Table and worked with the staff on how this approach also could be useful for liquidity forecasting. A daily Central Bank balance sheet should be produced to safeguard the quality of liquidity forecasting and monitoring. The mission also discussed ways to improve the internal CBSL awareness of bank liquidity matters and information to management.

Table 1 Key Recommendations

Recommendations	Priority	Timeframe
Modernization of monetary operations framework: 1st stage		
1. Elaborate and approve road map for modernizing monetary policy operational framework. (¶ 23)	High	Short-term
2. Communicate Road map to the market. (¶ 25)	High	Short-term
3. Remove restrictions for access to standing facilities. (¶ 29)	High	Short-term
4. Widen IRC to encourage interbank activity and redistribute liquidity in the system .(¶ 31)	High	Short-term
5. Phase out using monetary instruments for non-monetary purposes .(¶ 32)	High	Medium-term

6. Combine all monetary operations decision-making process under DOD. (¶ 7)	High	Short Term	
7. Link SRR penalty rate to policy rate.(¶ 30)	Medium	Medium-term	
8. Operationalize the ELA framework (.¶ 26)	High	Short-term	
Modernization of monetary operations framework: 2nd stage			
9. Introduce SRR for FX liabilities in foreign currency .(¶ 42)	High	Medium-term	
10. Remove cash from eligible assets to meet SRR.(¶ 45)	High	Medium-term	
11. Reorganize the SRR MRP to begin in the middle of the week to support liquidity forecasting and minimize interest rate volatility.(¶ 39)	High	Medium-term	
12. Introduce OMOs schedule with 1 week liquidity absorption and injection operations. Stop using O/N OMOs except by the end of RMP and for fine tuning operations. (¶ 37)	High	Medium-term	
13. Introduce fine tuning operations if (please add the conditions here).(¶ 38)	High	Medium-term	
14. Upgrade the efforts to strengthen forecasting of system liquidity and its distribution.(¶ 46)	Medium	Medium-term	
15. Include specialized banks in monetary implementation framework .(¶ 13)	Medium	Medium-term	
Modernization of monetary operations framework: 3rd stage			
16. Lengthen RMP and align it with MPC decision announcements and main liquidity instruments.(¶ 48)	High	Medium-term	
17. Increase LKR SRR to the level of precautionary reserves.(¶ 41)	High	Medium-term	
18. Introduce OMOs schedule with 1-week main operation targeting aggregate liquidity.(¶ 47)	High	Medium-term	
19. Minimize recourse to standing facilities by actively targeting and managing system liquidity.(¶ 49)	Medium	Medium-term	
20. Implement SRR remuneration at policy rate.(¶ 50)	Low	Long-term	
Liquidity monitoring			
21. Develop a comprehensive liquidity monitoring table with clear presentation of autonomous factors and CBSL liquidity operations.(¶ 63, 66)	High	Short-term	
22. Start using daily CB balance sheet to ensure consistency and full coverage of liquidity monitoring. .(¶ 65)	High	Medium-term	
23. Prepare time series for the use of systematic liquidity forecasting .(¶ 67, 68)	Medium	Medium-term	
Other			
24. Introduce single policy rate as mid-rate for interest rate corridor.(¶ 27)	High	Short-term	
25. Build risk management framework for collateral management, including for, yield curve development, collateral valuation, haircuts, and margin requirements for collateral .(¶ 34)	Medium	Medium-term	
26. Reform AWCMR according to IOSCO principles. .(¶ 22)	Medium	Medium-term	
1/ Priority	High	Medium	Low
2/ Timeframe	Short-term	Medium-term	Long-term

I. INTRODUCTION

1. Central Bank of Sri Lanka is operating in a difficult economic environment. Previous policy missteps coupled with external shocks led to shortfall in government revenues, monetary financing, depletion of FX reserves and as a result to a deep economic and humanitarian crisis. Sri Lanka embarked on an ambitious International Monetary Fund (IMF) Extended Fund Facility (EFF) program in March 2023 aimed to restore macroeconomic stability achieve debt sustainability and safeguard financial sector stability. Under the program, the CBSL is committed to restoring Sri Lanka's price stability through maintaining tight monetary stance and discontinuing monetary financing.¹

2. Economic activity remains subdued due to protracted impact of last year's stresses, but since the IMF program Sri Lanka has witnessed a significant turnaround, particularly regarding the macro-stability. Gross Domestic Product contraction was -8.7 percent in 2022 and a further decline by -3.0 percent is expected for the current year. There has been a faster disinflation than envisaged in the original EFF program with headline inflation now in single digits. Tight monetary and fiscal conditions, gradual easing of supply-side disruptions, the moderation of price pressures globally, and the softening of energy and food inflation largely contributed to this decline in inflation. CBSL has begun an easing cycle cutting its policy rates by 450 bp with 200 bp cut undertaken in July. Details about the Domestic Debt Optimization (DDO) operation are expected to have a moderating effect on market interest rates, and moral suasions has also been used to induce a downward adjustment in excessive market interest rates. Balance of Payments situation has also improved on the back of a narrower trade deficit and a rebound in worker's remittances. Consequently, the CBSL was able to increase Gross International Reserves from United States Dollar (USD) 1.8 bn in September 2022 to USD 2.8 bn in May 2023 and has started relaxing import restrictions.

3. The monetary transmission has weakened and needs to be restored. The debt restructuring process, financial stability issues, weaknesses in operational design of monetary policy implementation and the dysfunctional interbank market have all contributed to this erosion. The important role of policy rates to influence long-term rates as well as deposit and lending rates has not only weakened, but the CBSL has had problems having full control of domestic interest rates. The interbank market has become shallow with considerable market segmentation linked to heightened credit risk between the banks. Since the outset of the crisis, the interbank bank rates drifted from the middle of the Interest rate corridor (IRC) to the upper part of corridor, mainly reflecting that surplus liquidity in foreign banks have not been channeled into the interbank market. In addition, the CBSL has to be in a financial position to support an operational framework which can enhance an effective monetary policy transmission. Starting

¹ Other principal objectives of the EFF-supported program are to undertake structural reforms to unlock Sri Lanka's growth potential and improve governance, while mitigating the economic impact on the poor and vulnerable.

from an already weak financial position, the consequences of the DDO for the CBSL's balance sheet has to be closely monitored and mitigated.²

4. The awaited Government's debt restructuring plan is at an early stage of implementation. The statement by IMF staff noted that "Achieving timely restructuring agreements with creditors in line with the program targets by the time of the first review is essential to restoring debt sustainability". The government has recently proposed DDO after which the focus is on getting approval from the external creditors.

II. MODERNIZING THE MONETARY POLICY FRAMEWORK

A. Open Market Operations. Current Situation and Assessment.

5. Central Bank of Sri Lanka currently cannot influence aggregate liquidity conditions and steer most of interbank trading activity at interest rate within IRC. This is due to a segmented market characterized with weak liquidity position of largest state-owned banks and some of privately-owned banks. CBSL does not announce a single policy rate but uses instead the rates of standing facilities as policy rates. The primary objective of liquidity management is to use OMOs to steer short-term market rates, specifically Average Weighted Call Money Rate (AWCMR) as the chosen operating target, toward a desirable level. However, the desirable market rate is not clearly defined in CBSL 's communication. Allowing the operational target to move depending on market conditions rather than policy decisions, undermines its usefulness in anchoring expectations and clarity for communicating the central bank's monetary policy stance. Before the crisis, the CBSL targeted the mid-corridor market interest rate through OMOs, however, during period from mid-2020 to mid-2021, the market interest rates stayed at the corridor floor. AWCMR has since been pushed to the upper part of the corridor, and closer to standing lending facility rate, due to the current tight liquidity conditions.

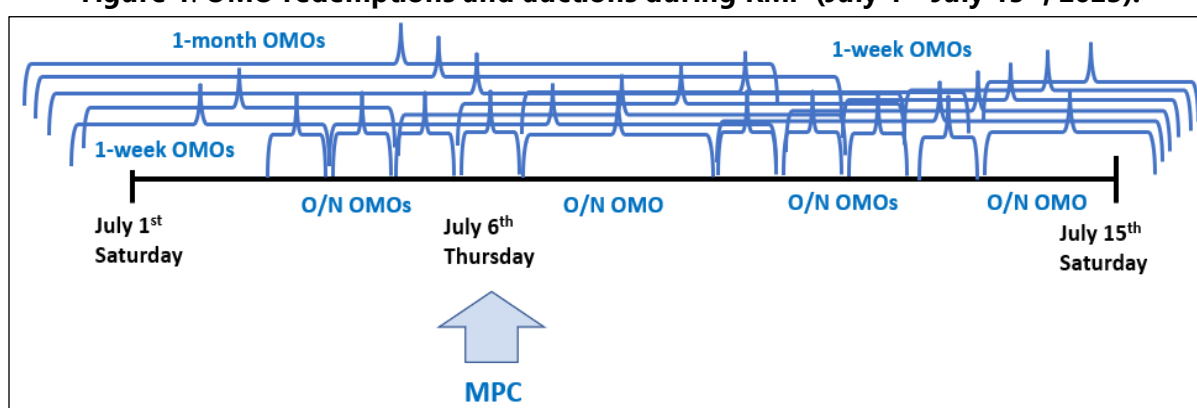
6. Currently, the CBSL conducts OMO operations on a daily basis by providing liquidity injection auctions with different maturities, without a predefined schedule, for the part of the banking system with structural liquidity deficit.³ These operations include liquidity providing O/N reverse Repo, short-term reverse Repo (up to 1w) as well as long-term (up to 3m) reverse Repo operations (Figure 1). The CBSL does not publish a schedule for OMOs operations in advance and makes decision on each business day morning regarding the amount

²The IMF/MCM TA mission on CB Balance Sheet and Monetary Operations (Jan 2023) recommended that a regular process to project the CBSL balance sheet should be institutionalized. This is necessary to avoid that financial risks to the balance sheet can pose challenges to policy implementation. A forward-looking approach will be required and closely shared with the MoF, so that recapitalization of the CBSL can be effectuated as soon as fiscal space can allow.

³ Structural liquidity (excess/shortage) calculates as: (Excess reserves+SDF+Short-term CB borrowing from banks)-(SLF+Short-term CB lending to banks). See also Box 1.

and tenor of the actions. Operationally, a daily market liquidity assessment is conducted and estimations on liquidity injections/absorptions are submitted to the Market Operations Committee (MOC), to decide on the appropriate market operations for that day. The MOC, decides on conducting OMO auctions, taking into consideration estimated liquidity forecast for changes in autonomous factors, the desired level of operational target on market interest rates, redemptions of previous OMOs, and most importantly current liquidity distribution among banks. CBSL conducts multiple-price OMOs auctions and decides on auction results based on bids from banks, ranging from highest to lowest interest rate. CBSL does not have a practice of excluding commercial banks from participation in auction based on non-compliance for prudential regulations and SSR.

Figure 1. OMO redemptions and auctions during RMP (July 1st-July 15th, 2023).



Source: IMF Mission Calculations

Box 1. Structural liquidity position as shown in the Central Bank balance sheet.

The Central Bank Balance Sheet	
Assets	Liabilities
A1. Net international reserves	L1. Currency in circulation
A2. Net lending to Government A2.1 Government securities A2.2 Other loans (e.g. overdraft)	L2. Required reserves
A3. Standing lending facility	L3. Excess reserves (includes overnight deposit facility)
A4. Other lending to banks A4.1 Short-term (e.g. repos) A4.2 Long-term (longer than 30 days)	L4. Borrowing from banks L4.1 Short-term (e.g. reverse repos / CDs/time deposits) L4.2 Long-term (longer than 30 days)
	L5. Capital and reserves
Structural liquidity position (excess/shortage): $(L3 + L4.1) - (A3+A4.1)$	

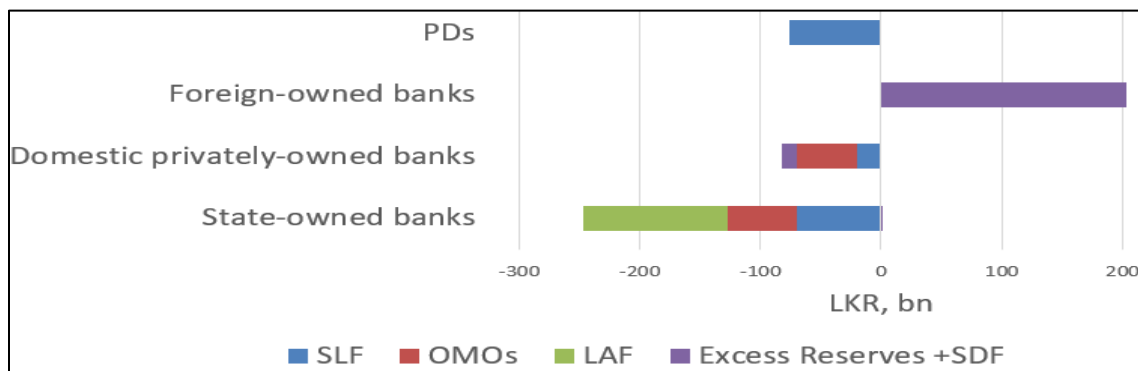
Source: IMF/SARTTAC Workshop Presentation by Niels Maehle.

7. FX swaps are conducted independently by the IOD and reported to the DOD. The use of sell-buy FX swaps appears to be decided based on FX liquidity needs of particular banks, whereas the buy-sell FX Swaps are primarily employed for local currency liquidity management. It is important that the decision-making process for all monetary operations be centralized under the DOD.

B. Standing Facilities. Current Situation and Assessment

8. The recourse by banks to the two standing facilities is frequent. This can be explained by the following main factors: First, liquidity is not distributed evenly because one part of the banking system faces a considerable liquidity shortage, while the other part is not ready to supply liquidity via the interbank market. Second, CBSL does not yet provide Emergency Liquidity Facility (ELA) facility and employs a punitive rate to discourage frequent use of Liquidity Assistance Facility (LAF) by state-owned banks. The liquidity injections via OMOs are not sufficient to satisfy the entire liquidity needs of these banks.⁴ Third, CBSL does not absorb the liquidity from foreign-owned banks via OMOs, leading these banks to place their excess reserves at the Standing Deposit Facility (SDF) (Figure 2).

Figure 2. Monetary instruments used by financial market segments. Apr 30, 2023



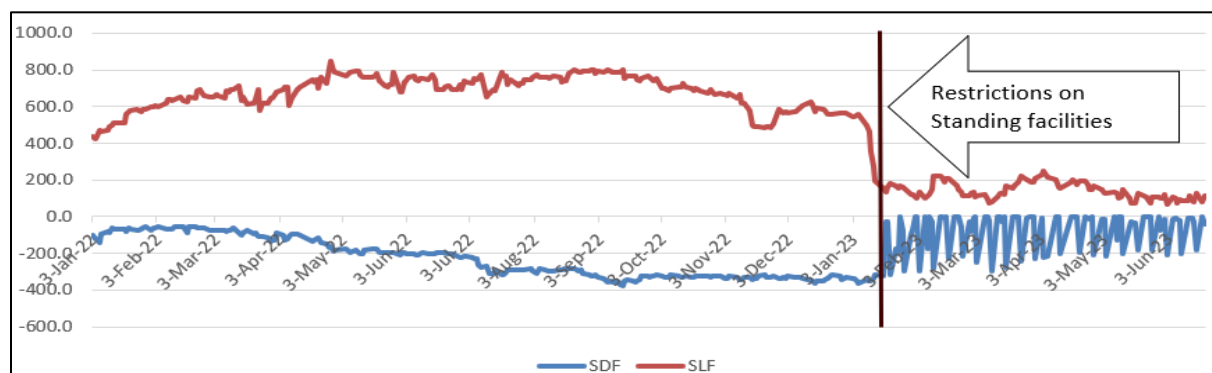
Source: CBSL

9. Administrative restrictions have been introduced on the use of standing facilities with the intention of forcing the banks to invest in T-bills or place funds at interbank market since January 2023. (Figure 3). Banks can borrow an amount not exceeding 90 percent of their daily SRR and can deposit reserves for a maximum of 5 times during a month. While interbank activity is gradually picking up, this measure is counterproductive, at least until trust is restored in the interbank market, which requires addressing financial stability issues for a large

⁴ To a large extent, the amounts offered in OMO operations have also not been fully taken up by the banks, which rather have resorted to the SLF at a higher interest rate. This might be an indication of low opportunity cost due narrow IRC. CBSL will be investigating this issue further.

part of banking system. Due to low-risk appetite, banks instead had to use SDF or deposit surplus funds in non-remunerated reserve accounts, thus weakening monetary policy transmission.⁵

Figure 3. CBSL standing facilities volume since 2022.

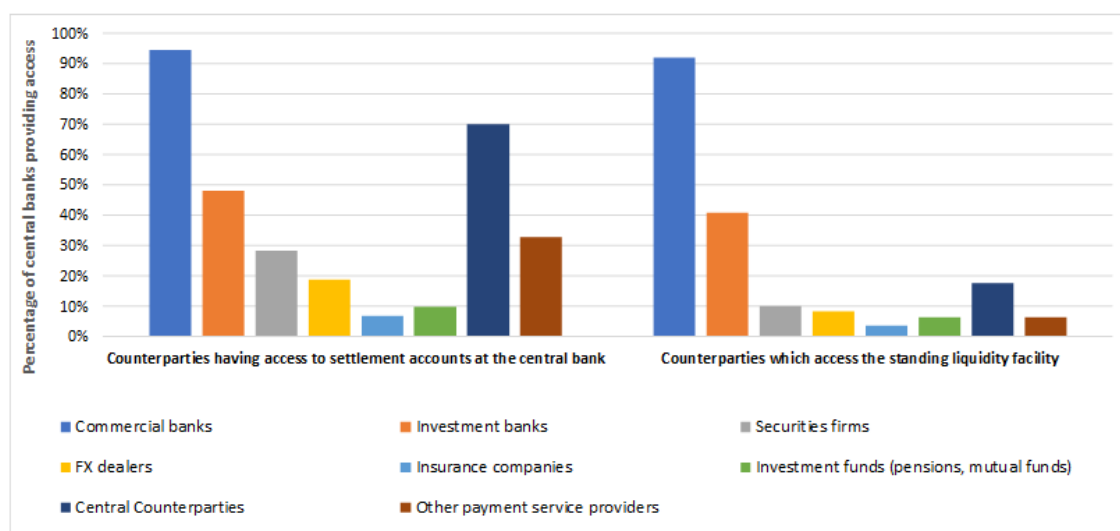


Source: CBSL

10. Non-bank primary dealers for government LKR debt have access to standing facilities and routinely use Standing Lending Facility (SLF) to fund their portfolios. The share of non-bank primary dealers in SLF accounts for about 46 percent or about 76 bn LKR as of end-April 2023. Although some central banks include securities dealers into framework of their monetary operations (Figure 4), the level of securities market development in Sri Lanka does not support complicated arrangements. Such arrangements may create carry trade opportunities by borrowing funds from CBSL and gaining from higher yielding own securities holdings instead of supporting market liquidity. These institutions are already excluded from participating in OMO operations, but they are eligible to make use of the SLF. The usage of monetary policy instruments for the purpose of developing the government securities market should not be considered as an appropriate practice in monetary policy implementation.

⁵ In addition, restrictions on the Standing Lending Facility (SLF) is a substantial impediment for government debt market development because of the inability to potentially fund their government bond portfolios during internal stress-testing conducted by foreign-owned commercial banks. As a result, restriction imposed on SLF led to low-risk appetite for government securities from foreign-owned banks.

Figure 4. Global Practices in Provision of Access to Central Bank Facilities



Source: IMF Monetary Operations and Instruments Database, 2018.

11. The width of the corridor appears relatively narrow, considering that the present policy rates are at double-digits. While the present interbank market is very shallow due to financial stability concerns, a wider corridor would help stimulate interbank trading in more market-friendly way, rather than relying on administrative restrictions for that purpose. Additionally, a wider corridor tends to decrease recourse to Standing Facilities.

C. Reserve Requirements. Current Situation and Assessment

12. There are several shortcomings in the current Statutory Reserve Requirements (SRR) arrangement. Changing and modifying some of the parameters could make the SRR system more supportive of liquidity management and the transmission of monetary policy. In a monetary policy framework with interest rates as the operating target, reserve requirements can be used to establish a stable demand for domestic reserves. In addition, with reserve averaging, banks can temporarily access this liquidity buffer to offset unexpected liquidity fluctuations, resulting in a tempering volatility in market interest rates.

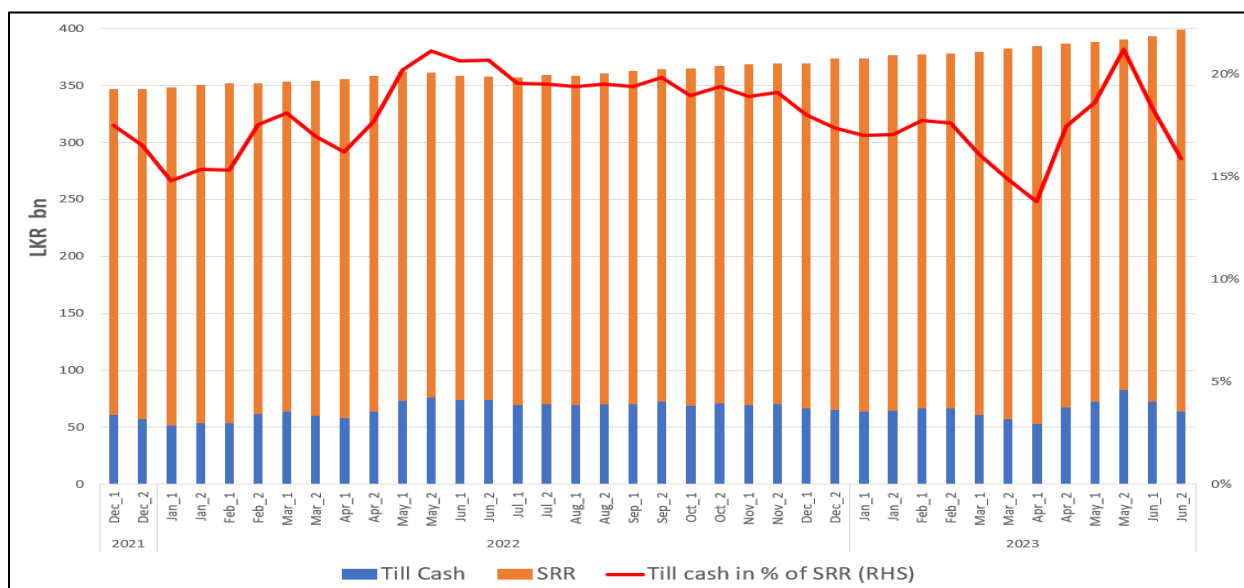
13. SRR requirements are not applied equally to all banks in the system. Local savings banks (which in Sri Lanka are named Licensed Specialized Banks – LSBs) accounting for 10 percent of total assets in the banking system, are excluded from SRR. LSBs are specialized institutions defined by law and allowed to attract only term and savings LKR deposits, which are allocated mostly to mortgage lending. They have no access to CBSL’s monetary policy instruments and, apart from the largest institution, they do not have accounts with CBSL. Although the prohibition to accept current accounts from clients is used as an argument for excluding them from SRR, this exemption and exclusion from participating in monetary operations lead to weakening of the monetary policy transmission.

14. Foreign currency liabilities are not subject for SRR although they account for about of 22 percent of banking system deposit base (as of end-April 2023). It encourages foreign

currency intermediation and put local currency in disadvantage in comparison with foreign currency. In such a system, foreign currency loans can be equal to foreign currency deposits, whereas due to SRR requirements for local currency, banks are not able to provide LKR loans equal to their deposits. Moreover, zero remuneration for reserves in local currency increases the distortions as it represents a tax on local currency and effectively promotes dollarization.

15. Banks subject to reserve requirements can fulfill up to 25 percent of SRR in cash. However, till cash is not generally recommended as a reserve asset, as it is difficult and sometimes costly to be quickly transformed into funds on accounts with the Central Bank. Moreover, the volatility of till cash banks used for SRR creates additional difficulties in liquidity monitoring and forecasting (Figure 5).

Figure 5. Reserve Requirement (Dec 2021 – Jun 2023).



Source: CBSL

16. Reserve averaging applies to 80 percent of reserve requirements, implying that 20 percent of reserve requirements or 0,8 percent of gross liabilities must be fulfilled at end-of-day. Currently, the CBSL uses two RMPs per month: Period A from 1st till 15th and Period B from 16th till the last day of each month. The RMP starts either on the first day of month or on 16th day of the month. The reserve base for RMP A of any month is based on average gross liabilities in LKR for the corresponding Period A of preceding month, with the same procedure for RMP B. This helps banks to know two weeks in advance the absolute level of SRR. The use of calendar for the end dates of RMP falling on the last day of the month or sometimes at the end of the week can amplify interest rate volatility.

17. Central Bank of Sri Lanka currently does not remunerate SRR in LKR that effectively imposing tax on the banking system. In general, non-remuneration leads to an increasing spread between interest rates on banks deposits and loans, thereby weakening monetary policy transmission (See Box 2) However, it is quite common that Central Banks are not remunerating SRR in the earlier stages of market development.

Box 2. Unremunerated SRR and weakening monetary policy transmission.

SRR are sometimes used as substitute or together with policy rates to tighten and ease monetary policy stance but might lead to undesirable results in case of unremunerated SRR.

$$\text{Deposit breakeven} = pr*(1-c) + r*c$$

Where:

pr is the policy rate, DR is the deposit rate, c is the SRR ratio; and r is the SRR remuneration.

Example:

In case pr=12%, DR =15%, c=10%, r=0%,

Increase of policy rate from 12% to 15%, lead to increase of *Deposit breakeven* rate from 10.8 to 13.5%.

As a result, monetary policy tightening with unremunerated reserves will increase cost of deposits and might lead to decision of commercial banks to decrease their deposits rates.

Sources : Reserve Requirements TA Rulebook, IMF Mission Calculations

18. If a bank fails to meet the minimum reserve requirement on LCY liabilities, the penalty rate is 0.1 percent per day, approximately equal to 36 percent p.a. using simple interest rate calculation for under fulfilment. Currently, such penalty is almost three times higher than the policy rates (11 percent for SDF and 12 percent for SLF). The best practice is to link a penalty for SRR under fulfillment to the policy rate, thereby avoiding excessive penalties. While punitively high penalties for SRR's requirement violation might stimulate liquidity hoarding and lead banks to maintain larger holdings of precautionary excess reserves, the penalties should be sufficiently large to incentivize compliance.

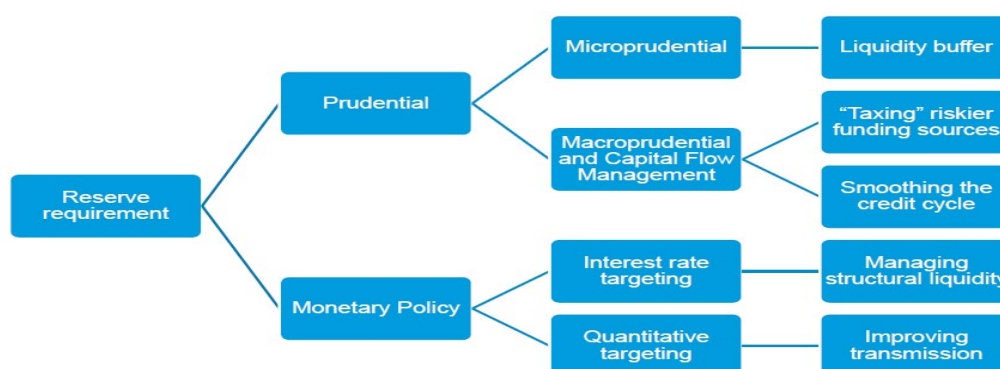
19. The existing CBSL SRR framework makes it difficult for CBSL to achieve prudential or monetary objectives. (See Box 3). First, in the situation of market segmentation, restrictions on access to monetary instruments and ability for Central Bank to target aggregate liquidity, the role of SRR as a precautionary buffer against liquidity shocks from autonomy factors becomes less relevant. Second, existence of Liquidity Coverage Ratio and other liquidity ratios makes the use of SRR less useful as a liquidity buffer for a prudential objective, especially with improvement of liquidity situation at government securities market. Third, absence of SRR for foreign currency liabilities is counterproductive, leading to an increasing interest rate differential between local and foreign currency interest rates, which encourages dollarization, hampers the transmission mechanism, and consequently reduces the effectiveness of monetary policy.

Box 3. Objectives of the Reserve Requirements

Central bank motivations for imposing the SRR have increasingly been aligned with modern-day central bank mandates of maintaining price and financial stability. Operationally, this means that the SRR is designed to meet either monetary or prudential policy objectives (See Figure).

However, some central banks have used the SRR to pursue a combination of different objectives in different categories. An earlier taxonomy (Gray 2011) provided three categories: prudential, monetary control, and liquidity management.

- For microprudential objective SRR ensures that banks hold a minimum specific amount of high-quality and liquid assets as backing for deposits.
- The SRR can be used as a macroprudential tool to reduce systemic risks arising from financial dollarization
- The SRR can play a key role in calibrating OMOs in Interest rate targeting mid-corridor system. SRR with averaging that comfortably absorbs the estimated precautionary demand for reserves would set a stable total demand for reserves



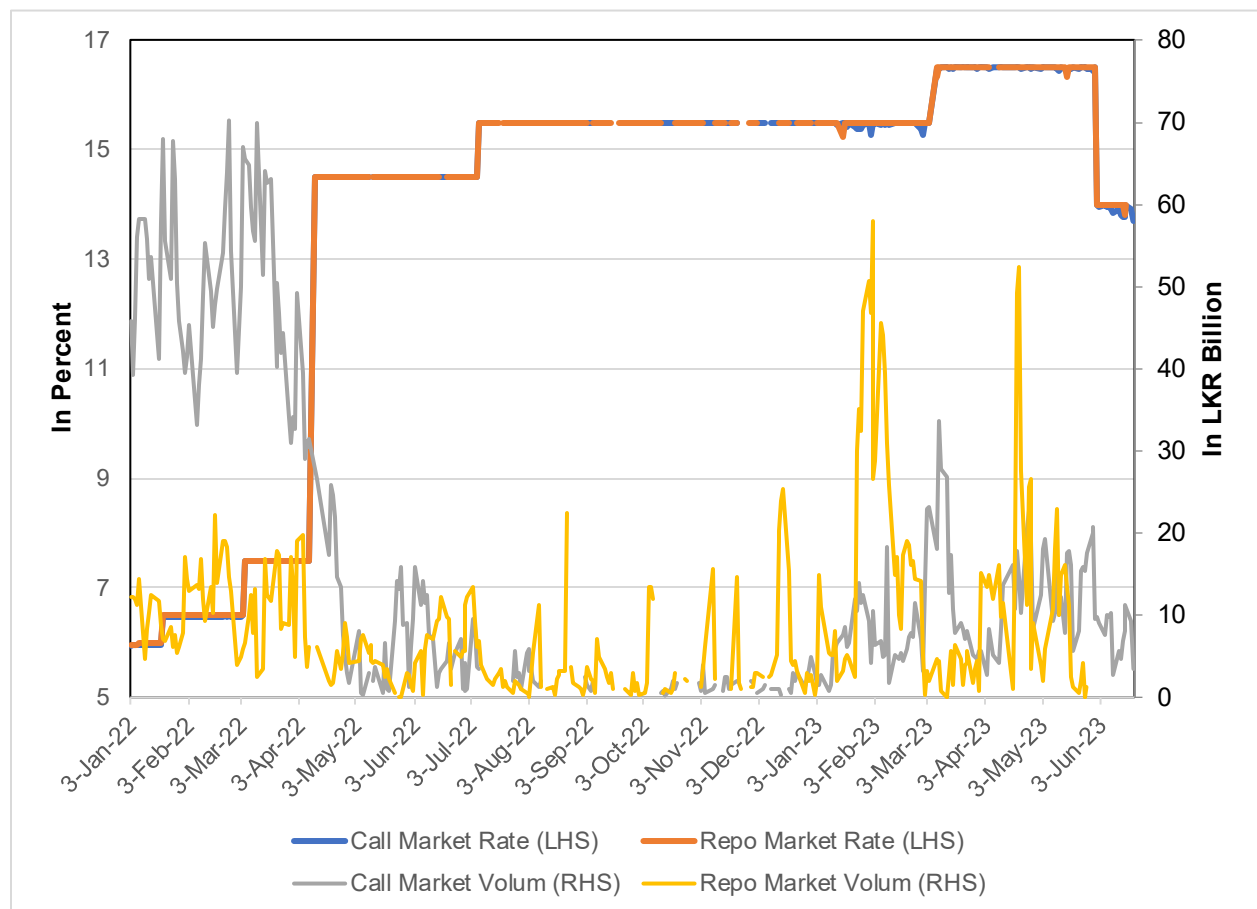
Source: Reserve requirements TA rulebook, IMF staff

D. Interbank Market and Benchmarks. Current Situation and Assessment.

20. While interbank trading volume is recently picking up, the activity remains significantly below pre-crisis level. Spikes in trading volume observed from March to May 2023

can be attributed to idiosyncratic factors related to operations of state-owned banks (Figure 6). Foreign-owned and some of privately owned commercial banks have liquidity surpluses, providing little incentives for trading among themselves. This market segment places their liquidity surplus with SDF or holds it as involuntary excess reserves due to CBSL limitations on access to absorption instruments. Additionally, this banking segment exhibits a low-risk appetite for placing liquidity with state-owned commercial banks, given the high liquidity demand from the latter. Notably, the foreign-owned banks have recently started using FX Swaps to provide LKR liquidity to the market, with tenors extending up to 3 months. However, it's worth noting that LKR implied yield is substantially above policy rate, sometimes as much as 200-300 bp.

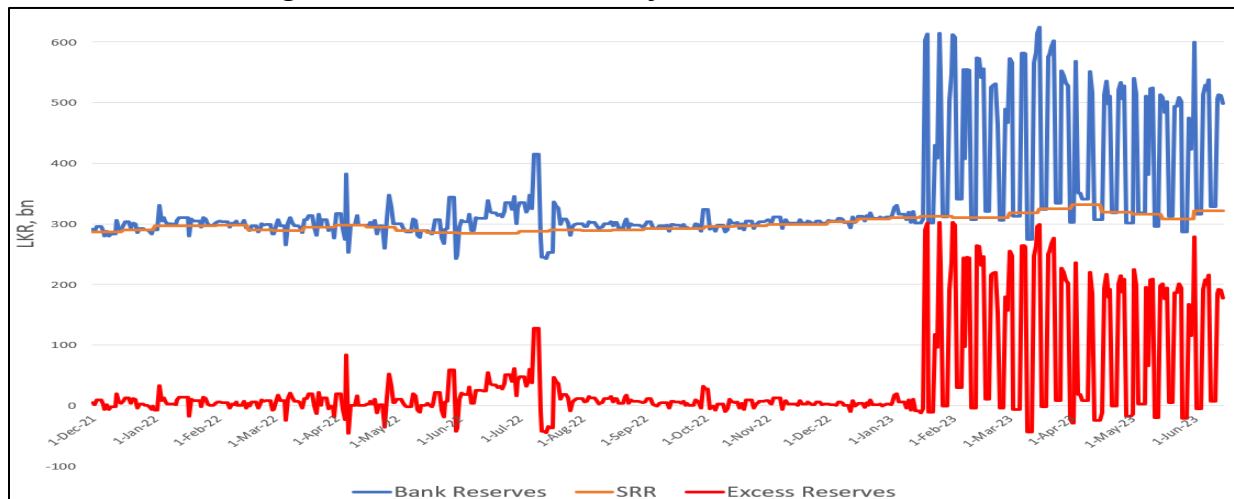
Figure 6. O/N interbank call and repo volumes and rates



Source: CBSL

21. While AWCMR has been announced as the operating target for its monetary operations, it cannot be considered as credible and representative indicator for the price of liquidity. Banks are not yet using it as a benchmark for financial operations. This rate is based on daily unsecured interbank transactions and does not capture daily recourse to standing facilities, substantial unremunerated involuntary excess reserves (Figure 7), or collateralized transactions. AWCMR is not responsive to changes in the daily level of liquidity and since the beginning of the crisis, it has consistently remained in the upper part of the IRC, often nearing the corridor ceiling.

Figure 7. Bank Reserves; Daily Dec 2021 – Jun 2023.



Source: CBSL

22. Ideally, short-term reference rates, especially serving as operating targets for monetary policy implementation, should be established in line with the IOSCO Principles for Financial Benchmarks.⁶ It is critical for reference rates to be reliable, they must be based on a reasonable level of actual transactions.

E. Modernization of Monetary Operations Framework. Recommendations.

23. The mission recommends a phased approach for modernizing monetary policy instruments and operations. The progress will depend on the ongoing debt restructuring, decreasing of financial stability risks and market segmentation, macro stabilization, and improvement of CBLS's balance sheet. The mission presented an illustrative condition-based Road map for modernizing the monetary policy operational framework (see Appendix 1). This roadmap aims to clearly indicate immediate steps and those that could wait until stability was restored in the financial system and at macro level. It comprises three major stages, including immediate actions, steps for implementing a transitory model, and the introduction of target future model for monetary operations.

First Stage

24. The immediate stage of the road map includes steps aimed at addressing a number of shortcomings to improve signaling effect of the policy rate, remove obstacles for monetary policy transmission, and raise market's awareness of the planned steps for implementing a future model of monetary policy operation. The CBSL should also use the immediate stage for preparation, including adopting necessary internal procedures, regulations,

⁶ IOSCO Principles for Financial Benchmarks, July 2013. Websource: <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf>

and, if necessary, amendments to organization structure. It is proposed to elaborate the road map based on the mission's recommendations and submit it for approval by the Monetary Board.

25. Communication is crucial for a successful implementation of the road map and will help the market to understand future changes, thereby reducing uncertainty. After internal approval, the CBSL should publish the road map and conduct dedicated events for market participants explaining future steps, conditionality, impacts on banking system, and the rationale for changes in the monetary policy implementation framework.

26. A successful modernization of the monetary policy framework will necessitate an operational ELA framework to deal with liquidity shortages of troubled banks. This will enable the Central Bank to exclude these banks from standard OMOs, which is appropriate given possible insolvency. A clear distinction between standard OMOs and ELA will also minimize the exposure of other banks in the system and thus facilitate interbank trading. As a first step to streamline OMOs, the ELA framework should be used to ringfence the CBSL's strategy to deal with the shortfall of the SOBs from standard market operations. A close cooperation with the MoF is needed to safeguard the CBSL balance sheet.

27. The mission proposes to replace the two policy rates with a single one, aligning with the overwhelming practice among central banks. ⁷ A single policy rate strengthens the signaling of monetary policy and improves the ability of the CBSL to steer market rates towards the desired level. This approach also facilitates communication, clearly indicating the monetary policy stance. Additionally, widening IRC for the purpose of stimulating interbank activity in a system with two policy rates might send conflicting signals and create challenges for policy communication.

28. The proposed changes in the SRR system, including measures to exclude cash from the list of SRR eligible assets, increasing LKR SRR ratio, and introducing SRR for foreign currency liabilities, require banks to allocate additional funds to be placed at their accounts with CBSL. While these changes can be introduced at the second stage, it is appropriate to communicate them in advance. Moreover, introduction of SRR on foreign currency liabilities should not occur before Sri Lanka's upgrade in international rating or gaining access to international debt market, as this might hinder foreign-owned banks from establishing sufficient limits to place foreign currency assets with the CBSL.

29. Restrictions on access to standing facilities should be abolished at this immediate stage. The mission believes that abolishing administrative restrictions will eliminate distortions in monetary transmission, stimulate market development, and help to regain central bank credibility.

⁷ The mission's recommendation on introduction of single policy rate is in line with the recommendations in IMF TA report on Sri Lanka: Foreign Exchange and monetary policy design. (Aug, 2017).

- 30. Mission advises linking a penalty rate for SRR non-compliance to the prevailing policy rate.** Aligning the level of penalty to market conditions would help to avoid liquidity hoarding while incentivizing compliance.
- 31. Central Bank of Sri Lanka can consider widening IR corridor already at the first stage.** Although it is too early to expect activity picking up in the uncollateralized call market until financial stability issues are resolved, widening corridor will help to redistribute liquidity via collateralized transactions. This measure would also help to reduce recourse to standing facilities.
- 32. Central Bank of Sri Lanka should start phasing out the use monetary instruments to support LKR bond market development.** Monetary policy instruments should therefore not be made available to non-bank primary dealers to support their activity in LKR bond market.
- 33. The time span between the policy rate announcement and press-briefing needs to be minimized.** To avoid uncertainty and fluctuations in interest rates, it is advisable to start press briefing providing background information right after the policy decision announcement.
- 34. CBSL should consider implementing a modernized collateral framework.** IMF SARTTAC undertook a TA mission to cover the collateral framework (March 2021). After DDO announcement, T-bill yields have already declined substantially. DDO completion, decrease of inflation level and macro stabilization will lead to further decline in yields across the whole yield curve, and improvement of liquidity in the government securities market will allow CBSL to use market information for collateral valuation. The new system of haircuts and margining procedure needs to be introduced as well. Additional TA for CBSL collateral framework implementation is recommended.

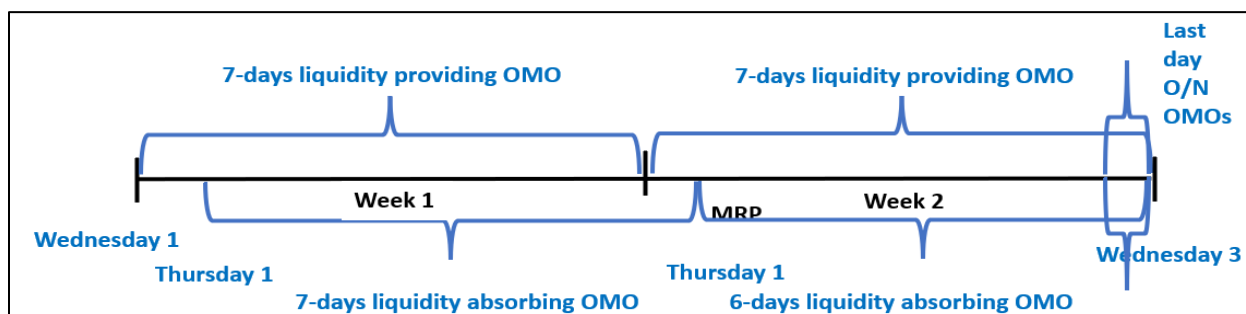
Second Stage

- 35. Initiation of the second stage of the road map for monetary operations must be conditioned on an improved situation in the financial market.** Capitalization plans, based on Asset Quality Review, define capital shortfall for the largest part of the financial system and must be approved by shareholders and be at advanced stages of fulfillment. There must be a clear commitment and actions from the government to address solvency of state-owned banks. If financial stability issues are not fully resolved and capital of banks at risk are not restored based on assurances from shareholders within scheduled timeframe, then this problematic part of financial system should be removed from monetary operation framework. This can be done when CBSL is able to address liquidity issues of the part of financial system at risk based on a banking resolution framework. This work might require additional TA.
- 36. At the second stage of the road map, the mission proposes a transitory model for monetary operations, still envisaging a certain level of market segmentation.** Without the ability to target aggregate liquidity, the CBSL would continue to address liquidity needs of market segments. The duration of second stage will depend on restoring trust in the interbank market, reflected in increased collateralized and uncollateralized interbank activity, at least to the level observed before the crisis. Banks will then be able to satisfy their liquidity needs at the interbank market, especially when pricing on the interbank market is more attractive than on

instruments offered by Central bank. It is important to have IRC wide enough to stimulate interbank activity and keep central bank balance sheet lean. It should be noted that improving the country rating and regaining access to international bond market will accelerate the process of restoring confidence in the interbank market, thus shortening period of the second stage.

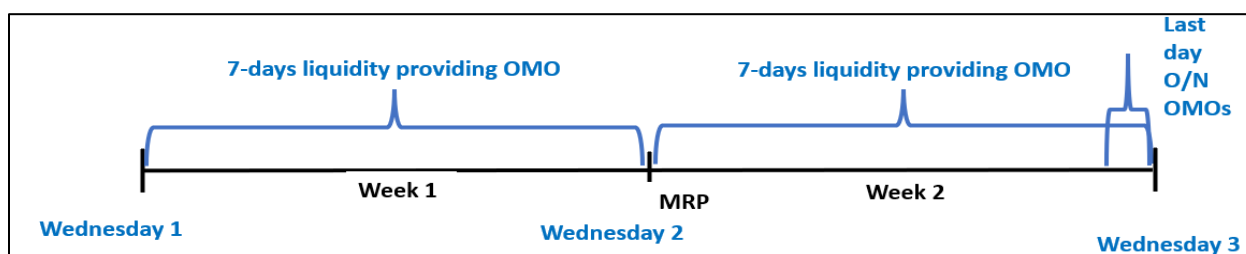
37. A transitory monetary policy operations framework should be simplified and conducted with one week liquidity operations. The mission proposes two options for the transitory framework, both assuming the existence of market segmentation. CBSL should transition from conducting daily OMOs with different tenors to a predetermined schedule of one-week instruments, with a single operation per week. Option 1 (Figure 8) envisages conducting both one-week liquidity providing and absorbing operations, while in Option 2 (Figure 9) CBSL conducts only one-week liquidity providing OMOs, and absorption operations are done via recourse to SDF. Option 2 is easy to communicate but it might not work properly in the situation of structural liquidity surplus. While Option 1 can be used in cases of structural liquidity deficit or surplus, modality of OMOs is more complicated there. Ideally liquidity providing and absorbing OMO auctions in Option 1 should not be conducted on the same day, and interest rate floors for latter and caps for the former need to be employed. CBSL has extensive experience with auction procedures and should conduct OMOs using variable rate /fixed amount price auctions based on liquidity forecast obtained from surveys of banking segments. The mission also recommends scheduling an O/N operation at fixed rate full allotment on the last day of RMP at a rate currently set in the middle of corridor.

Figure 8. Transitory model of operational design. Option 1.



Source: IMF mission calculations

Figure 9. Transitory model of operational design. Option 2.



Source: IMF Mission Calculations

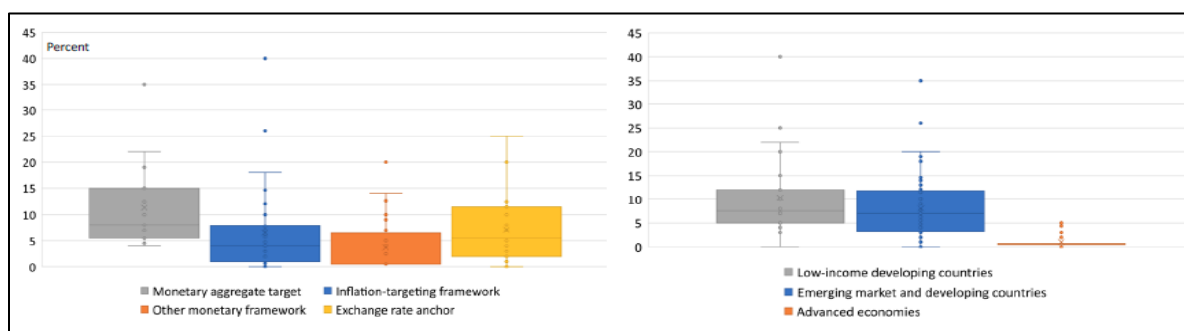
38. Fine tuning operations should be employed to address the impact of sudden changes in autonomy factors which are not captured in the liquidity forecasts. At this stage, fine tuning operations might be used relatively frequently to gain confidence in the new monetary operations setup. Simultaneously, CBSL should try to avoid using fine-tuning operations too often. With improved liquidity on the interbank market, the frequency of fine-tuning operations will decrease.

39. The RMP is proposed to be changed to two weeks rather than linking it to calendar days. SRR RMP should begin in the middle of the week to support liquidity forecasting and minimize interest rate volatility spikes linked to cash withdrawals, salaries, or taxes payments that typically occur at the end of the week or end of the month.

40. The mission believes that 80 percent SRR averaging, implying that the minimum of 20 percent of SRR must be kept at the account on any one day, is sufficient at this stage. However, this could be revised to 100 percent averaging in the next stage based on analysis of precautionary reserves and the impact of reserve requirement level on interest rate volatility.

41. At the second stage, as the confidence in the market improves, CBSL should start assessing the level of precautionary demand to define the appropriate ratio of SRR. Level of SRR requirements can be based on volatility of autonomous factors not captured in the liquidity forecasts. The decision on the level of SRR can be postponed to the third stage. For reference, Figure 10 provides information on the level of SRR across different monetary regimes and income groups in 2018. It shows SBSL’s SRR level is relatively low in comparison with other emerging markets.

Figure 10. Reserve requirement ratio by monetary policy framework and market type



Source: Reserve Requirements. IMF | MCM Technical Assistance Handbook, 2022

42. The CBSL should introduce SRR for FX liabilities for macroprudential objective as part of a comprehensive framework aimed at dedollarization and promoting its own currency. This requirement should be fulfilled in foreign currency only. The CBSL previously abolished a SRR for FX liabilities to support liquidity of banking system. Currently, the open currency position of state-owned banks is likely to be negative, but an improved situation in the financial system will allow banks to allocate enough FX liquidity to fulfill SRR in foreign currency. There are no exact rules to set the appropriate level of SRR for foreign currency, but it is usually higher than for SRR for local currency to disincentivize the usage of foreign currency. It is not advisable to use local currency for fulfilling requirements for foreign currency liability. This might

stimulate dollarization during periods of relaxation of monetary policy stance. In addition, SRR in all foreign currencies can be fulfilled in USD.

43. SRR balances in foreign currency should not be used as a source for replenishing the Central Bank's FX reserves, and the mission strongly advise to keep such balances segregated from the FX reserves. CBSL needs to communicate clearly to the market the purpose of SRR in foreign currency and establish safeguard measures for the appropriate management of these FX funds.

44. The mission does not recommend having differentiated SRR in terms of maturity of liabilities for prudential purposes to reduce liquidity and interest rates risk. SRR should be applied uniformly to across all liabilities, including term deposits, otherwise this can be easily circumvented by banks using term deposits with possibility of early repayments.

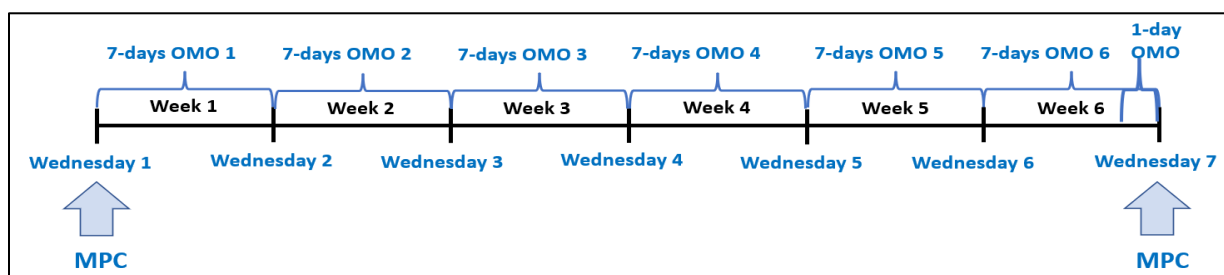
45. Cash should be excluded from eligible collateral for meeting the SRR, as it serves neither a prudential nor a monetary policy objective. However, it is important to consider that removing cash from eligible collateral will increase structural liquidity deficit, leading to an increased demand for central bank liquidity-providing facilities.

46. Liquidity forecasting should be upgraded and strengthened at this stage. As will be discussed in Section III, liquidity forecasts should be presented in a more user-friendly format suitable for decision-making. Priority should further be given to developing a solid forecasting model for currency in circulation. Analyses of seasonal patterns in foreign exchange flows (notably tourism, remittances, major exports) could be useful for assessing the likelihood of central bank interventions. Government cash flow projections should be utilized as one of several indicators to better understand the distribution of liquidity within the banking system. Considerations could be given to make use of further TA to be provided by SARTTAC.

Third Stage

47. After macro and financial stability are restored, followed by increased activity in interbank market activity to at least pre-crisis level , the CBSL would be able to target aggregate liquidity. The mission proposes to introduce a new operational design whereby CBSL will use one-week OMOs to provide liquidity in case of structural liquidity deficit or absorb liquidity in case of structural surplus in the system (Figure 11). Banks should be motivated to make better use of their liquidity management tools, such as reserve averaging and interbank market trading, to actively manage liquidity between such operations. The CBSL can supplement OMOs with fine-tuning operations to correct any liquidity forecasting errors and cope with volatility in autonomous factors.

Figure 11. Future model of operational design.



Sources : IMF staff, IMF mission calculations

48. At this stage, RMP should be lengthened and aligned with dates of MPC decisions and monetary operations at later stages. The RMP could start on T+0 day of the first main liquidity management operation and finish on T-1 day of maturity date of the last main liquidity operation. With MPC meetings scheduled 8 times per year, it means RMP could last on average about 6 weeks with 6 one-week main liquidity operations during RMPs. Overlapping between one main liquidity operation and SRR period creates unnecessary uncertainty and lack of consistency, as interest rates can change before maturity of some instruments. This can cause banks to defer from taking part in OMOs and complicate their liquidity management decisions.

49. Recourse to standing facilities should ideally be minimized during this stage. OMOs should steer interbank rate close to mid-corridor and improved liquidity forecast will prevent large interest rate volatility.

50. CBSL should consider introduction of SRR remuneration in the future close to the policy rate to minimize distortive tax on financial intimidation and reduce interest rate differential between deposits and loans. Such step will be conditioned on improvement of CBSL's financial position.

III. LIQUIDITY MONITORING

A. Current Situation and Assessment.

51. CBSL has in place an operative liquidity monitoring and forecasting function. On a daily basis, the DOD produces on each business day morning a summary forecast on banking system liquidity. The day's opening balance of bank reserves (banks' settlement accounts with the CBSL) are adjusted with known impact from earlier monetary actions and estimation of autonomous factors during the day. This information is supplemented with reports submitted daily by commercial banks to attain an estimate of excess reserves. Due to market segmentation the estimation of excess reserves is done for different groups of banks to identify banks with structural liquidity deficit by effectively excluding foreign-owned banks. Ideally, this estimation by the banks should in addition to SRR also cover any voluntary or precautionary demand for reserves. This estimate of excess reserves (before any liquidity actions taken by CBSL) is submitted to the Market Operations Committee (MOC) and used as a basis for decisions on the market operations to be conducted during the day.

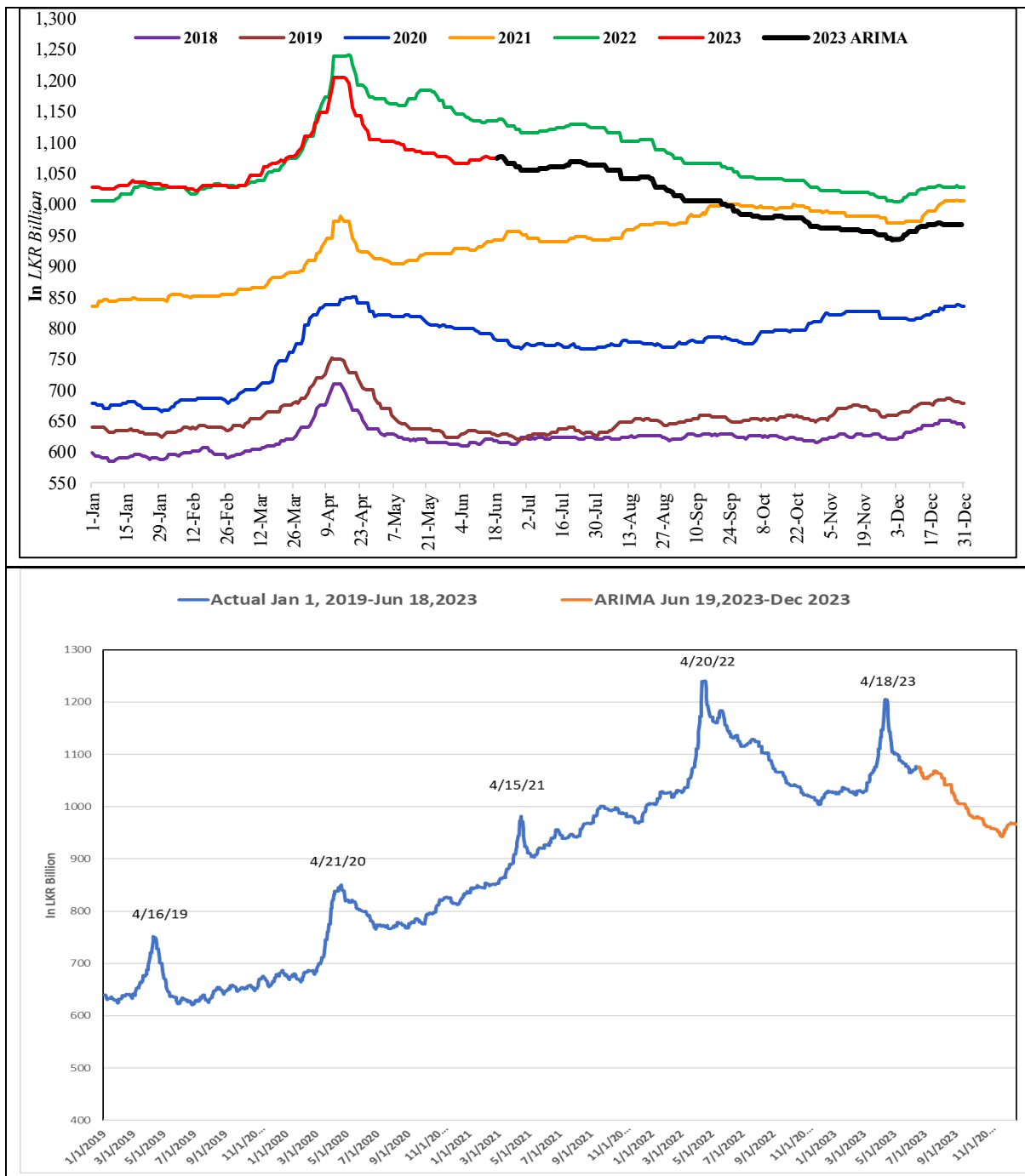
52. The liquidity table also contains ex-post data on actual liquidity changes and some key stock variables. Although the aggregates of daily reports from banks come out close to the DOD's own estimates, the actuals can deviate quite substantially. There is no breakdown on the actual outcome for the individual liquidity components. Since 2020, the liquidity forecasts have been extended one month ahead and forecast inaccuracy increases as the time horizon gets longer.

53. The liquidity monitoring and forecasting activity is well established and organized. A total of four staff members can alternate to update and maintain the Excel Table, which are well sufficient to ensure continuity. The responsibility is allocated to the Front Office, which also conducts the auctions and other liquidity operations. The daily reporting by banks is ensembled and reconciled by the Middle Office, and at least three staff members can perform this task.

54. The liquidity effects of the main autonomous factors appear to be covered in the current framework. A system is well in place for continuous collection of FX transactions with liquidity effect from the IOD. As market transactions are traded on a T+2 basis, the settlement amounts can be incorporated with certainty during this period. However, the forecasts for a longer horizon are not systematically established. The IOD occasionally conducts FX swaps based on exceptional situations in the FX market. Although timely reported to the DOD, the use of this instrument should be subject to LKR liquidity management decisions (see discussion in Section IB).

55. Currency in Circulation is an important autonomous factor, accounting for 78 percent of Reserve Money (RM) on average in 2022. Daily data of currency in circulation is provided by the Currency Department and a time series starting from 2010 was provided to the mission.

Figure 12. Currency in Circulation (2018 – 2023)



Sources: CBSL and IMF Mission calculations

56. The daily figures for Central Bank of Sri Lanka Currency in Circulation (CiC) used in the forecasts are primarily based on the observed pattern from previous year. This has worked fairly well for short-term forecasts as the demand for currency in Sri Lanka follows a very clearly seasonal pattern with a peak in March/April every year, reflecting the main holiday season. As in many other countries, however, the Covid pandemic markedly changed the pattern for currency demand. An unusual surge in demand took place, caused most likely by more transactions being paid in cash and the building up of precautionary cash holdings. The demand for currency can likewise be influenced by political and economic uncertainty, which Sri Lanka has

been through after the pandemic. Some illustrative Autoregressive Integrated Moving Average (ARIMA) projections made by the mission may indicate that the well-established pattern in currency demand before the pandemic are already now returning.⁸

57. The autonomous impact on banking system liquidity from government transactions is rather unusual and somewhat complicated in Sri Lanka. There are three main Treasury accounts (named DST accounts)⁹; one in CBSL and one in each of the two main state-owned banks (BOC and PB). The two accounts in the state-owned banks (SOBs) are the main operational accounts for government domestic transactions, and all bank balances maintained by Spending Agencies are swept up to these accounts at the end-of-day. The DST account held by the CBSL is mainly used for government debt operations, FX transactions and as a collection account for project accounts. Also, occasionally excess end-of-day balances on this account is transferred to the DST accounts in the SOBs.

58. The liquidity effect of government transactions in this system will only take place when funds are transferred between the DST accounts in the two SOBs and the Central Bank. Among the flows which are most evident are the disbursement and repayment of foreign loans entailing FX operation. In this case, FX will be sold to or purchased from CBSL, and the LKR funds credited or debited the SOBs DST accounts with liquidity effect.¹⁰ The different forms of monetary financing by the CBSL will have liquidity effects. When CBSL purchases Treasury bills in the primary market, liquidity will be added, and at maturities liquidity will be drained as funds to cover the payments are transferred from the SOBs. Making use and repayment of “provisional advances” (under section 89 in the Monetary Law) will have liquidity effects which should be incorporated into the liquidity table. The CBSL also provides banking facilities to some government departments, agencies and institutions, of which project accounts are the most important. These transactions are handled by the DOD and are incorporated in the liquidity table as applicable.

59. Moving forward, there may be changes in government banking relations with consequences for liquidity monitoring and forecasting. The Treasury is referring to the current arrangement as a “Modified Treasury Single Accounting System” which in future will be changed into a “fully fledged single accounting system”. In addition, the on-going process of introducing Treasury Financial Management System (TFMS) will in the end be “a total solution for Treasury Management”. This mission was not in a position to fully determine what these changes could entail for liquidity flows, including in particular the future role of CBSL. Further changes may also follow from the adoption of the new Central Bank Act, which among other provisions

⁸ This illustrative ARIMA projection is made in R, with `auto.arima` used to automatically select the most appropriate ARIMA model for the time series data. For more on forecasting CiC, see IMF Country Reports 22/101.

⁹ Deputy Secretary to the Treasury Account (DTS Account)

¹⁰ The Treasury may choose to use the DST FX account in CBSL in which case there will be no liquidity effect.

will prohibit monetary financing of the fiscal deficit.¹¹ The management of domestic public debt is currently handled by the CBSL, but the liquidity effects of issuance and maturities of debt held by domestic counterparties are a redistribution of bank reserves within the system. Under the current IMF program, there is a structural benchmark that a separate Public Debt Management Agency in line with international best practices shall be established. Based on mission discussions with Treasury, TA on Treasury single account might be considered.

60. The DOD is well positioned to have the full overview of all details related to the use of liquidity instruments. Also instruments currently employed by other departments, notably FX swaps by the IOD, are timely reported to DOD. The SRR arrangement is the responsibility of the Economic Research Department, but the monitoring is allocated to DOD. Also, the use of ELF and LAF, which is decided on the Board level, is operationally executed by the DOD.

61. The mission observes that the CBSL has most of the prerequisites in place to establish a strong and applicable liquidity monitoring system. Some areas were discussed on how to improve and strengthen the current framework. These are mostly actions which can be initiated immediately and constitute activities which should be part of the first stage of the proposed Road map. As financial stability is restored during the course of the second stage and CBSL can increasingly focus on managing aggregate liquidity, accurate liquidity forecasting will become important. The use of liquidity finetuning operations will also require more reliable liquidity forecasts. In addition to deepening the understanding of the evolution of all factors affecting banking system liquidity, liquidity monitoring should be used as a basis for preparing accurate liquidity forecasts.

B. Recommendations

62. A first step to improve the current liquidity task should be to clearly separate liquidity monitoring and forecasting. A more user-friendly presentation could enhance the understanding of main drives behind liquidity changes and facilitate the analyses of liquidity flows.

63. The mission proposed an alternative Liquidity Monitoring Table to be considered and adopted by the CBSL. (Appendix II). The main feature in this set of tables will be to start with the opening balance of Bank Reserves (as in the current Excel framework) and clearly show the end-of-day balance (which is not directly shown now). The autonomous factors will be presented and summarized as the first bloc of liquidity impact and the liquidity effect of all actions by the CBSL will follow. As the opening and closing balances are directly observable, the sum of identified autonomous factors and liquidity actions will usually not be complete enough to explain the actual daily change in bank reserves. A residual will therefore be calculated to close the difference.¹²

¹¹ The new Central Bank Act was approved by the Sri Lanka's Parliament on July 20, 2023.

¹² The proposed Liquidity Monitoring Table was populated with actual figures for a random chosen week in May 2023. The result was promising as the residuals were insignificant, indicating that the

64. In order to analyze any significant changes in the residual, a daily balance sheet will be of vital importance. A daily balance sheet is currently not produced, but a trial balance sheet can be made available by the Finance Department on demand. This balance sheet will not include any manual adjustment normally done only at the end of month (such as calculation of accrued interest, valuation adjustment etc.). These adjustments will normally not have any significant impact on changes in bank liquidity. The current monthly format of the balance sheet is however not adopted for liquidity analyses and some effort could be made, with the support of IT resources, to convert the present format into an analytical balance sheet. An example is provided in Annex III.

65. A daily balance sheet can also be useful for detecting any deviations from the data collected from source. An example could be that the exact timing for passing an entry can be important for consistency in the liquidity table. Sometimes funds can be posted to temporary suspense accounts which have never been used before, and this could have a major impact on liquidity recordings. A daily balance sheet can also provide information on important non-liquidity variables, such as Net Foreign Assets.

66. It is recommended that the proposed alternative Liquidity Monitoring Table has a main summary table and several sub-sheets with details. This approach should be more user-friendly than hidden columns in the current framework, in order to save space. In the main summary table Memo items can be added, for example stock figures of relevant variables (such as also included in the current framework). This framework should be flexible and easily adjustable as situation changes and new factors become of interest.

67. To make a time series of CiC more applicable for analyses and forecasting, banks' cash in vault should be separated. CiC is an important autonomous variable in liquidity monitoring and forecasting and it would be helpful if cash in banks' vault (till cash) could be identified on a daily basis. A time series for currency in circulation outside the banking sector would be best suited for detecting short-term and longer-term patterns in currency demand. This is probably particularly true in the case of Sri Lanka where till cash is accepted as a reserve asset. This may influence the banks demand for cash in an unstable manner. If the collection of daily data is difficult, some estimates based on surveys and data collected on selected days would probably be helpful.

68. As part of liquidity monitoring, government revenue and expenditure transactions should be observed even though they do not have any direct impact on aggregate liquidity position. Liquidity monitoring in Sri Lanka is different from many other countries where a Treasury Single Account is located in the Central Bank. In these cases, recording expenditure and revenue flows as well as domestic debt transactions is among the most demanding tasks, especially because these time series have to be made ready for liquidity forecasts. A close cooperation between the Treasury and the Central Bank is necessary in order to incorporate the

template captures the main liquidity factors (see Appendix II). However, the possibility for discrepancies has to be constantly monitored as part of liquidity monitoring activity.

most accurate cash flow projections into the liquidity forecasts. With the main Treasury accounts located in commercial banks, expenditure and revenue flows will give rise to a redistribution of liquidity within the banking system. Although there is no direct need to monitor and forecast the liquidity effects of government transactions, a broad overview of these major flows in the money market should be observed at some level. At the Domestic Debt Management Committee monthly meetings, a cash flow forecast is presented by the Treasury with a daily distribution of the major revenue and expenditure items. These cash flow projections can contain items which will have liquidity effects, such as foreign loans. The information on the cash flows should be taken into consideration as part of liquidity monitoring and summarized in Liquidity Reports (see below).

69. The daily detailed reporting by banks is not widely common and ties up resources both in banks and in the Central Bank. In the current situation, this reporting can be an important supplement to the data available from the CBSL own accounts due to the diversity and segmentation in the banking system. As discussed, this information can be used to tailor market operations to meet dissimilar liquidity needs among different banks and groups of banks. As a more equal distribution of system liquidity is restored and the interbank market starts to function, this reporting can be replaced with more normal market intelligence performed by the Central Bank. The resources this activity can release should rather be employed for strengthening the liquidity monitoring and forecasting function.

70. In some central banks, a technical Liquidity Working Group (LWG) has been established to strengthen coordination and broaden the discussion of liquidity developments. At regular meetings, for example weekly, the information sharing should be supplemented by a discussion of the current liquidity situation and what may be expected in the period ahead. Consequently, an important purpose of the LWG, particularly initially, would be to broaden the general understanding of how the activities of various departments at the CBSL can impact bank liquidity. Members of the LWG could include operational staff representing the various departments, such as Finance, Statistics, Economic Research, Bank Supervision, IOD, and shared by DOD. There should always be an agenda available ahead of each meeting and summery minutes should be produced and made available to management without delay.

71. As part of liquidity monitoring, Liquidity Reports should be regularly produced, at least monthly. These reports should in no way replace the current quarterly reports on liquidity developments to the Board, but rather be a more frequent supplement. The justification for such (monthly) reports would be the importance changes in banking system liquidity have for the situation in the financial system as a whole. These reports need not to be very detailed, but focus on the main liquidity factors, the liquidity actions taken by CBSL and the cumulative situation in excess reserves. The proposed LWG could review and discuss the Liquidity Report before it goes to management and distributed to the relevant departments.

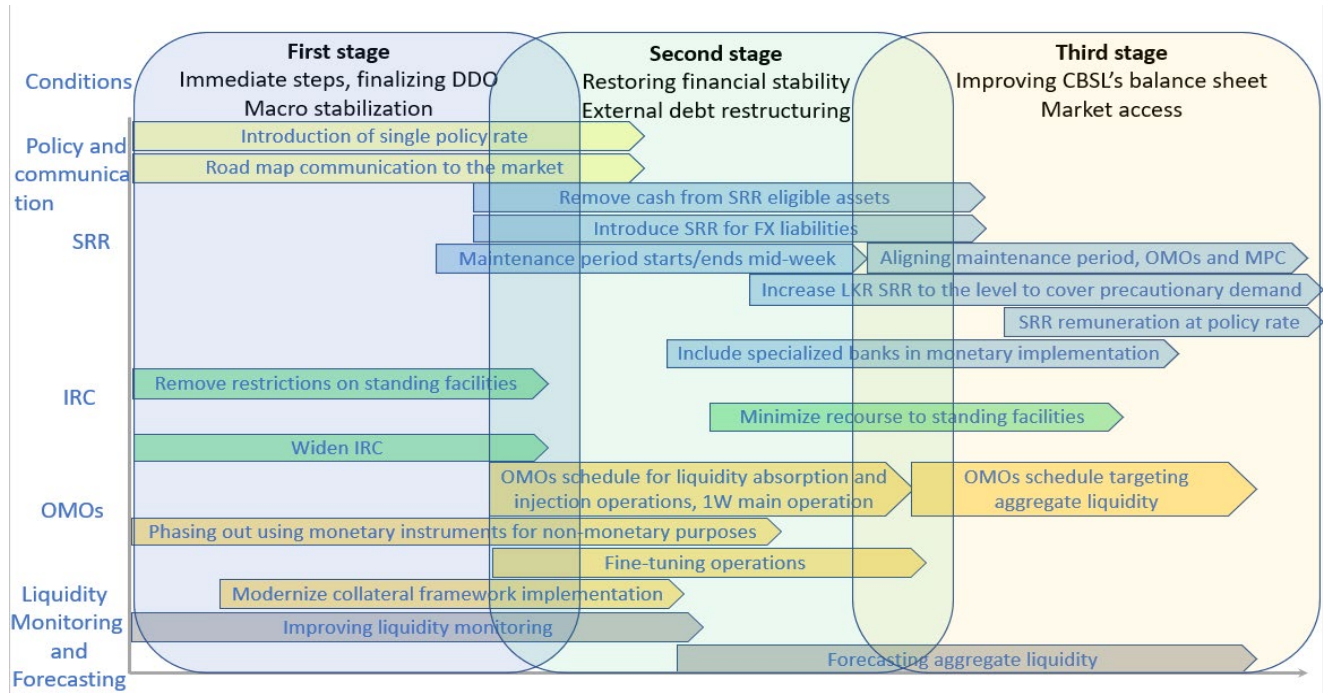
72. To sum-up the mission's recommendation on liquidity monitoring, the aim is to strengthen the current liquidity monitoring framework in the following areas:

- continue organizing this function with sufficient number of qualified and dedicated staff;

- undertake a clear separation between liquidity monitoring and liquidity forecasting;
- present the output from liquidity monitoring in a user-friendly and easily understandable format;
- ensure consistency between data collected at source and the daily balance sheet;
- investigate and reconcile any unexplained difference (residual) between the opening and closing balance of bank reserves; and
- improve the internal CBSL awareness of bank liquidity matters and information to management.

APPENDIX I. PROPOSED ROAD MAP FOR MODERNIZING MONETARY POLICY

OPERATIONAL FRAMEWORK



APPENDIX II. LIQUIDITY MONITORING TABLE

A	AA	AB	AC	AD	AE	AF	AG
Sri Lanka: Liquidity Monitoring Framework (LKR Billion)							
	08-May-23	09-May-23	10-May-23	11-May-23	12-May-23		
1. Opening balance of Bank Reserves	319	511.33	381.38	523.04	524.35		
A. FX transactions (net)	10.08	14.61	14.65	15.91	15.28		
A1. FX transactions (purchase +/sale -)	10.08	14.61	14.65	15.91	15.28		
A2. Foreign loans (Disbursed +/repayment -)?	0.00	0.00	0.00	0.00	0.00		
A3. Other							
B. Government transactions	-78.33	0.00	-0.49	0.49	-56.88		
B1. CBSL TB Holdings/Advances (Net)	-78.34	0.00	0.00	0	-56.875		
B2. Net Government transactions	0.01	0.00	-0.49	0.49	0.00		
C. Currency in Circulation (Increase -/reduction +)	0.80	0.54	2.91	0.407	6.789		
C1. Cash in Vault							
C2. Currency outside banks							
2. Autonomous supply of reserves (A+B+C)	-67.45	15.14	17.07	16.81	-34.80		
3. CBSL Liquidity operations (a+b+c+d)	259.88	-145.13	124.58	-15.42	-193.52		
3a. Standing Facilities (net)	220.28	-135.33	101.58	6.53	-154.52		
3b. Term Repo (-/+)/RevRep (+/-) auctions (net)	30.00	-6.04	23.00	-21.95	-39.00		
3c. FX SWAP (net)	9.60	-3.76	0.00	0.00	0.00		
3d. Other CBSL (own securities, outright, other) (net)	510.96	381.34	523.04	524.43	296.03		
4. Residual	0.37	0.04	0.01	-0.08	-0.58		
5. Closing end-of-day balance of Bank Reserves	511	381.38	523.04	524.35	295.46		
Control							
6. Cumulative SRR position (End-of-Day)	3,140.72	3,522.10	4,045.14	4,569.50	4,864.95		
7. Cumulative Reserve Requirement	2,527.16	2,843.05	3,158.95	3,474.84	3,790.74		
8. Excess Reserves Cumulative	613.56	679.05	886.20	1,094.65	1,074.22		
Memo items (stocks)							
NFA							
CBSL T-bill Holdings							
CiC							
Vault Cash							
Currency Outside							
< >	Liquidity Main	NFA	Gov Debt	Gov Trans	CiC	CBSL	SRR

APPENDIX III. CBSL DAILY ANALYTICAL BALANCE SHEET

Central Bank of Sri Lanka					
Daily Summary Balance Sheet (in LKR Billion)					
Assets			Liabilities		
Foreign Assets			Foreign Liabilities		
	Net purchase of FX				
	FX SWAPS Net		Currency in Circulation		
	Net purchases from Government				
	Other		Bank Deposits		
Lending to Government			Securities sold under Repo		
	Securities			Standing Deposit Facility	
	Advances (overdrafts)			Term Repos (Liq. Absorbing)	
Lending to Banks			Other borrowing form Banks		
	Securities Purchases under Repo			Term Deposits (net)	
	Standing Lending Facility				
	Term Repos Liq. Providing)				
	Lending to banks (incl. LAF,ELF)		Government Deposits		
				Net transfers to SOB	
				Net sales of FX (to CBSL)	
Lending to Others			Other Deposits		
	Other Financial Corporations				
	Government Agencies a.o.			Other Financial Corporations	
	Primary Dealers			Others	
	Private Sector, if any				