



BANK *Of* ZAMBIA

Operating Rules and Guidelines for Open Market Operations

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ACRONYMS

ASA	Authorised Settlement Agency
BCPS	Banking, Currency and Payments Systems Department
BIS	Bank for International Settlements
BoZ	Bank of Zambia
CSD	Central Securities Depository
DvP	Delivery versus Payment
FoP	Free of Payment
FX Swap	Foreign Exchange Swap
ISDA	International Securities and Derivatives Association
MDA	Master Dealing Agreement
MRA	Master Repurchase Agreement
OMO	Open Market Operations
Repo	Repurchase Transaction
Reverse FX Swap	Reverse Foreign Exchange Swap
Reverse Repo	Reverse Repurchase Transaction
SSI	Standard Settlement Instructions
ZIPSS	Zambia Interbank Payment and Settlement System

I INTRODUCTION

The primary objective of the Bank of Zambia (BoZ) is to formulate and implement monetary and supervisory policies to achieve and maintain price and financial system stability (Bank of Zambia Act No. 43 of 1996). To achieve the price stability objective (low and stable inflation), while fostering macroeconomic and financial stability, the BoZ uses the Policy Rate as the key interest rate to signal its monetary policy stance. The Policy Rate, also provides a credible and stable anchor to financial market participants in setting their own interest rates. The Policy Rate guides the Bank of Zambia's open market operations and is expected to influence the overnight interbank rate (operating target) which in turn impacts on inflation through changes in market interest rates which are transmitted via the expectations, exchange rate and/or credit channels.

To effectively manage the overnight interbank rate, the BoZ conducts open market operations to either supply or withdraw liquidity from the banking system in volumes required to keep the overnight interbank rate within the corridor of +/- 1 percentage points around the Policy Rate. However, the interbank rate may be allowed to move outside the Policy Rate corridor in exceptional circumstances.

These guidelines are established in an effort to put in place procedures to govern OMO operations. The rest of the guidelines are structured in seven segments as follows: Section II outlines the definitions of the instruments to be used under OMO. Section III outlines the common features across instruments. Section IV contains the procedures for liquidity management operations under OMO while the review of OMO guidelines and Appendices are presented in Sections VII and VIII, respectively.

II DEFINITIONS

1.0 INSTRUMENTS FOR WITHDRAWING LIQUIDITY

1.1 The following Instruments are used for withdrawing liquidity from the banking system: Term Deposits, Repurchase Transactions, Foreign Exchange Swaps, Outright Sales of Government Securities and Outright Sales of Foreign Exchange.

1.1.1 A **Term Deposit** is an interest earning deposit placed by commercial banks with the BoZ for a specified period of time.

1.1.2 A **Repurchase Transaction** (Repo) involves the sale of a financial asset with an agreement to repurchase it at a future date. The transaction entails commercial banks placing interest earning deposits with the BoZ, which will in

turn sell securities with an agreement to repurchase the securities at a specified future date.

- 1.1.3 A **Foreign Exchange Swap** (FX Swap) refers to a financial transaction where a commercial bank places domestic funds with BoZ and in return receives collateral in the form of foreign exchange in the spot transaction, and simultaneously agree to unwind the exchange at a future date.
- 1.1.4 The **Outright Sales of Government Securities** refers to transactions where the BoZ sells Government securities to commercial banks and ownership of the securities permanently changes from the BoZ to the commercial banks. It entails a secondary market sale of Government securities offered on a competitive basis through an auction. The decision to use outright sales of Government securities in the OMO will be guided by among other factors, the availability of securities on the BoZ portfolio.
- 1.1.5 The **Outright Sales of Foreign Exchange** refers to the sale of foreign exchange to commercial banks by the BoZ. The decision to undertake these transactions will be made with due consideration of BoZ foreign exchange market operations to ensure consistency between the Exchange Rate and Monetary Policy objectives.

2.0 INSTRUMENTS FOR SUPPLYING LIQUIDITY

- 2.1 The following Instruments are used for injecting liquidity into the banking system: Reverse Repurchase Transactions, Secured Loans, Reverse Foreign Exchange Swaps, Outright Purchases of Government Securities and Outright Purchases of Foreign Exchange.
 - 2.1.1 A **Reverse Repo Transaction** (Reverse Repo) involves the purchase of a financial asset with an agreement to sell it back at a future date. The transaction entails that the BoZ sells funds (cash) to commercial banks which in turn sells securities to the BoZ with an agreement to repurchase the securities at a specified future date.
 - 2.1.2 A **Secured Loan** is a collateralised loan which is given to a commercial bank by the BoZ.
 - 2.1.3 A **Reverse Foreign Exchange Swap** (Reverse FX Swap) refers to a financial transaction where BoZ lends funds to a commercial bank and the bank provides collateral in the form of foreign currency in the spot transaction. There is also a simultaneous agreement to unwind the exchange at a future date.

- 2.1.4 The **Outright Purchases of Government Securities** are transactions in which the BoZ purchases Government securities from commercial banks and ownership of the securities permanently changes from the commercial bank to the BoZ. This secondary market purchase will be done on a competitive basis through an auction.
- 2.1.5 The **Outright Purchase of Foreign Exchange** refers to the BoZ purchases of foreign exchange from commercial banks. The decision to undertake these transactions will be made with due consideration of BoZ foreign exchange market operations to ensure consistency between the Exchange Rate and Monetary Policy objectives.

III COMMON FEATURES ACROSS INSTRUMENTS

1.0 FEATURES COMMON TO INSTRUMENTS USED FOR WITHDRAWING LIQUIDITY AND SUPPLYING LIQUIDITY INTO THE BANKING SYSTEM

- 1.1 All OMO transactions are carried out in the Central Securities Depository (CSD) system. However, the transfer of foreign exchange collateral in respect of FX Swaps and Reverse FX Swaps will be undertaken outside the CSD in the BoZ Core Banking system (T24 R14).
- 1.2 Commercial banks with clearing accounts at the BoZ are eligible to participate in the instruments outlined in Section II. However, with Repos, Reverse Repos, FX Swaps and Reverse FX Swaps, only banks that have signed the Master Repurchase Agreement (MRA) and other relevant documents such as the International Securities and Derivatives Association (ISDA) Contract/ the Foreign Exchange Code of Conduct and the Interbank Foreign Exchange Market Framework (IFEM) with the BoZ are eligible to participate.
- 1.3 The minimum offer/bid amount is One Hundred Thousand Kwacha (K100,000.00) and thereafter in multiples of One Hundred Thousand Kwacha (K100,000.00). The BoZ reserves the right to change the minimum amount required and multiples as and when deemed necessary. Advance notice will be given when such changes are made.
- 1.4 Domestic securities issued by the Government of the Republic of Zambia are eligible instruments for Repo and Reverse Repo transactions while foreign currency denominated in US dollars will be required for FX Swaps and Reverse FX Swaps. For Secured loans, both Government securities and OMO Term Deposits will be considered as collateral.

- 1.5 The BoZ processes and maintains all OMO transactions electronically. This means that no physical certificate will be issued for any instrument.
- 1.6 Participants can access statements showing their holdings of OMO instruments from the CSD. However, where there is need for authentication of statement(s), Participants can make a request in writing to BoZ for signed copies of the statement (s).
- 1.7 Currently, the BoZ does not charge handling fees for OMO instruments. However, the BoZ reserves the right to change this position as and when deemed necessary.
- 1.8 Interest earnings on OMO instruments will be subject to tax regulations as set by the Government of the Republic of Zambia.

IV TENOR OFFERED ON AUCTIONS

- 1.1 The Bank of Zambia shall offer overnight tenor¹ in order to steer the overnight interbank rate towards the Policy Rate and any other tenors deemed appropriate when conducting liquidity operations.

V GENERAL PROCEDURES FOR CONDUCTING LIQUIDITY OPERATIONS

1.0 PROCEDURE

1.1 Tenders

- 1.1.1 The Bank of Zambia will conduct liquidity operations (tenders) at interest rates that are within 50 basis points of the Bank of Zambia Policy Rate and will accept bids that are as close as possible to the BoZ Policy Rate.
- 1.1.2 The intention of the Bank of Zambia to either withdraw or inject liquidity will be announced through the Reuters and Bloomberg Information Systems on the day of the tender by 10:15 hours and 14:15 hours for the morning and afternoon operations respectively.
- 1.1.3 The Bank of Zambia shall offer overnight and any other tenors as deemed appropriate when conducting liquidity operations

1.2 Lodging of Applications

- 1.2.1 Commercial banks will submit bids electronically through the CSD.

¹ More days on weekends and public holidays

- 1.2.3 Participants will be allowed to submit only one (1) bid per tenor which the Bank of Zambia will offer when conducting open market operations.
- 1.2.4 Withdrawal of bids cannot be made after the auction is closed (i.e. after Bidding Cutoff time).
- 1.2.5 On submitting a bid, commercial banks may simultaneously give the BoZ, the rights to collect the relevant OMO funds through the Authorised Settlement Agency (ASA) by 15:00 hours should there be ZIPSS failure on their end while there are adequate funds available in the current account.
- 1.2.6 Where a commercial bank utilises ASA in settling OMO transactions, a standard charge as determined from time to time by the BoZ will be levied.

1.3 Pricing Mechanism

- 1.3.1 The pricing of a Term Deposit and the deposit placed with the BoZ under a Repo are based on the interest rate offered by banks.
- 1.3.2 The interest amount will be calculated as follows:

$$I = P \times R \times \left(\frac{D}{365} \right)$$

where:

I = Interest amount

P = Principal

R = Offer rate (a rate within 50 basis points of the Policy rate)

D = Number of days placed with BoZ

- 1.3.3 The securities under **Repos** will be valued based on the present value formula as follows:

$$PV = \frac{FV}{\left(1 + \frac{R * N}{365}\right)}$$

where:

PV = Present value

FV = Future value

R = Latest yield rate of the security being repoed

N = Number of days remaining to maturity of the repoed security

- 1.3.4 For **FX Swaps**, the deposit placed with the BoZ will be priced based on the swap points offered. The collateral and interest amount will be calculated as follows:

$$FXC = \left(\frac{P}{S} \right) \text{ and } IA = (FXC * SP)$$

where:

FXC = Foreign exchange collateral

P = Principal (amount offered)

S = Spot exchange rate

SP = Swap points

IA = Interest amount

1.4 Allotment

- 1.4.1 The BoZ applies the multiple price system to allocate funds among participants. This means that, successful applicants will be allocated funds at the quoted rate (swap points for FX Swaps). (lowest swap points for FX Swaps). The BoZ will only accept bids whose rates are within 50 basis points from the prevailing BoZ policy rate. The BoZ reserves the right to reject or accept in part the amount applied for.

1.5 Determination of Required Securities for Repos

- 1.5.1 The determination of required securities will be undertaken in three steps:
- 1.5.2 **Step one:** Calculation of the repurchase price:

$$RP = PP + IA$$

where:

RP = Repurchase price

PP = Purchase price

IA = Interest Amount

- 1.5.3 **Step two:** Determination of the margin cover (required Present Value of securities):

$$MC = RP \times CC$$

where:

MC = Margin cover

RP = Repurchase price

CC = Current cover

- 1.5.4 The Current Cover is 100 percent when the BoZ is borrowing funds, that is, no haircut will be applied.

- 1.5.5 **Step three:** Determination of the face value of securities. The formula to be applied will be as follows:

$$FV = PV \left[\left(1 + \left(\frac{R * N}{365} \right) \right) \right]$$

where:

FV = Face value

PV = Present value

R = Latest yield rate of the security being repoed

N = Number of days remaining to maturity of repoed securities

1.6 Determination of Required Securities for Foreign Exchange Swaps

- 1.6.1 The determination of collateral under swaps is as follows:

$$FXC = \left(\frac{P}{S} \right)$$

where:

FXC = Foreign Exchange Collateral

P = Principal (Amount Offered)

S = Spot Exchange Rate

- 1.6.2 When BoZ is borrowing using FX Swaps no haircut will be applied.

1.7 Announcement of Results

- 1.7.1 A consolidated summary of tender results will be available on the Reuters and Bloomberg Information systems by 12:30 hours and 15:45 hours for the morning operation and afternoon operation, respectively on the day when Bank of Zambia is in the market.
- 1.7.2 Banks that have participated on open market operations may obtain individual result reports from the CSD shortly after the liquidity management operation is finalised.

2.0 SETTLEMENT PROCEDURE

- 2.1 Settlement of Term deposits and Repos awarded will be on the same day (T + 0) while settlement for FX Swaps will be two days after the deal date (T + 2). Any changes to settlement date will be advised to all participants.
- 2.2 Settlement of Term deposit and Repo transactions will be done through an Interface between the CSD and the Zambia Interbank Payment and Settlement System (ZIPSS) on a gross basis using Delivery versus Payment principle (DvP) model 1. However, for FX Swaps, settlement will be done outside the CSD.
- 2.3 Where funds are available in ZIPSS to settle the DvP transaction in full for a successful Participant, securities shall be transferred from BoZ's Own Account to the Participant's Own Account in the case of Repos.
- 2.4 Where funds are not available to settle the DvP transaction in full for a successful Participant by DvP cutoff time then the CSD shall send a message to ZIPSS to cancel the transaction for that Participant. This will constitute a default and a penalty will be levied on the transaction(s) and charged outside the CSD.

In the case of Repos, the following penalty will be levied:

$$Penalty = F \times P \times \left(\frac{N}{365} \right)$$

Where:

F = Unremitted funds (Principal)

P = Penalty rate [the higher rate between the Overnight Weighted Average Interbank Rate & Pricing Rate]²

N = Number of days the funds were unremitted³

² Pricing Rate is the interbank rate as agreed between the two parties to a specific transaction, i.e. the repo rate in the case of Repos.

In the case of FX Swaps and Term Deposits, the following penalty will be levied:

$$Penalty = F \times P \times \left(\frac{N}{365} \right)$$

Where:

F = Unremitted funds (Principal)

P = BoZ Penalty Rat⁴

N = Number of days the funds were unremitted

- 2.4 For FX Swaps, the BoZ will transfer the foreign exchange collateral to successful Participants' prescribed accounts as per commercial banks' Standard Settlement Instructions (SSI) by the settlement date. This leg of the transaction will be done outside the CSD, in the BoZ Core Banking system (T24 R14).
- 2.5 In the event that an ASA has been used to settle the transaction, BoZ will transfer the collateral to the Participants Own Account through a Free of Payment (FoP) transaction.
- 2.6 Procedures for secondary trading of OMO Term Deposits are presented in Appendix B.

3.0 MATURITY PROCEEDS

- 3.1 For Term deposit and Repo transactions, repayment shall be initiated automatically in the ZIPSS.
- 3.2 In the case of Repos, the CSD shall await receipt of a repayment confirmation message from ZIPSS indicating that BoZ has repaid the principal and interest before releasing the repoed securities from the Participants' Own account to the BoZ Own Account.
- 3.3 In the event that an ASA has been used, BoZ will credit the Participant's Settlement Account after the return of securities from the Participant by 10:00 hours.
- 3.3 For FX swaps, the Participant will transfer the foreign exchange collateral to the BoZ prescribed account as per BoZ SSI.

³ In the CSD system, (N/365) is by default equivalent to (1/365) as the transaction is cancelled at DVP Cut-off time on the day of the auction (Settlement date).

⁴ This is to be determined by BoZ from time to time.

- 3.4 Failure to return collateral on time will constitute a default and the penalty outlined below will be applied and charged outside the CSD:

$$\text{Penalty} = F \times P \times \left(\frac{N}{365} \right)$$

Where:

F = Principal

P = Penalty rate [the higher rate between the Overnight Weighted Average Interbank & Pricing Rate]

N = Number of days the collateral was unremitted

In the case of FX Swaps, the following penalty will be applied:

$$\text{Penalty} = F \times P \times \left(\frac{N}{365} \right)$$

where

F = Principal

P = BoZ Penalty rate

N = Number of days the collateral was unremitted

4.0 MARGIN MAINTENANCE

4.1 Repos

- 4.1.1 The threshold for margin maintenance for Repos is ± 400 basis points of the cover ratio (Collateral Value/Loan Amount) from the initial margin. That is, the initial margin for Government securities is 100 percent. This threshold may change from time to time as BoZ sees fit.
- 4.1.2 The BoZ will revalue (mark-to-market) securities utilised in the Repos on the basis of the latest Government securities tender results.
- 4.1.3 In the event that the present value of the securities falls as a result of a market rate increase, the BoZ will provide additional securities to the successful participants in order to maintain the set margin over the repurchase amount. However, in the event that the present value of the securities rises as a result of a market rate decrease, the participant will be required to transfer back securities to the BoZ in order to maintain the set margin over the repurchase amount. The BoZ will notify respective participants in respect of the excess value of the margin to be transferred back to its holdings.

- 4.1.4 For Repos, transfer of securities for the purpose of margin maintenance will be carried out through an FoP transaction in the CSD by FoP cutoff time on the date of the call.
- 4.1.5 Failure to transfer the additional securities on the call day will constitute a default. The penalty outlined below will levied and charged outside the CSD.

$$Penalty = RFV \times P \times \left(\frac{D}{365} \right)$$

where

RFV = Required additional face value of securities

P = Penalty Rate [the higher rate between the Overnight Weighted Average Interbank Rate & Pricing Rate]

D = Number of days the securities are not provided

4.2 FX Swaps

- 4.2.1 The threshold for margin maintenance for FX Swaps is at least ± 100 basis points, that is, a minimum 1 percent change in the value of the collateral will warrant a margin call. This threshold may change from time to time as BoZ sees fit.
- 4.2.2 The central bank will perform a valuation of outstanding operations with all counterparties on a weekly basis on a Monday based on the end of day BoZ official mid-rate.
- 4.2.3 BoZ should transfer additional collateral to the counterparty if the market value of collateral (US dollar) falls below the threshold. However, in the event that the market value of the collateral rises above the threshold, BoZ should receive the excess collateral from the participant in order to maintain the set margin over the FX Swap amount.
- 4.2.4 For FX Swaps, transfer of collateral for the purpose of margin maintenance will be done outside the CSD.
- 4.2.5 By 9:30 hours, a margin call will be communicated to the counterparty if necessary. To preserve the margin, either party will transfer the foreign exchange collateral to other party's prescribed account as per SSI by the settlement date. Failure to transfer the additional collateral on the call day will constitute a default. The penalty outlined below will apply and will be charged outside the CSD.

$$Penalty = RFX \times P \times \left(\frac{D}{365} \right)$$

where

*RFX = Required additional Foreign Exchange converted to Kwacha
equivalent converted at latest BoZ mid- rate*

P = BoZ Penalty rate

D = Number of days the additional collateral is not provided

VII GENERAL PROCEDURES FOR SUPPLYING FUNDS INTO THE BANKING SYSTEM

1.0 TENDER PROCEDURE

1.1 Tender Invitation

1.1.1 The announcement of the tender amount will be made through the Reuters and Bloomberg Information Systems on the day of the tender by 10:15 hours for the morning operation and 14:15 hours for the afternoon one.

1.2 Lodging of Applications

1.2.1 Commercial banks will submit bids electronically through the CSD.

1.2.2 For each bid, the Participant will enter the eligible instruments to be repoed in the case of Reverse Repos or pledged in the case of Secured Loans.

1.2.3 Participants will be allowed to submit only one (1) bid per tender. The BoZ reserves the right to change the number of bids as and when deemed necessary. Advance notice will be given whenever such changes are made.

1.2.4 Withdrawal of bids cannot be made after the auction is closed (i.e. after Bidding Cutoff time).

Pricing Mechanism

1.3.1 The pricing mechanism to be applied for the funds supplied by BoZ for Reverse Repos and Secured Loans is the same as outlined in Sections 1.3.2 and 1.3.3 above under Pricing Mechanism for Term Deposits and Repos. For Reverse FX swaps, funds supplied by BoZ will be priced based on the swap points offered. The interest amount will be calculated as in 1.3.4 above under FX swaps.

1.4 Allotment

1.4.1 The BoZ applies the multiple price system to allocate loans. This means that each successful participant is allocated at the quoted rate in accordance with section IV (1.1). Loans will be made by accepting the bids rates within acceptable range (highest swap points in the case of Reverse FX swaps). The BoZ reserves the right to reject or accept in part the amount applied for.

The BoZ will pro-rate bids at the cut-off rate (swap point for Reverse FX Swaps).

1.5 Determination of Required Securities for Reverse Repo

- 1.5.1 Determination of the required securities will be undertaken in three steps as outlined in Section 1.5 under Repos. For each Reverse Repo transaction, commercial banks will repo securities whose value will be 5 percent over and above the repurchase price for both Treasury bills and Governments bonds.
- 1.5.2 In the case of Reverse FX swaps a haircut of up to 5 percent will be applied to the collateral.

1.6 Determination of Required Securities for Secured Loans

- 1.6.1 Determination of the required **Government securities** will be done as follows:

For each secured loan, commercial banks will pledge securities whose value will be 5 percent over and above the loan plus Interest amount for both Treasury bills and Government bonds.

Step one: Calculate the interest amount.

$$I = P \times R \times \left(\frac{D}{365} \right)$$

where

I = Interest Amount

P = Principal

R = Bid Rate

D = Number of Days

Step two: Determination of the required Present Value of securities. The Current Cover is 105 percent when the BoZ is lending funds for either Treasury bills or Government bonds.

$$MC = [P + I] \times CC$$

where:

MC = Margin cover

P = Principal

I = Interest amount

CC = Current cover

Step three: Determination of the future (face) value of securities. The formula to be applied will be as follows:

$$FV = PV \left[\left(1 + \frac{R * N}{365} \right) \right]$$

where:

FV = Face value

PV = Present value

R = Latest yield rate of the security being pledged

N = Number of days remaining to maturity of the pledged securities

- 1.6.2 Determination of the required value of **OMO Term deposit** will be done by the application of the following formula:

$$V = MV \times \left(1 + \frac{R * N}{365} \right)$$

V = Required value

MV = Market value {Loan Amount (1+ Haircut)}

R = Previous day's weighted average interbank rate

N = Number of days between settlement date and maturity date of the Instrument

- 1.6.3 The applicable haircut on the OMO Term deposit shall be 5 percent.

1.7 Announcement of Results

- 1.7.1 A consolidated summary of tender results will be available on the Reuters and Bloomberg Information systems by 12:30 hours and 15:45 hours for the morning operation and afternoon operation, respectively on the day of the tender.

- 1.7.2 Banks that have participated on the auction may obtain Individual Result Reports from the CSD shortly after the auction is finalised.

2.0 SETTLEMENT PROCEDURE

- 2.1 Settlement of all successful Reverse Repo and Secured Loan transactions will be on the same day (T+0) while settlement for Reverse FX Swaps is two days after the deal date (T+2). Any changes to settlement date will be advised to all participants.

- 2.2 Settlement of Reverse Repo and Secured Loan transactions will be made through an Interface with ZIPSS on a gross basis, using DvP model 1. However, settlement of Reverse FX Swaps will be done outside the CSD.

- 2.3 Should there be system failure on ZIPSS, the BoZ will manually credit the OMO funds to the commercial banks' current accounts after the transfer of securities from the successful Participant's Own account to BoZ's Own account through a FoP.
- 2.4 To settle the DvP transaction in full, the CSD will effect transfers of eligible securities from successful Participant's Own account to BoZ's Own account. For Reverse FX Swaps, the successful Participants will transfer foreign exchange to the prescribed account as per BoZ SSI outside the CSD.
- 2.5 Failure to transfer securities from successful Participant's Own account to BoZ's Own account in the case of Reverse Repo and Secured Loan transactions will constitute a default and the following penalty will be levied on the transaction (s) and charged outside the CSD.

$$Penalty = F \times P \times \left(\frac{N}{365} \right)$$

where

F = Principal (amount intended to be supplied to the commercial Bank)

P = Penalty rate [the higher rate between the Overnight Weighted Average Interbank Rate & Pricing Rate]

N = Number of days the collateral was unremitted

In respect of FX Swaps, following penalty will be levied on the transaction (s):

$$Penalty = F \times P \times \left(\frac{N}{365} \right)$$

where

F = Principal

P = BoZ Penalty rate

N = Number of days the collateral was unremitted

3.0 MATURITY PROCEEDS

- 3.1 On maturity date, settlement shall be initiated automatically in the ZIPSS. For Secured Loans and Reverse Repos, the CSD shall await receipt of a repayment confirmation message from ZIPSS before releasing the pledged/repoed securities.
- 3.2 If the cut off time for DvP is reached prior to receipt of a repayment confirmation message, CSD shall send a cancellation message to ZIPSS. This will be treated as a default and CSD shall not release the securities. In addition, the following penalty will be levied on the transaction.

$$\text{Penalty} = F \times P \times \left(\frac{N}{365} \right)$$

where

F = Unremitted funds (Principal)

P = Penalty rate [the higher rate between the Overnight Weighted Average Interbank Rate & Pricing Rate]

N = Number of days the funds were unremitted (which in the CSD is by default equivalent to 1⁵)

- 3.3 For Reverse FX swaps, BoZ will also return the foreign exchange collateral by end of Business day on the maturity day. The BoZ will issue instructions to its correspondent bank(s) to transfer foreign exchange to the commercial bank as per SSI from commercial banks to the BoZ. This will be done outside the CSD, in the BoZ core banking system (T24 R14).
- 3.4 In the event that an ASA has been used, BoZ will debit the Participant's Settlement Account by 10: 00 hrs and return securities to the Participant.

4.0 MARGIN MAINTENANCE

- 4.0.1 Margin maintenance will apply to Reverse Repos, Secured Loans and Reverse FX swaps. The collateral used for these instruments will be valued as follows:

4.1 Government Securities

- 4.1.1 The threshold for margin maintenance for Government Securities is ± 400 basis points of the cover ratio (Collateral Value/Loan Amount) from the initial margin. That is, the initial margin is up to 105 percent for either Treasury bills or Government bonds. This threshold may change from time to time as BoZ sees fit.
- 4.1.2 The BoZ will revalue (mark-to-market) securities utilised in the reverse repos and secured loans using the latest Government securities tender results on a fortnightly basis.
- 4.1.3 In the event that the present value of the securities falls as a result of a market rate increase, participants will be required to provide additional securities to the BoZ in order to maintain the set margin over the reverse repurchase amount. However, in the event that the present value of the securities rises as

⁵ In the CSD system, a loan repayment can only be outstanding for one day (maturity date). At DvP Cut-off time on maturity date, the repayment is cancelled and not queued up again. Therefore (N/365) is by default equivalent to (1/365).

a result of a market rate decrease, the BoZ will be required to transfer back securities to the commercial banks in order to maintain the set margin over the reverse repurchase amount.

4.1.4 For Repos, transfer of securities for the purpose of margin maintenance will be carried out through a FoP transaction in the CSD by FoP cutoff on the date of the call.

4.1.5 By 9.30 hours on Monday at the beginning of the fortnight, a margin call will be communicated to our counterparty if necessary. Respective participants must provide details to the BoZ of securities to be transferred by 15:00 hours on the date of the call. Failure to provide additional securities will be deemed to be an event of default and will incur a penalty charge using the formula below for both Reverse Repos and Secured Loans.

$$Penalty = RFV \times P \times \left(\frac{D}{365} \right)$$

where

RFV = Required additional face value of securities

P = Penalty rate [the higher rate between the Overnight Weighted Average Interbank Rate & Pricing Rate]

D = Number of days the securities are not provided

4.2 OMO Term Deposits

4.2.1 The threshold for margin maintenance for OMO Deposits is at least ± 100 basis points, that is, a minimum 1 percent change in the value of collateral will warrant a margin call. This threshold may change from time to time as BoZ sees fit.

4.2.2 The BoZ will revalue (mark-to-market) OMO deposits utilised in the secured loan transactions every Monday based on the latest weighted average interbank rate.

4.2.3 In the event that the present value of the OMO deposit increases as a result of a market rate increase, participants will be required to provide additional deposits to the BoZ in order to maintain the set margin over the secured loan amount. However, in the event that the present value of the deposit falls as a result of a fall in the market rate, the BoZ will transfer excess deposits back to respective participants in order to maintain the set margin over the secured loan amount.

4.2.3 By 9.30 hours on Monday at the beginning of the week, the BoZ will make a margin call to its counterparties if necessary. Respective participants must provide details to the BoZ of additional deposits to be transferred by 15:00

hours on the date of the call. Failure to provide additional deposits will be deemed to be an event of default and will incur a penalty charge on the required additional value of deposits based on the penalty rate below.

$$Penalty = RV \times P \times \left(\frac{D}{365} \right)$$

where

RV = Required additional value

P = BoZ Penalty rate

D = Number of days the deposit was not provided

4.3 Foreign Currency USD

4.3.1 The threshold for margin maintenance for FX swaps is at least ± 100 basis points, that is, a minimum 1 percent change in the value of collateral will warrant a margin call. This threshold may change from time to time as BoZ sees fit.

4.3.2 The central bank will perform a valuation of outstanding operations with all counterparties on a weekly basis on a Monday based on the end of day BoZ official mid-rate.

4.3.3 BoZ should transfer additional collateral to the counterparty if the market value of collateral (US dollar) falls below the threshold. However, in the event that the market value of the collateral rises above the threshold, BoZ will receive the excess collateral from the participant in order to maintain the set margin over the FX swap amount.

4.3.4 By 9:30 hours, a margin call will be communicated to our counterparty if necessary. To preserve the margin, either party will transfer the foreign exchange collateral to other party's prescribed account as per SSI by the settlement date. Failure to transfer the additional collateral on the call day will constitute a default. The penalty outlined below will apply.

$$Penalty = RFX \times P \times \left(\frac{D}{365} \right)$$

where

RFX = Required additional foreign exchange converted into kwacha equivalent at latest BoZ mid- rate

P = BoZ Penalty rate

D = Number of days the collateral is not provided

VIII. REVIEW OF OMO GUIDELINES

The Operating Rules and Guidelines for OMO will be reviewed periodically or when deemed necessary.

IX. APENDICES

APPENDIX A: CSD TIMETABLE

CSD Event	Time	Activities
Start of Day	8.00 hrs	The business date is moved to current system date. Housekeeping functions can be undertaken such as maintenance of parameters, participant details, user maintenance
Start of Business Day	8.15 hrs	The system is ready to process available future transactions and new transactions.
Intraday Auction Cut Off	16.00 hrs	The system processes auction related transactions only when the intraday auction window is open. No auction related transactions can be undertaken after the intraday auction cut-off.
DvP Cut Off	16.20 hrs	The system processes DvP Transactions only when DvP service is open. When DvP is executed, all DvP transactions that are not in final status are cancelled.
FoP Cut Off	16.25 hrs	The system processes FoP Transactions only when FoP service is open. When FoP is executed, all FoP transactions that are not in final status are cancelled. Also all FoP transactions that are not matched will be automatically cancelled.
End of Business Day	16.30 hrs	Business transactions cannot be processed beyond this time. Housekeeping functions can take place.
End of Day	16.35 hrs	CSD system closes. Back-up and archiving takes place.

APPENDIX B: Procedures for Secondary Trading of OMO Term Deposits

1.0 ELIGIBILITY

- 1.1 Only commercial banks with clearing accounts at the BoZ are eligible to participate in the secondary trading of OMO Term Deposits⁶.
- 1.2 Secondary trading of Term deposits can take any one of the following forms:
 - (a) Outright sales and purchases of securities on the basis of DvP;
 - (b) Repo and reverse repo agreements on the basis of DvP;
 - (c) Transfer of securities without a transfer of funds, that is, FoP transactions;
 - (d) Pledge agreement.
- 1.3 The terms and conditions relating to a particular transaction will be determined by the parties concerned.
- 1.4 Where Participants have traded directly with each other (over the counter) it is recommended that these transactions are reported directly to CSD within 1 hour of concluding the trade or before the CSD cut off time for DvP settlement, whichever is earlier.

2.0 SETTLEMENT PROCEDURE

- 2.1 All transfers between Participants take place on the basis of an instruction that has been entered by both Participants and matched by the CSD.
- 2.2 When transactions are matched, the CSD shall transfer from the CSD account of Deliverer, sufficient securities to satisfy the transaction in full. If securities are not available, then the transaction will be queued awaiting the availability of securities.
- 2.3 Immediately securities are available, funds shall be transferred from the ZIPSS account of the Receiver (in the case of DvP transactions). If funds are not available in ZIPSS the transaction shall be queued awaiting the availability of funds.
- 2.4 If a matched transaction is not settled by DvP Cut Off time, the transaction is cancelled and a notification sent to the Deliverer and the Receiver.

⁶ See Circular No. SCH/CB/8/96 issued on 17 July 1996

- 2.5 It is the responsibility of the Participants to re-create the cancelled messages and transactions on the following Business Day to settle their liabilities to each other.
- 2.6 Statements showing a commercial bank's OMO Term Deposit holdings can be obtained from the CSD.

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