UGANDA GOVERNMENT SECURITIES OPERATIONS

1. GENERAL GUIDELINES

The following are the instruments auctioned and used in BOU’s monetary policy implementation process:

**Treasury bills** - structured in three maturities, i.e. 91 days, 182 days, and 364 days. Treasury bills are referred to as short-term instruments (securities). These securities are issued at a discount and currently they account for more than half of total outstanding securities, i.e. government securities that are yet to mature.

**Treasury bonds** - these are new instruments on our market and compared to the Treasury bills, they are long-term securities in maturities of 2, 3, 5 and 10 years. Treasury bonds were introduced mainly to extend the yield curve and to mitigate the cost of sterilization. Currently their use is restricted to monetary policy purposes only. They may however be used for fiscal purposes in future when deemed appropriate. [Legal basis for issuing securities: Treasury Bill Act 1969, and Public Finance and Accountability Act 2003].

1a  WHO CAN INVEST IN GOVERNMENT SECURITIES?

- Commercial banks
- Insurance companies
- Individual companies
- Government agencies
- Pension funds
- Individuals (of at least 18 years of age)
- Offshore investors (individual persons and corporate entities)—through a local agent i.e., Primary Dealer Bank
1b ADVANTAGES OF INVESTING IN UGANDA GOVERNMENT SECURITIES

- They offer a competitive rate of return
- They are risk-free instruments
- Saving mechanism
- They are very liquid; can easily be sold in the secondary market
- They can be pledged as collateral for borrowing

1c INVESTMENT PROCEDURES-- SUMMARY

All investors wishing to participate in the treasury bills/bonds transactions must be registered on the CDS (Central Depository System). An investor registers by filling CDS Form 1, CDS Form 7, CDS Form 9A/B, CDS Form 8 (if organization) and the CDS Dealing Agreement (all available on the BOU website). The forms must be routed through a Primary Dealer (PD) Bank for endorsement before a CDS account is opened at the BOU. (Currently, there are six (6) PDs in Uganda: Stanbic Bank, Standard Chartered Bank, Barclays Bank, DFCU Bank, Bank of Baroda, Centenary Bank).

Only registered participants are eligible to submit bids in auctions. There are two categories of investors or bids during auctions:

i. Competitive investors – investors whose bids exceed 10 million shillings

ii. Non-competitive investors – investors whose bids range from Shs. 100,000= to 10 million shillings.

All bids, competitive and non-competitive, must be submitted through one of the appointed Primary Dealers. Primary dealers are well-capitalized financial institutions with a current account at the Central Bank.

All bids must be submitted to the Central Bank in a sealed envelope and dropped in the tender box at counter 14, Banking Hall of BOU.
Bids are captured on the Central Depository System (CDS), they are manually verified against print out from CDS. The auction is finalized after thorough verification of captured bids as finalization on the CDS implies diarisation on the RTGS for the next day’s automatic settlement for the securities at 12 o’clock.

**Settlement** – Bank of Uganda applies a T+1 settlement arrangement. All successful bids are settled by directly debiting the Primary Dealer/commercial bank accounts at the Central Bank for the value of the cost of the securities of the investments through a particular PD/commercial bank. Securities are automatically created on the CDS after settlement through the RTGS at 12 o’clock on settlement day. Bank of Uganda issues electronic securities and they are stored electronically.

1d **PRE-AUCTION PROCEDURES**

i. Bank of Uganda announces ranges for Treasury bills/bonds auctions monthly or quarterly through the media

ii. Volumes to be offered are decided by Financial and Market Operations Sub-committee (FMOS)

iii. The public is given a 7-days notice of the Bank’s intention to auction Treasury bills/bonds through one or two of the leading newspapers and via the BOU website

iv. All investors intending to participate in the auction are required to submit their bids to the Bank by 10:00 am on the auction day.

v. All bids must be submitted through Primary Dealers

1d(a) **GENERAL RULES**

i. The investor must be registered on the CDS

ii. All bids must be delivered through a Primary Dealer bank

iii. A bidder cannot place both competitive and non-competitive bids in a single tenure of a Government security

iv. Investors must ensure completeness when filling in their bid forms

v. Commercial bank bid forms must be signed in by at least two authorized signatories registered on the CDS
vi. Authority to debit a commercial bank’s account at Bank of Uganda must be given by at least two authorized signatories

vii. The bid forms must be stamped

viii. Bank of Uganda staff cannot submit competitive bids

1d(b) BID VOLUMES

i. The minimum bid volume is Shs100,000

ii. Bids must be in multiples of Shs100,000

iii. Bank of Uganda has no limit to high volume bids (dominance by single investor)

iv. Bid volumes ranging between Shs100,000 and Shs10,000,000 are classified as non-competitive

v. Bid volumes of Shs10,100,000 or more are classified as competitive.

1d(c) BID PRICING

i. Non-competitive bids are not priced

ii. Competitive bids must be priced with prices expressed per Shs100 and correct to 3 decimal places

iii. Bank of Uganda allows multiple bid pricing up to a maximum of four bids per tenor

2. AUCTIONING PROCEDURES

2a AUCTION DAY

i. Auctioning starts at 10:00 am

ii. The tender box is opened in the presence of an Internal Auditor

iii. Bidders are recorded according to their Primary Dealers before bids are captured

iv. After capture and verification of bids, non-competitive bids are awarded before competitive bids, which compete for the remaining volumes. Competitive bids are awarded ranking from the lowest to the highest yield until the offer volume is exhausted.
2b CUT-OFF POINT –Volume: – the awarding process will stop at the point where the offered volume is attained.

2c REJECTION OF BIDS

Bank of Uganda reserves the right to reject any or all bids if it deems it necessary in the interest of maintaining stable rates in the financial market. Bids may also be rejected if:

i. The auction rules stipulated above are breached

ii. A bid is established to be an outlier

iii. A bid is construed to be speculative

3. FAILURE TO SETTLE FOR SECURITIES

A bank is deemed to have failed to settle if by the time the RTGS settlement instructions are sent out there are no sufficient funds to settle the dealer’s obligation arising out of the auction. In the current RTGS-CDS set-up, this would occur when there are insufficient funds on bank’s account at around 12 o’clock on settlement day. Failure to settle is punishable by

i. A mandatory default surcharge which is a number of percentage points of the payable amount (cost of security) and/or

ii. Suspension of the defaulting bank from a number of future government securities auctions as the Bank of Uganda may determine.

4. WITHOLDING TAX AND INTEREST RATE CALCULATIONS

4A Withholding tax (WHT) of 20% is charged on all interest earned on Treasury bills and bonds on all investors except those that are explicitly exempted by Uganda Revenue Authority and/or other regulatory authorities. Tax is withheld at coupon payments dates and at redemption and/or rediscounting of instruments. Currently, there is no tax charged at the time of a secondary market transaction.

\[ WHT = 20\% \times \text{Interest Earned} \quad (1a) \]
4B Interest Rates in Primary Auctions

(a) Treasury Bills

(i) Annualised Discount Rate

\[ Annualised\ \text{Discount\ Rate} = (100 - P) \times \frac{365}{DTM} \] (1b)

(ii) Effective Yield

Effective Yield Formula:

\[ Effective\ Yield = 100 \times \left[ \frac{(100 / P)^{\frac{365}{DTM}} - 1}{100} \right] \] (2)

where \( P \) is any primary market price quoted by the bidder, \( DTM \) is ‘days to maturity’ or tenor (i.e. 91, 182 or 364 days). The price for Treasury bills is usually a discount price (and expressed in shillings per 100) i.e., less or equal to 100, e.g., 99.9999

(b) Treasury Bonds

Relationship between bond price and yield to maturity

Let \( P \) be the price of a bond in shillings per 100 of a bond; 
\( C \) be coupon payment (in shillings) per year (payment begins in period \( t = 1 \)); 
Assume there are \( n \) coupon payments in the bond’s life; 
Let \( M \) be the maturity value of the bond.

Then the following formula is used to calculate yield to maturity (YTM) or price:

\[ P = \sum_{t=1}^{n} \frac{C}{(1 + YTM)^t} + \frac{M}{(1 + YTM)^n} \] (3)

In Uganda, coupon is paid semi-annually. Thus a 2-year 10% per annum coupon bond pays \( 5\times100 = 5 \) shillings per 100 per six-month period for a total of 4 coupon payments. In this case, the price – YTM relationship in formula (3) above translates into the following:

\[ P = \sum_{t=1}^{4} \frac{5}{(1 + \frac{YTM}{2})^t} + \frac{100}{(1 + \frac{YTM}{2})^4} \] (4)
**Weighted Average Price, WAP**

**How to determine the weighted average price (or WAP):**

Let \( WAP \) denote the weighted average price derived from the Treasury bill auction’s successful (awarded) competitive bids

\[ F_r \] be the bid amount (or maturity value) for the \( r^{th} \) bid

\[ P_r \] denote the price tendered for the \( r^{th} \) bid (expressed on a 100/- basis i.e. par value)

\( N \) be the total number of successful (awarded) competitive bids

The weighted average price- \( WAP \)- is defined as:

\[
WAP = \frac{\sum_{r=1}^{N} F_r \times P_r}{\sum_{r=1}^{N} F_r} = \frac{F_1 \times P_1 + F_2 \times P_2 + \ldots + F_N \times P_N}{\sum_{r=1}^{N} F_r}
\]  

(5)

The WAP formula in (5) is used in Treasury bills auctions in conjunction with formulae (1) and (2) to generate annualised discount rate at WAP and annualised effective rate at WAP, respectively. In Treasury bond auctions, WAP is used to generate YTM at WAP used in formula (3).

**c) How to compute proceeds from Secondary Market Sale:**

Let \( M \) denote the maturity value of the affected CDS instrument account holdings

\( Ps \) denote the agreed secondary market price

Secondary market proceeds:

\[
Secondary\_Market\_Proceeds = M \times \frac{Ps}{100}
\]
Formula (6) applies to both T-Bills and T-Bond secondary market sales.

(d) **How to compute proceeds from Rediscounting T-Bills:**

Let $M$ denote the maturity value of the affected CDS instrument account holdings.

d, denote the prevailing BOU Rediscount rate

$n$ be the number of days remaining to maturity in the standard year

The interest forfeited is defined as:

$$Interest\ Forfeited = M \times \frac{d_r}{100} \times \frac{n}{365}$$

Therefore,

$$rediscount\ proceeds = M - Forfeited\ Interest$$

**Illustration for T-Bills**

For example, suppose that on 22-June-2009 the CDS instrument account holder requests to rediscount personal holdings with a maturity value of 3,000,000 /- from a CDS instrument whose security name is TBILL-91-22-SEP-2009 when there are 30 days remaining to maturity and the prevailing rediscount rate quoted by the Bank of Uganda is 10.06%.

The forfeited interest is computed as follows:

$$Forfeited\ Interest = 3,000,000 \times \frac{10 \cdot 06}{100} \times \frac{30}{365}$$

$$= 24,805$$

The rediscount proceeds are computed as follows:

$$Rediscount\ Proceeds = 3,000,000 - 24,805.48$$

$$= 2,975,194.52$$

The proceeds from the rediscounted CDS instrument are subject to withholding tax. Assume the last price of the CDS instrument above was last recorded at 2,800,000 prior to rediscounting. The withholding tax arising from the rediscount transaction would be:
The rediscounted security is then held on a BOU CSD rediscounting account and does not earn any more interest even up to maturity.

(e) How to compute proceeds from Rediscounting T-Bonds:

Let $M$ denote the maturity value of the affected CDS instrument account holdings

$d_r$ denote the prevailing BOU Rediscount rate

$n$ be the number of days remaining to maturity in the standard year

First convert the rediscount rate $d_r$ into annual effective interest rate $y$ using the formula:

$$y = \frac{d_r}{1 - d_r}$$

(7)

Using the YTM obtained above, the ‘fair valuation’ according to equation (3) gives the investor the rediscount proceeds from the transaction as follows:

$$\text{Rediscount Proceeds} = \frac{FV + \text{COUPON}}{(1 + \frac{y}{2})^{\frac{DIM}{182}}}$$

(8)

where $\text{COUPON}$ is final remaining coupon payment till maturity of the bond. Withholding tax is then computed on the difference between the bond’s last valuation and the rediscount proceeds given in (8) above.

Withholding tax on rediscount proceeds = $15\% \times (2,975,194.52 - 2,800,000)$

$= 26,279$

For additional information:

Visit Bank of Uganda: Plot #37-45 Kampala Road (Uganda)

PO Box 7120. Kampala.

Telephone: (+256)-414-258-441. Dir +256-414-233-723

Website: www.bou.or.ug