TREASURY BONDS PROSPECTUS

The Bank of Tanzania, as fiscal agent for the United Republic of Tanzania, issues Treasury bonds with the following terms and conditions:[1]

A. TERMS AND CONDITIONS

1. **Issuer**:	United Republic of Tanzania
2. **Agent**:	Bank of Tanzania
3. **Mode:**	Auction
4. **Auction Frequency:**	Monthly or as otherwise prescribed by the Bank.
5. **Available tenures:**	2 and 5 years
6. **Price per TZS 100 Par Value of Bond:**	Quoted at premium, par or discount to four (4) decimal places. Prices should be inclusive of accrued interest for tranched issues
7. **Minimum bid size:**	TZS 1,000,000 when bidding through Primary Dealers and TZS 100,000,000 for direct bidders, in multiples of TZS 100,000
8. **Interest:**	Fixed rate announced before each issuance
9. **Interest payments:**	Semi-annual
10. **Day count convention:**	Actual/365
11. **Tax:**	Interest income is subject to withholding tax as set by the Government from time to time.
12. **Form of issuance:**	Only in book entry form
13. **Rediscounting:**	Not possible at the Bank of Tanzania
14. **Listing:**	The bonds will be listed on the Dar es Salaam Stock Exchange (DSE)
15. **Eligibility:**	Tanzanian residents only

[1] Effective February 27, 2002 for 5-year T-bonds and April 1, 2002 for 2-year T-bonds.

B. GENERAL INFORMATION

1.0 Notice

- **This new prospectus only applies to bonds issued under the new terms and conditions. Already issued bonds will continue to be governed by the original prospectus and will continue to be traded over the counter.**

1.1 Advantages of Treasury Bonds

- They are transferable and negotiable.
- They can be pledged as collateral.
- The rate of return is competitive.
- They are issued through market-based procedures.

1.2 Auction Process

- A press release will be issued one week before each auction, announcing the auction date, size of issue, coupon rate and other terms and conditions.

- Investors are invited to submit bids using tender forms, through primary dealers (PDs) or directly to the Bank of Tanzania (BoT) for direct investors.

- Bid forms are available from the BoT Head office, BoT Branches, and from Primary Dealers. Samples of bid forms are displayed in section 3.1.

- The auction for Treasury bonds (T-bonds) will be conducted through the multiple price system basis, where each successful bidder pays the price s/he quotes for the amount of T-bonds s/he wants to purchase. The winners are listed, starting with the highest bid price, down to the lowest bid price that exhausts the face value amount of T-bonds offered for sale.

- The results of the auctions are displayed at the BoT Head Office Notice Board and at all the BoT branches, and at BoT's website: http://www.bot-tz.org. PDs are also required to display the auction results at their counters.

1.3 Payment and Settlement Procedures

- Successful bidders are obliged to settle their bids within one day after notification of the auction results (T+1).

- Payment should be done through debiting primary dealers' accounts opened at the Bank or by bankers' cheques for direct investors, drawn on the 'Bank of Tanzania – Domestic Accounts Department,' P.O. Box 2939, Dar-es-Salaam.

- In case of non-compliance with the time limit for payment, successful bidders will be disqualified from participation in the next four (4) auctions. In case of no payment at all, the Government reserves the right to indefinitely bar the investor from participating in auctions.

- Interest will be paid semi-annually in the form of a cheque drawn against the holders’ names in the BOT’s book entry registry system.

1.4 Redemption

- On maturity, T-bonds will be redeemed through PDs or directly at BoT.

- Investors will receive the par value (100 percent) of their respective bids.

- All T-bonds purchased at discount in the primary auction, and held to maturity, will be subject to capital gains tax.

1.5 Secondary Market Trading

- After the primary auction, T-bonds may only be traded at the Dar es Salaam Stock Exchange (DSE) in multiples of TZS 100,000. Prospective investors should approach the DSE’s registered broker-dealers so as to place their buy or sell orders. All the rules and guidelines for trading bonds at the DSE apply.

- The weighted average price from the primary auction serves as the indicative listing price for a new T-bond. Bond pricing modalities for tranched (reopened) bonds are explained in Part C attached.

- After transactions occur, the DSE informs the BoT immediately so that it can update its register with respect to the holders of the respective securities. The BoT makes interest and principal payments on behalf of the Government.

1.6 Investor Eligibility

- Investments in T-bonds are restricted to Tanzanian residents only.

1.7 Reservation

- The BoT reserves the right to accept or reject part or whole of any bid.

C. BASIC COMPUTATIONS

I. Calculating the Price and Yield to Maturity (YTM) of a Bond

The price and yield to maturity of a bond are mirror reflections of each other. The two are inversely related and one is needed to arrive at the other. Thus if price is given, an investor can calculate the yield on the bond, and compare it with his/her own required rate of return to see if the bond is a worthy investment or not. Alternatively, an investor can work out the price he/she would be willing to pay for a bond given his/her yield requirement.

The price of a bond and its yield to maturity are held together by the following equation:

$$P = \frac{C}{(1+y)^1} + \frac{C}{(1+y)^2} + \ldots + \frac{C}{(1+y)^n} + \frac{M}{(1+y)^n} \quad \ldots\ldots \textbf{ Equation A}$$

where P = price of the bond
C = semi-annual coupon (interest payment)
M = maturity value, usually 100%
y = yield-to-maturity
n = number of periods (number of years x2)

Thus, the yield to maturity (y) is essentially the bond's internal rate of return (IRR); i.e., that discount rate which makes the present value of all the bond's future bond cash inflows ("C"oupon + principal at "M"aturity) EQUAL to the current price of the bond (initial investment outlay). As such it is the value of 'y' that satisfies Equation A above.

Example: FROM PRICE TO YIELD

Suppose the Government announces a call for tender for a 5-year bond with coupon rate of 7.5% p.a. payable semi-annually. Let's assume the weighted average price (WAP) achieved in the auction was 100.3498.

$$\text{Price} = 100.3498 = \frac{3.75}{(1+y)^1} + \frac{3.75}{(1+y)^2} + \ldots + \frac{3.75}{(1+y)^{10}} + \frac{100}{(1+y)^{10}}$$

1) Solving y using EXCEL's IRR yields 3.7075% semi-annually or **7.415% p.a.**[2] The same can be determined using the YIELD[3] function:

   =YIELD(settlement date,maturity date,coupon rate,bond price,par value,no. of coupons per year)

   Thus, putting the values as follows:
   =YIELD("15-Feb-2002","15-Feb-2007",7.5%,100.3498,100,2) = **7.415%.**

[2] List cash flows "-100.3498,+3.5,+3.5,+3.5,+3.5,+3.5,+3.5,+3.5,+3.5,+3.5,+103.5" (corresponding to time periods 0 to 10 respectively) in a column and calculate IRR using Excel function: **=IRR(column range)**.

[3] The Analysis Toolpak may need to be installed and activated for this function.

2) Yield to maturity can also be estimated using a pocket calculator by computing the semi-annual yield as follows:

s.a. yield = coupon yield + capital gains yield

=coupon/average price + [(par value-present price)/n]/average price

=3.75/[(100.35+100)/2] + [(100-100.35)/10)]/[(100.35+100)/2)]

= 3.7434% + (-0.0349%)

Semi-annual yield = 3.7085%

Annual yield **= <u>7.417% p.a.</u> ~** <u>7.415% p.a.</u> calculated above using Excel.

This is a reflection of the government's actual weighted average yield paid out to investors. The fact that the bond sold for a premium is consistent with the coupon rate (7.5%) exceeding the required yield (7.415%). If the price were TZS 99, the yield would have been 7.745% p.a., which is higher than the offered coupon.

<u>Example: FROM YIELD TO PRICE</u>

If the investor knows his/her yield or required rate of return (or discount rate), it is a simple matter to arrive at the price s/he should pay for a bond.

1) Price can be estimated manually as follows:

(i) Say an investor wants an internal rate of return or yield to maturity of 6% per annum or 3% semi-annually. The bond price would be as follows:

$P = 3.75/(1.03)^1 + 3.75/(1.03)^2 + \ldots + 3.75/(1.03)^{10} + 100/(1.03)^{10} =$ 106.3977. Thus, the bond sells for a premium.

(ii) Say an investor wants an internal rate of return or yield to maturity of 9% per annum or 4.5% semi-annually. The bond price would be as follows: $3.75/(1.045)^1 + 3.75/(1.045)^2 + \ldots + 3.75/(1.045)^{10} + 100/(1.045)^{10} = 94.0655$. Thus the bond sells for a discount.

(iii) Say an investor wants an internal rate of return or yield to maturity of 7.5% per annum or 3.75% semi-annually. The bond price would be as follows: $3.75/(1.0375)^1 + 3.75/(1.0375)^2 + \ldots + 3.75/(1.0375)^{10} + 100/(1.0375)^{10} = 100$. Thus the bond sells for par.

3) Price 'P' can also be solved using EXCEL's PRICE function: =PRICE(settlement date,maturity date,coupon rate,yield,par value,number of coupons per year,day count basis[4])

Thus putting the values as follows produces a price of 106.3977:

[4] In this case equals 1, which means Actual/Actual.

=PRICE("15-Feb-2002","15-Feb-2007",7.5%,6%,100,2,1)

II. Calculating the Price of a Tranched or Reopened Bond

Buying a tranched bond in an auction is exactly similar to buying a bond in the secondary market. The only difference is that while a bond in the secondary market is purchased from an investor who has held that bond up till that time, a tranched bond is purchased from the government who was holding the bond since the parent issue. Suppose that on 15 March 2002 the Government auctions a reopening (tranche) of the 5-year bond with a coupon rate of 7.5% p.a. paid semi-annually and a maturity date of 15 February 2007. Assume that an investor's required rate of return is 6% p.a. or 3% semi-annually. Applying the formula above, the investor's bid price, the 'clean' price (excluding accrued interest), would be 106.3052[5]. This can be determined from the EXCEL PRICE function (explained earlier), by changing the settlement date from "15-Feb-2002" to "15-Mar-2002".

However, like any other investor holding a bond, the Government would be eligible to collect the coupon interest accruing between 15-Feb-2002 and 15-March-2002. Accrued interest is determined as follows:
=3.75*("15-March-2002"-"15-Feb-2002")/("15-Aug-2002"–"15-Feb-2002") = TZS 0.5801.

Therefore, the total price that the investor would pay, if successful, would be TZS 106.8853 (=106.3052+0.5801). This price is also known as the 'dirty price'. This is the price the government expects the investors to bid in auctions.

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[5] Note that **'n'** in Equation A will now be replaced by:
(n-1) + (no. of days between settlement date and next coupon payment date, divided by the total number of days in the coupon period).

D. BASIC FORMS

3.1 Sample of the Bid Form for Direct Investors

Name(PRINT)...
Address:...
....
Tel. No..
Date...

Governor,
Bank of Tanzania,
P.O. BOX 2939,
Dar es Salaam.

Dear Sir,

Re: TENDER FOR PURCHASE OF TREASURY BONDS
ISSUE NO....................TO BE HELD ON.................

I/We hereby tender for the purchase of ....……years
Treasury Bonds worth Shs...……..
(in words)...…
at a price of ....per Shs. 100.00

I/We undertake to pay the price of the bidded Treasury Bonds upon receipt of your notification that this has been successful.

Yours faithfully,

....

3.2 Sample of the Bid Form for Primary Dealers

Name (PRINT)..
Address:..
....
Tel.No...
Date..

Governor,
Bank of Tanzania,
P.O. BOX 2939,
Dar es Salaam.

Dear Sir,

Re: TENDER FOR PURCHASE OF TREASURY BONDS
ISSUE NO....................TO BE HELD ON.................

We hereby tender for the purchase of...years
Treasury Bonds worth Shs..
(in words)...………
at a price of ....per Shs. 100.00.

If bidding on behalf of a client, please state client's full name and address
Name…………………………………………………………
Address ……………………………………………………….
…………………………………………………………………
We authorise you to Debit our Current Account in the event our bid(s) is(are) successful.

Date	Authorised Signatory	Authorised Signatory
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All forms should be officially stamped.

E. REGISTERED PRIMARY DEALERS

Eighteen primary dealers have been registered by the Bank to date, namely:

(i) Akiba Commercial Bank Ltd.
(ii) Citibank (T) Ltd.
(iii) CRDB Ltd.
(iv) Diamond Trust Bank (T) Ltd.
(v) Eurafrican Bank (T) Ltd.
(vi) Exim Bank (T) Ltd.
(vii) Habib African Bank Ltd.
(viii) International Bank of Malaysia (T) Ltd.
(ix) Kenya Commercial Bank (T) Ltd.
(x) NBC Limited
(xi) NMB Ltd.
(xii) Orbit Securities Co. Ltd. (also a DSE broker)
(xiii) Rasilimali Limited (also a DSE broker)
(xiv) Solomon and Co. Limited (also a DSE broker)
(xv) Stanbic Bank (T) Limited
(xvi) Standard Chartered Bank Ltd.
(xvii) Tanzania securities Ltd. (also a DSE broker)
(xviii) Vertex International Securities (also a DSE broker)

ENQUIRIES SHOULD BE DIRECTED TO:

The Commissioner
Policy Analysis Department
Ministry of Finance
P.O. Box 9111
Dar-es-Salaam.
Tel: 022-2110331
Fax: 022-2123574/2110326

The Deputy Director
Domestic Markets Department
Bank of Tanzania
P.O. Box 2939
Dar-es-Salaam.
Tel: G/L 022 - 2110945-7
D/Line: 022 - 2114770/2115128
Fax: 022-2115126

Branch Director,
BOT Arusha,
P.O Box 3043,
Arusha.
Tel: 027 - 2508341-3/7091
Fax: 027 - 2508225/2508344

Branch Director,
BOT Mwanza,
P.O Box 1362,
Mwanza.
Tel: 028 - 2500313/2500315-8
Fax: 028 - 250074

Branch Director,
BOT Mbeya,
P.O Box 1203,
Mbeya.
Tel: 025 - 2503321-5
Fax: 025 - 2502844

Branch Director,
BOT Zanzibar,
P.O Box 568,
Zanzibar.
Tel: 024 - 2230803
Fax: 024 - 2231441

FEBRUARY 18, 2002

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