Marché des Titres Publics
Animé par l'UMOA-Titres

# THE PRODUCTS

UMOA-Titres
Bâtir un Marché intégré des Titres Publics

www.umoatitres.org
*Boulevard Général de Gaulle*
*Direction Nationale BCEAO*
*BP 4709 Dakar RP-Sénégal*

# Fungible Treasury Bills (T-Bills)

**Fungible Treasury Bills[1] (T-Bills)** are government short-term debt securities issued by way of invitation to tender.

## Characteristics of T-Bills

- **Nominal unit :** 1 000 000 FCFA (unit amount of each bill).
- **The nominal value (NV),** multiple of the nominal unit, corresponds to the amount announced by the Treasury of the issuing State. The Treasury has the option to retain up to 110% of the amount put out to tender if offers are satisfactory.
- **Maturities :** 7, 28, 91, 182, 360, 728 days. The due date is expressed in number of days (n).
- **Interest rate (i) :** fixed. Interests are deducted from the issuance's nominal value.
- **Day count basis :** for T-Bills is Exact/360.
- **Interests:** interest is payable in advance on value date, calculated on the nominal value (NV) of bills (discounted at the yield rate requested by the investor).
- **Net amount (NM) :** the net amount received by the issuer corresponds to the nominal Value minus interest paid by the issuer.
  $NM = NV (1 - i * n/360)$
- **Refund:** Treasury bills are reimbursed only once at maturity (bullet redemption).
- **Performance (i') :** $i' = \left(\frac{VN}{MN} - 1\right) * \frac{360}{n}$

## Who can invest

- Any individual or legal person residing in the WAEMU
- Non-resident investors through Primary Dealers or banks resident in the WAEMU

## Issuance technique

- T-Bills are issued by tender and at multiple rates (requested rates). Auction ensures market transparency and competition.
- Issues by tender are organized by UMOA-Titres. Notice of call for tenders is launched for each issue of Fungible Treasury Bill. This notice specifies the issuance characteristics as well as bidding practicalities.

1A fungible security can be issued, the first time, in form of a fixed size then subsequent issues are matched. Every new security issued is attached to the previous with the same characteristics (nominal unit, maturity date, basis for interest calculation). Only rates and issuance dates change. Fungibility increases the size of securities, and facilitates liquidity of securities thereby helping to boost trade in the secondary market.

## Subscription terms

Fungible Treasury Bills are available at any time on the primary market and the secondary market through Primary Dealers, financial institutions and brokerage firms.

The purchase amount is a multiple of 1 000 000 FCFA.

## Taxation

Tax applied to Fungible Treasury Bills is that in force in the issuing State. In general, Treasury bills are exempt from taxes for buyers who are residents of the issuing State.

## Benefits

- Fungible Treasury Bills offer short-term investment to meet requirements of cash management combining security and quality.
- Fungible Treasury Bills offer the investor an optimal risk/return ratio.
- The interest is known and paid in advance to the investor on the value date
- Investment on Fungible Treasury Bills helps to contribute to the cash resources of the State.

## Liquidity

- Treasury bills are traded over-the-counter on the secondary market and are eligible (for those who are eligible) as collateral to access Central Bank refinancing.

## Illustration

Let's take as example, a 364 day T-Bill. The first issue concerns the issuance of the first tranche of a nominal amount of 20 000 million CFA. The second issue occurs 6 months later for a second tranche of an amount of 10 000 million. Securities issued during the second tranche have 182 days' time to maturity. Securities issued on both occasions (first and second tranches) are fungible.

### **First issue :** 20 000 million (20 billion) of 364 days

Amount put out to tender by the Treasury : 20,000 million CFA

| Investors | Yearly Interest rate (in %) | Amount in million CFA | Total |
|---|---|---|---|
| Investor_A | 3 | 3 000 | 3 000 |
| Investor_B | 3,15 | 1 000 | 4 000 |
| Investorr_C | 3,15 | 1 050 | 5 050 |
| Investor_D | 3,4 | 5 000 | 10 050 |
| Investor_B | 3,65 | 1 750 | 11 800 |
| Investor_E | 4 | 2 500 | 14 300 |
| Investor_F | 4 | 300 | 14 600 |
| Investor_C | 4,15 | 3 000 | 17 600 |
| Investor_H | 4,35 | 400 | 18 000 |
| Investor_G | 4,55 | 2 000 | 20 000 |
| Investor_I | 4,75 | 400 | 20 400 |

Results

| Amount (in millions of CFA) | 20 000 |
|---|---|
| Marginal rate | 4,55% |
| Weighted average rate | 3,67% |
| Interest paid by Treasury (in million CFA) | 741,50 |
| Net received by the Treasury (in million CFA) | 19 258,50 |
| Price | 96,29% |
| Performance | 3,81% |
| Stock of the 364 day T-Bills (in million of CFA) | 20 000 |

**Second issue :** second tranche of 10 000 million (10 billion) T-Bills of 364 days 6 months (182 days) after the first issue (residual maturity of 182 days).

Additional amount sought by Treasury: 10 000 million FCFA

| Investor | Interest rate (in %) | Amount in million CFA | Total |
|---|---|---|---|
| Investor_X | 3 | 3 000 | 3 000 |
| Investor_Z | 3,15 | 5 000 | 8 000 |
| Investor_C | 3,15 | 1 000 | 9 000 |
| Investor_A | 3,4 | 1 000 | 10 000 |
| Investor_B | 3,65 | 1 750 | 11 750 |

Results

| | |
|---|---|
| Amount (in millions of CFA) | 10 000 |
| Marginal rate | 3,40% |
| Weighted average rate | 3,77% |
| Interest paid by Treasury (in million CFA) | 190,53 |
| Net received by the Treasury (in millions of CFA) | 9 809,47 |
| Price | 98,09% |
| Performance | 3,84% |
| Stock of the 364 day T-bills (in million of CFA) | 30 000 |

The amount of the loan raised in matching adds to the amount borrowed during the first issue. At maturity, the State will have to repay 30 000 million CFA to the holders of the 364 days T-Bills.

# Fungible Treasury Bonds (T-Bonds)

Fungible Treasury Bonds[2] (T-Bonds) are government medium to long-term debt securities issued by way of invitation to tender.

## Characteristics of T-Bonds

- **Nominal unit :** 10 000 FCFA (unit amount of each bond).
- **The nominal value (NV)**, multiple of the nominal unit, corresponds to the amount announced by the Treasury of the issuing State. The Treasury has the ability to retain 10% of the amount announced depending on the offers.
- **Maturities :** 3 years, 5 years, 7 years, 10 years, 15 years, or more. The due date is expressed in number of years (N).
- **Coupon rate (i) :** corresponds to the nominal coupon rate which is fixed.
- **Basis for interest calculation :** by agreement, the basis of calculation for FT-Bonds is Exact/Exact.
- **Interests :** interest is payable on a defined periodicity or frequency of interest payments. Usually, the frequency of interest payment is annual. Interest paid in the period i will be noted Interest_i
- **Price :** upon issue, the auction price corresponds to the weighted average price (WAP). This WAP is the weighted average price, which is the average of the prices offered by the winning bids.
- **Net amount (NA) :**
    - o at the first issue, the net amount received by the issuer corresponds to the nominal value multiplied by the average weighted price.
    - o Matching of T-Bonds, a second tranche of the same T-Bonds (same characteristics) is offered in auction. The net amount hit this time by the issuer corresponds to the nominal value multiplied by the average weighted price plus the accrued coupon.
    - o The accrued coupon is in proportion to the total value of interest over the period between the last interest payment and matching date. On the date of coupon detachment, the issuer pays a full coupon, to all the holders irrespective of the date they acquired the securities.

- **Refund :** the Treasury bonds are to be reimbursed in several times by annual amortization of the capital (constant amortization) or at once on the final maturity date (Bullet redemption). The refund in the period i will be noted ***Amort_i***
- **Performance or Weighted Average Rate (WAR) :** corresponds to the rate of actuarial return obtained by keeping the bond until maturity.

## Who can benefit

- An individual or legal person residing in the WAEMU
- Foreign non-residents through Primary Dealers or banks resident in the WAEMU

## Issuance technique

- Bonds are auctioned on multiple prices (requested rates).
- Issues by tender are organized by UMOA-Titres. A notice of call for tenders is launched for each issue of Fungible Treasury Bond. This notice specifies the issuance characteristics as well as the bidding practicalities.

## Subscription terms

The bid amount is multiple of 10,000 FCFA for a minimum amount of 1 000 000 FCFA (minimum purchase of 100 securities).

## Taxation

Tax applied to Fungible Treasury Bond is that in force in the issuing State. As a general rule, T-Bonds are tax-free for buyers resident in the issuing State.

## Benefits

- T-Bonds offer medium or long term investment to meet your investment requirements of your savings or your long-term resources. These securities combining security and quality.
- Fungible Treasury Bonds offer the investor an optimal risk/return ratio.
- The investment in Fungible Treasury Bonds contributes to the financing of State budget.

## Availability

Fungible Treasury Bonds are available at any time on the primary market and the secondary market through Primary Dealers, financial institutions and brokerage firms within WAMU.

## Liquidity

Bonds are traded over-the-counter on the secondary market and eligible (for those which qualify) as collateral for Central Bank refinancing.

## Illustration

Let's take the example of a 3 year T-bond. The first issue concerns the issuance of the first tranche of a nominal amount of 20 000 million CFA. The second issue occurs 6 months later for a second tranche of an amount of 10 000 million. Securities issued during the second tranche have 2.5 years to maturity and have exactly the same characteristics as the first issues. Securities issued in both instances (first and second tranches) are fungible.

**First issue :** 20 000 million (20 billion) of 3 year FT-Bonds with a 5.5% coupon rate

Amount to be raised by the treasury : 20 000 millions CFA

| Investors | Price requested ien %) | Amount proposed (in million CFA) | Total |
|---|---|---|---|
| Investor_A | 100,5000 | 3 000 | 3 000 |
| Investor_B | 100,2500 | 1 000 | 4 000 |
| Investor_C | 100,0000 | 1 050 | 5 050 |
| Investor_D | 99,7500 | 5 000 | 10 050 |
| Investor_B | 99,0000 | 1 750 | 11 800 |
| Investor_E | 98,7500 | 2 500 | 14 300 |
| Investor_F | 98,5000 | 300 | 14 600 |
| Investor_C | 98,2500 | 3 000 | 17 600 |
| Investor_H | 98,0000 | 400 | 18 000 |
| Investor_G | 97,5000 | 2 000 | 20 000 |
| Investor_I | 97,0000 | 400 | 20 400 |

Results

| | |
|---|---|
| Amount (in millions of CFA) | 20 000 |
| Marginal price | 97,5000% |
| Weighted average price | 99,2063% |
| Net received by the Treasury (in million CFA) | 19 841,25 |
| Stock of the 3 year T-Bonds (in millions of CFA) | 20 000 |

**Second issue :** second tranche of 10 000 million (10 billion) T-bonds of 3 years, 6 months (182 days) after the first issue (2.5 years residual maturity).

Additional amount sought by the Treasury: 10 000 million FCFA

| Investor | Prices (in %) | Amount proposed (in million CFA) | Total |
|---|---|---|---|
| Investor_X | 100,0000 | 3 000 | 3 000 |
| Investor_Z | 99,5000 | 5 000 | 8 000 |
| Investor_C | 99,2500 | 1 000 | 9 000 |
| Investor_A | 99,0000 | 1 000 | 10 000 |
| Investor_B | 98,7000 | 1 750 | 11 750 |

Results

| | |
|---|---|
| Amount (in millions of CFA) | 10 000 |
| Marginal price | 99,0000% |
| Weighted average price | 99,5750% |
| Accrued coupon (half of the full annual coupon) | 2,7500% |
| Net received by the Treasury (in million CFA) | 10 232,50 |
| Stock of the 3 year T-Bonds (in million of CFA) | 30 000 |

The amount of the loan raised in matching adds to the amount borrowed during the first issue. At maturity, the State will have to repay 30 000 million CFA to the holders of the 3 year T-Bonds.

UMOA-Titres

Bâtir un Marché intégré des Titres Publics

maxafrica

Boulevard Général De Gaulle
Direction Nationale BCEAO
BP 4709 Dakar RP-Sénégal