Investing in Government Securities

Frequently Asked Questions

Bank *of* Zambia

Bank of Zambia

1. What are Government Securities?

Government securities are debt instruments issued by the Government of Zambia through the Bank of Zambia. By issuing these instruments, the Government is borrowing money from the buyers of the debt instruments. These debt instruments are in the form of Treasury bills and Government bonds. The Zambian Government is obliged to pay the holder of the Treasury bill or Government bond a fixed sum of money on the maturity date of the instrument. Thus, when you purchase Government securities, you are lending your money to the Zambian Government.

2. Why does the Zambian Government issue Government Securities?

The Zambian Government issues Government securities to raise funds needed to pay off maturing debt and finance its operating and development expenditures that cannot be fully met from tax revenues.

3. What is the difference between a Treasury bill and a Government bond?

Treasury bills are short-term debt instruments that the Zambian Government issues in order to borrow money for a period of up to one year. Government bonds are relatively longer-term instruments that the Government issues to borrow money for a period of more than one year.

The other difference is the manner in which Treasury bills are bought and how the interest is paid. Treasury bills are always bought at a price less than their face (par) value. On maturity date, the Government pays the holder of the Treasury bill an amount of money equal to the face value. Therefore, the interest earned on the Treasury bill is the difference between the price you pay to buy the security and the face (par) value you receive on maturity date. Unlike Treasury bills, Government bonds can be bought at prices that are either less (similar to treasury bills), equal or more than their face value and the Zambian Government pays a fixed rate of interest called the coupon every six months and the face (par) value on maturity date.

4. Why should a potential investor purchase a Government Security?

Government securities are a safe and secure investment because the full faith and credit of the Zambian Government guarantees that interest and principal payments will be paid when they fall due. Government securities are a liquid investment, which means that they can easily be sold for cash and/or used as collateral for loans.

5. Am I eligible to purchase Government Securities?

There are no restrictions to eligibility. Business firms, institutions, foreign entities, and individuals are all eligible to purchase Government securities at the Bank of Zambia. However, there are two key requirements; (i) every investor must have a local commercial bank account denominated in Kwacha and (ii) register on the Central Securities Depository at Bank of Zambia.

6. How are Government Securities issued?

The Bank of Zambia issues Government securities on behalf of the Zambian Government. Government securities are sold at auctions on a competitive basis and on a non-competitive basis.

Competitive basis (auction): Investors compete to lend money to the Government by specifying an interest rate and the face value of securities they wish to purchase. The Bank of Zambia then ranks all bidders and allots securities first to the investor with the lowest interest rate followed by one with the next lowest interest rate in that order until the amount of securities on offer is fully allotted.

Non-competitive basis: Investors do not specify an interest rate. Instead, investors are willing to be allotted securities at an interest rate determined in the auction. The return on the investment is determined from the cut-off price/rate prevailing at the auction. Therefore, an investor does not have to specify the return they would like to receive. Here, the investor is a price taker.

7. Is there any minimum or maximum amount of securities I can purchase?

The minimum amount that one can invest is K1,000 face value for both Treasury bills and Government bonds. However, investors purchasing amounts ranging from K1,000 to K499,000 will fall in the non-competitive window while investor purchasing K500,000 and above will fall in the competitive window.

Investments in the non-competitive window are made in multiples of K1,000 and those in the competitive window are made in multiples of K5,000.

8. How are Government Securities priced?

Government securities are currently issued using a single price auction method. This means that if you participate as a competitive bidder in the auction, you may not pay the price you have indicated in your application, but the cut-off price. All successful bidders are awarded the cut-off price. The price is quoted per K100 face value. If you choose to submit a non-competitive bid instead, you will pay the cut-off price determined in the auction.

9. How can I purchase Government Securities?

You can purchase Government securities by either submitting a bid yourself directly to the Bank of Zambia or through any of the local commercial banks that will submit the bid to the Bank of Zambia on your behalf. You will be required to indicate your bid on an appropriate application form that can be obtained from the Bank of Zambia offices or can be downloaded from the Bank of Zambia website (www.boz.zm). Before purchasing any security, you need to register with the Bank of Zambia by providing personal details on a Central Securities Depository (CSD) Application Form. The CSD is the Bank of Zambia Government Securities Registration and Settlement System. Once registered, you simply need to submit a bid for the security you wish to purchase.

10. How can I submit my application?

Applications for Government Securities can be submitted through any one of the following ways:

- Through the Bank of Zambia as long as investors obtain a Letter of Guarantee, which is a statement from your respective commercial bank, that it will make settlement on your behalf once your bid is successful. Individual investors wishing to bid through Bank of Zambia should submit their bids by **10:00 hours** on the day of the auction, to the Financial Markets Department;
- Through their respective commercial banks; or
- Through the Virtual Private Network (VPN) connectivity to the CSD. VPN is a communications mechanism managed by BoZ which allows secure communication between users of the CSD. The VPN access can be extended at a cost, to any investor who wishes to submit bids directly.

11. Can I cash in my Treasury bills before they mature?

You can sell any amount of Treasury bills to any willing buyer in the Government securities secondary market should you need cash before the maturity date. The secondary market is the place where securities that have already been issued are traded (see appendix I for the general procedure on buying and selling securities in the secondary market).

12. Can I Cash in my Government Bonds before they mature?

You can sell any amount of Government bonds to any willing buyer in the Government securities secondary market should you need cash before maturity date (see appendix I for the general procedure on buying and selling securities in the secondary market).

13. Benefits of investing in Government Securities

Government Securities offer a combination of the following benefits:

- Government securities have been dematerialised. This means that all records are stored and processed electronically. This feature makes Government securities safe and allows transactions in varying denominations.
- Government securities can be pledged as collateral to obtain a loan from a commercial bank or any other financial institution.
- The timely payment of interest and principal at maturity on Government securities is guaranteed by the full faith and credit of the Zambian Government. This makes Government securities a very safe investment.
- Government securities are liquid and transferable.

14. Are there any charges to my interest income on Government Bonds?

For Government bonds, only your coupon interest income is subject to the current 15% withholding tax and a 1% handling fee both of which are deducted on the payment date. However, the discount income is not subject to any charges.

15. Are there any charges to my interest income on Treasury Bills?

For Treasury Bills, your interest income is subject to withholding tax, which is currently 15%, and a 1% handling fee, both of which are deducted when Treasury bills mature.

16. Once purchased, where are Government Securities kept?

Government securities are safely held in electronic record form on the CSD at the Bank of Zambia. The securities can be held in one of two ways, either directly under an account created in your name as an individual or under the custody of your bank in a designated customers account.

17. How long can I lend my money to Government through Government Securities?

The Zambian Government borrows money through Treasury bills currently for four maturity periods, namely 91 days, 182 days, 273 days and 364 days. The Government also borrows money through Government bonds currently for six maturity categories, namely 2 years, 3 years, 5 years, 7 years, 10 years and 15 years.

18. How frequent are auctions of Government Securities held and how can I find out when an auction is held? What about the results?

Treasury bill auctions are currently conducted fortnightly while Government bond auctions are conducted once every month (investors will be advised of any changes on the auction frequencies). Government securities auctions are advertised in the newspapers in the week of the auction. Further, if you have opened a CSD account and given consent, you will also receive mobile alerts to notify you of the dates for upcoming auctions.

The advertisements can also be accessed online on the Bank of Zambia website (www.boz.zm). The results of your bid will be communicated to you on the business day following the auction. Summary results of the entire Government securities auction are published on the Bank of Zambia website on the day of the auction and in the newspapers every Monday following the auction.

19. How do I make or receive payments for my Government securities transactions and receive interest payments?

All payments are made through commercial banks. Interest income on Treasury bills (discount) is only paid at maturity together with the money you invested (principal). Interest income for Government bonds is paid every six months and the money you invested (principal) is only paid at maturity. The six-month interest payments are called coupon payments and calculated as follows:

Coupon Payment = Face Value of Bond X (Coupon Rate/100) X (No. of Days in Coupon Period/365 Days)

20. How do I calculate how much money I need to invest? What about my interest income?

Given that the price information on Government securities is usually expressed in terms of interest rates, you need to convert your required interest rate to a number expressed in kwacha terms.

For Treasury bills, the following formula is used to obtain the kwacha-price:

$$P = \frac{1}{\left(1 + (\frac{n}{365} \times i)\right)} \times 100$$

Where:
- n is the number of days (tenor)
- i is the interest rate (the yield rate)
- 100 is the Par value or Face Value.

See Example in the Appendix II

For Government bonds, the formula below is used to obtain the kwacha-price.

$$P = \left[\frac{\frac{C}{2}}{(1 + \frac{i}{2})} + \frac{\frac{C}{2}}{(1 + \frac{i}{2})^2} + \frac{\frac{C}{2}}{(1 + \frac{i}{2})^3} + \ldots + \frac{\frac{C}{2} + 100}{(1 + \frac{i}{2})^n} \right]$$

Where:

Where:	n	is the number of coupon periods between date of purchase and maturity date
	i	is the interest rate (the yield rate quoted on annual basis and expressed in decimal)
	C	is the annual coupon amount for each six-month period
	100	is the Par value or Face Value.

See Example in the Appendix II

APPENDIX I

Procedure on buying and selling securities on the secondary market

I. The client places an order to buy or sell a security with a market maker or through a broker. In Zambia, most Commercial banks are market makers and also act as brokers. Other brokers can be found on the Lusaka Securities Exchange (LuSE).

ii. The market maker or broker quotes a client a price.

iii. If the price is acceptable, and the client is selling the security, the client gives his bank the instruction to transfer the security to the market maker who in turn delivers the cash to the client through the client's settlement bank.

iv. In the case where the client is buying the security, if the price is accepted, the client issues an instruction to their settlement bank to transfer the cash to the market maker who in turn after receiving the cash transfers the security to the client via the client's settlement bank.

To protect the market maker from potential interest rate and settlement risk arising from the non-settlement of the security and/or cash by the client, the client may be required to either open a cash account with the market maker's settlement bank or the client may be required to instruct their settlement bank to guarantee the transaction before it is confirmed. Please note that banks have processes and requirements that may differ, and specific details may be obtained from the banks.

APPENDIX II

Examples on how to make the calculations

a) Treasury bills

If you want to purchase a 364-day Treasury bill and you require an interest rate of 20%, the price you will pay for every K100 will be K83.3714 i.e. you pay K83.3714 now and receive K100 after 364 Days. The price is calculated as follows

$$P = \frac{1}{\left(1 + (\frac{364}{365} \times 0.20)\right)} \times 100$$

$$= 83.3714$$

<u>Calculating the Cost amount</u>

Suppose you want to purchase K500,000 face value for 364 days treasury bills, you will pay K416,857.01. This is calculated by multiplying the Face Value by Price and dividing it by 100. Your interest income in this example is K83,142.99 which is the difference between the face value of K500,000 and the cost of K416,857.01

Cost Value = 500,000.00x 83.3714/100
= K416,857.01

<u>Calculating the Face Value</u>

Suppose you have a cash amount of K500,000.00 and you want to invest it in 364 days treasury bills, what will be the face value at the price of 83.3714. The face value is calculated by multiplying the cash amount by 100 and dividing it by the price. In this case;

Face Value = (Cost Value x 100)/price
=500,000.00x100/83.3714
=599,726.03

Face value amounts of K500,000.00 and above are placed in multiples of K5,000.00. Therefore, you can either invest a face value of K595,000.00 of which you will pay K496,059.84 or K600,000.00 of which you will pay K500,228.41.

b) Government bonds

Suppose you want to purchase a 2-year Government bond with a coupon rate of 9% you require an interest rate of 20%, the price is calculated as follows:

$$P = \left[\frac{\frac{9}{2}}{(1+\frac{0.2}{2})} + \frac{\frac{9}{2}}{(1+\frac{0.2}{2})^2} + \frac{\frac{9}{2}}{(1+\frac{0.2}{2})^3} + \frac{\frac{9}{2}+100}{(1+\frac{0.2}{2})^4} \right] = 82.5657$$

For every K100 face value, you will pay K82.5657.

Calculating the Cost amount

Suppose you need to purchase face value of K500,000.00, the cost amount will be K412,828.70. This is calculated by multiplying the Face Value by Price and divide it by 100.

Cost = (Face Value x Price)/100
= (500,000.00 x 82.5657)/100
= K412,828.70

Your interest income in this example will combine six coupon payments of K18,900 each (net of charges) and a discount payment of K87,171.30 which simply is the difference between the face value of K500,000 and the price of K412,828.70.

Calculating the Face Value

Suppose you have a cash amount of K500,000.00 and you want to invest it in 2-year Government bond, what will be the face value at the price of 82.5657. The face value is calculated by multiplying the cash amount by 100 and dividing it by the price. In this case;

Face Value = (Cost Value x 100)/price
=(500,000.00x100)/82.5657
= K605,578.05

Face value amounts of K500,000.00 and above are placed in multiples of K5,000.00. Therefore, you can either invest a face value of K605,000.00 of which you will pay K499,522.73 or K600,000.00 of which you will pay K495,394.44.

For more information contact:

Manager - GRZ Securities Dealing
Financial Markets Department
P 0 Box 30080
LUSAKA
Tel: +260 211 399 399/343
Email: Government.securities@boz.zm

Senior Economist
Regional Office
P 0 Box 71511
NDOLA
Tel: +260 212 399 633
Email: Government.securities@boz.zm