

## **FOREWORD**

As an agent for the issuance and management of the Government of the Republic of Namibia's domestic debt and an institution with keen interest in the domestic financial system, the Bank of Namibia (the Bank) continues to explore means through which to make the country's financial markets efficient. This would not only create an environment conducive for the Bank to achieve monetary and financial stability, but would also enable our financial sector to facilitate and promote real economic activity that would in turn yield sustainable economic growth and development.

As a step towards this end, the Bank, amongst others, also generates interest and encourages participation in the local financial markets by disseminating market information and educational publications to the public. These publications include brochures that furnish information on the types of securities issued by the Government of the Republic of Namibia, their features, tender process, pricing mechanisms, tax status and glossary of financial terms.

With the increasing need to provide more information to the public, the Bank upgraded the "Investing in Government Securities" brochure into a booklet. Amongst the new information in the booklet is the concept of the book entry system recently introduced for Government securities and conventions in the market for Government Securities. This section is meant to familiarize potential investors with practices in the local market for Government securities and to serve as a guide for trading in non-Government securities.

I hope you will find this booklet informative and useful.

**TK Alweendo**  
**GOVERNOR**

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## **1. WHAT ARE NAMIBIAN GOVERNMENT SECURITIES?**

Government securities are essentially IOU declarations (or debt instruments) by the Government in terms of the State Finance Act of 1991. Namibian Government securities are issued in the form of Treasury Bills (TB's) and Internal Registered Stock (IRS).

## **2. WHY DO GOVERNMENTS ISSUE SECURITIES?**

Government securities are a major means of financing Government deficits. The Namibian Government, like any other government, finances its operations largely through taxation and levies. Receipts from taxation and levies pay for various government expenditures such as capital projects in the form of construction of roads, schools, dams, etc. and recurrent expenses in the form of salaries for government employees, maintenance of state assets, fuel, etc. In cases where revenue received from taxation and levies is less than expenditure, the government finances the difference (that is, the deficit) mainly through borrowing by issuing government securities. Thus, government securities are primarily issued for financing part of government expenditure, usually part of the capital expenditure. These securities also provide additional investment avenues for investors. Although the public has various avenues in which to invest their savings, government securities offer the most secure investment. It rarely happens that a government fails to honour its obligations issued in its own currency. Thus, these securities tend to be highly marketable and liquid, that is, they are in high demand and can easily be bought and sold in the secondary market. In addition, government securities provide an additional liquid investment outlet for financial institutions, mainly commercial banks, in which they can invest their surplus funds and which can also be sold when they need to supplement their cash resources. Banks can also hold Government securities at the Bank of Namibia as collateral against borrowing. Because of the requirement by the Bank for commercial banks to hold liquid assets locally, Government securities are often used for this purpose. The use of Government securities, as seen in many countries, forms the basis for developing secondary markets.

### **3. ADMINISTRATIVE PROCEDURES**

- 3.1 The Bank of Namibia places advertisements in the media, mainly local newspapers, on its website (<http://www.bon.com.na>), via e-mail, and on the Reuters System, officially inviting the public to participate in tenders for Government securities. Advertisements inviting tenders for TBs and IRS are placed in the media prior to auction date. Tender forms may be obtained from the website and Bank of Namibia at 71 Robert Mugabe Avenue in Windhoek on each business day subsequent to the announcement of an issue. Completed tender forms are submitted in sealed envelopes addressed to *The Deputy Director: Treasury Operations Division* and deposited into the designated tender box by 10:00 at the Bank on the auction date stated in the advertisements. Alternatively, tender forms can be sent to the Bank via its dedicated fax number, 061-2835214. In the case of institutions and where agents are involved, tender forms must be signed under a power of attorney and accompanied by the original power of attorney.
- 3.2 The Bank of Namibia, in conjunction with the Ministry of Finance, determines the allotments of the issue shortly after the closure of the bid. Tender results are announced through the media, fax, e-mail and telephone not later than 13:00 on the auction date. For TB's allotments are made in a descending order of bid prices, meaning that the most attractive (i.e., relatively high) prices stand a better chance of getting an allotment, because a relatively high price subjects the Government to lower cost of borrowing. However, for IRS allotments are made in an ascending order of yield to maturity.
- 3.3 Bids for TBs must be for a minimum of N\$10 000. For IRS the minimum is N\$50 000, but, larger amounts can be tendered for in multiples of N\$10 000. Successful bidders are required to provide payment at the Bank of Namibia, not later than 10:00 a.m. on the next business day following the announcement of the allotment on the auction date. Settlements by

commercial banks can be made through NISS (Namibia Inter Bank Settlements System), or authorizations to debit the accounts of those banks with the Bank of Namibia. For others, that is, businesses and individuals, settlement can be made in the form of bank cheques. Personal cheques and cheques certified or guaranteed by banks are not acceptable for settlement. All amounts paid by individuals exceeding N\$5 million should be paid through the NISS system.

3.4 In the event of a default by a client, meaning that a successful bidder is unable to settle his/her amount, the client shall be blackmailed and barred in future participation for a period of six months.

3.5 If redemption or interest payment falls on a non-working day, the payment would take place on the following working day without interest compensation.

**Table 1: TIMETABLE FOR PRIMARY AUCTIONS: (TREASURY BILLS AND BONDS)**

Activities	Timetable	Activity	Activity By Participants	Activity by BON/MOF
<b>Auction Frequency</b>	Bi-weekly	Issuance of Treasury Bills in the Book Entry System		
<b>Auction Invitation</b>	<b>1 Week Before Auction</b>			E-mail /Web page
<b>Bidding Opens</b>	<b>8:00</b>		Submit bids Fax /e-mails PDF Tender form	Receive bids
<b>Bidding Close</b>	<b>10:00</b>		Confirmation of the tender	
<b>Certification of Bids</b>	<b>11:00</b>			Allocate bids MOF/BON
<b>Approval Auctions Result</b>	<b>11:20</b>			Approve allocated bids BON/MOF
<b>Announcement Auction Result</b>	<b>11:30</b>			Press release, &BoN webpage & Direct call to participant
<b>Settlement</b>	<b>T+1</b>			BON

#### **4. TREASURY BILLS**

- 4.1 Treasury Bills are issued in a Book Entry System (BES) in which records of ownership are electronically registered. Information is detailed in the Book Entry System section. Holders are entitled to sell their TBs in the secondary market upon completion of a relevant transfer form issued by the Bank or to receive capital and interest payment at redemption. These Bills are issued on a discount basis, currently with initial maturities of 91, 182 and 365 days. This means that income from investing in TBs, at the primary issue, is the difference between the offer (or purchase) price and the nominal (also called face or maturity) value.
- 4.2 The offer price of the bid must be quoted in terms of a percentage of the nominal value (N\$100) expressed at most to the nearest N\$0.00001 per hundred, that is, rounded to 5 decimal places. As a general rule, the relatively closer the offer price is to N\$100, the higher the probability of getting an allotment, but then the lesser the return on the investment (and the cheaper it is for the Government to borrow). Examples of basic calculations in TBs are given below and a list of formulae is provided in Appendix I.

##### **A. Example: consideration**

If a bidder offers N\$95.76000 for every N\$100 for a nominal amount of N\$10 000, on a 91-day bill, this means that this bidder is willing to pay an amount (called the consideration) of N\$9 576 for the Bill at the time of tender. This amount is calculated by using the following formula:

$$C = \frac{NxP}{100}$$

Where: **C** = consideration, **N** = nominal value tendered, **P** = bid or purchase price

$$\begin{aligned}
C &= \text{N\$}10\,000 \times \text{N\$}95.76000/100 \\
&= \text{N\$}9\,576
\end{aligned}$$

Upon maturity this bidder will receive a nominal amount of N\$ 10 000 for such a bill and thus would earn N\$424.00 (N\$10 000 – N\$9 576) in 91 days. By deciding on the bid price, bidders have an opportunity to determine the amount of interest income from investing in TBs, provided that their price is competitive. As a starting point in the process of tendering for TBs, bidders may decide on the return from investing in these instruments using an effective yield (compound interest) or discount rate or nominal (simple) rate. The effective yield assumes that interest earned on an investment is based on the principal and on interest subsequently earned on such principal. Furthermore, it assumes that the principal and interest is reinvested at regular intervals at the initial rate. In addition, this rate also enables bidders to compare their preferred returns with returns on alternative investments that are quoted on a similar basis. Knowing the desired yield, a bidder can then calculate the price that s/he must quote on the tender form.

### ***B. Example: effective yield***

If a bidder decided on an effective yield of 12.5 per cent on the 91-day TB investment, he/she can calculate the price using the following formula:

$$P = \frac{F}{\left(\frac{Y}{100} + 1\right)^{\frac{d}{365}}}$$

Where: **Y** = effective yield; **F** = face value; **d** = days

$$P = \frac{100}{\left(\frac{12.5}{100} + 1\right)^{\frac{91}{365}}} = \text{N\$}97.10619 \text{ per N\$}100$$

To compare and ascertain whether this bid price is competitive vis-à-vis prevailing market rates on TBs, which are normally quoted on a discount basis, a bidder may use this price to calculate a discount rate. The discount rate expresses the future income stream (N\$100) in present value or price (N\$97.10619). In addition, the discount rate is often quoted in the market and would be useful for comparing the bidder's rate with that prevailing in the market.

### ***C. Example: discount rate***

At the N\$97.10619 per N\$100 bid price, the bidder may calculate the discount rate using the following formula:

$$D = (F - P) \times \frac{365}{91}$$

Where: **D** = Discount rate

$$D = (100 - 97.10619) \times \frac{365}{91} = 11.60704 \text{ per cent.}$$

Alternatively, a potential investor can start the process of tendering by looking at the prevailing TBs discount rate and general interest rate outlook in the market to decide whether they would like to tender or not and if so at what price to tender. If a bidder decided to quote 11.60704 per cent discount rate for a 91 days TB, that bidder may calculate the price using this formula:

$$P = 100 - \left( D \times \frac{d}{365} \right)$$

$$P = 100 - \left( 11.60704 \times \frac{91}{365} \right) = N\$97.10619 \text{ per N\$100}$$

A potential investor can, however, also start the process of tendering by deciding on a nominal (or simple) interest rate. A nominal rate represents a rate of return

on a capital amount invested over a given period. The following example shows how a prospective investor can calculate the price from a nominal rate.

#### ***D. Example: nominal rate***

If an investor tenders for a nominal or simple rate of 11.95294 per cent for 91 day TB, what price must that investor quote on the tender form? Using the following formula, an investor will calculate the price as follows:

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

Where: S = nominal (simple) interest rate

$$P = \frac{100}{\left(1 + \frac{91}{365} \times \frac{11.95294}{100}\right)} = N\$97.10619 \text{ per N\$100}$$

### **5. INTERNAL REGISTERED STOCK (IRS)**

5.1 Unlike TBs, IRS are capital market instruments issued for longer maturities i.e., for a period exceeding 12 months and holders may earn half-yearly interest (coupon). Currently the Government of the Republic of Namibia has five bonds, namely the , GC10, GC12, GC15, GC18 and GC24 maturing in , 2010, 2012, 2015, 2018 and 2024 respectively (*Table 1*). However, the Government may issue new bonds from time to time in consultation with the market.

5.2 Allotments are made in the ascending order of yields with lowest yields receiving a priority. The Bank acts as an agent for the Government for the issue and redemption of IRS and maintains an electronic register that records details of each stockholder, and the amount of stock held by each holder. IRS like TBs may be traded between parties at prices negotiated between them. Like TBs, the holder may transfer IRS to any other person

upon completion of a relevant transfer form issued by the Bank. The transfer form should be signed by both the Buyer and the Seller. The bonds are listed on the Namibian Stock Exchange (NSX) where secondary trading can take place. Interested parties can, thus, opt to buy and/or sell bonds in issue on the NSX through qualified and registered stockbrokers. Trading in Government stock can also take place over-the-counter, that is, legal trading outside the formal market such as the NSX. In other words, trading in Government Stocks can take place between and amongst individuals and/or institutions.

- 5.3 The Government issues prospectuses in which the terms and conditions of proposed issues are stipulated. Details of the proposed issue are published in advance on the Bank's website, local newspapers and Reuters System and sent via e-mail. Tender forms signed under a power of attorney must also be accompanied by the original power of attorney for noting. On tenders, yields for IRS must be quoted at most to the nearest 5 decimal places.

***A. Example: price calculation for bonds with more than six months to redemption***

Suppose the Government issued a Prospectus inviting tenders for GC10 (a bond with original maturity of 10 years) with the following terms:

Trade date	=	16 September 2008
Settlement date	=	17 September 2008
Redemption date	=	15 January 2010
Coupon	=	12% per annum (or 6% semi-annually)
Interest dates	=	15 January and 15 July

A bidder with N\$100, wishes to invest in the above-mentioned Stock and expects a yield of 10.056%. What price must the bidder quote on a tender form? Bidders are required to quote the all-in-price. To arrive at the required price, bidders can

use the following general formula adopted from the Bond Exchange of South Africa:

$$All-in-price = V_i^{\frac{d_1}{d_2}} \left\{ \frac{1}{2} g(a_n^i + e) + 100V_i^n \right\}$$

Where:

$d_1$  = number of days from settlement date to next interest date

$d_2$  = number of days from last to next interest date or from settlement date to next interest date if settlement falls on an interest date.

$I$  = yield at which bond trades, as a percentage

$V_i$  =  $1/(1 + I/200)$

= present value of 1 payable in six month's time

$g$  = coupon as a percentage (e.g. enter 12% as 12)

$n$  = number of complete six month periods from next interest date to redemption date

$a_n^i$  =  $(1 - V_i^n)/(I/200)$

= present value of an annuity of 1 per six months, payable in arrears

$e$  = 1, if the bond is cum-interest (i.e., the settlement date is earlier than the date of closure of the register, which takes place a month before the coupon date). And  $e = 0$ , if ex-interest (that is the settlement date is after the closure of the register). In the former, the buyer shall pay the seller the interest accrued from the previous interest date or the clean price plus accrued interest, while in the latter the seller pays the buyer interest for the period from settlement date to the day of interest payment or the clean price minus interest owed to the buyer.

$$\text{Accrued Interest} = \frac{d_2 e - d_1}{365} \times g$$

$$\text{Clean Price} = \text{All-in-price} - \text{Accrued interest}$$

- Note:
- i. Rounding convention: First take a clean price, round it to 5 decimal places and then take accrued interest then round it to 5 decimal places and added back to the clean price to arrive at the all-in-price.
  - ii. Bonds are considered to be cum-interest on a coupon date.

In the example, above, the bidder would use the first formula, because the Stock the bidder wishes to tender for will mature in more than six months and the price will be cum-interest. This is because settlement takes place before the closure of the register on the 14<sup>th</sup> of June, which is one month before the next interest payment date. Substituting values into the relevant formula, the bidder's price would be calculated as follows:

$$\text{All-in-price} = V_i^{\frac{d_1}{d_2}} \left\{ \frac{1}{2} g (a_n^i + e) + 100 V_i^n \right\}$$

Where:

$$d_1 = 120$$

$$d_2 = 184$$

$$I = 10.056$$

$$V_i = 1/(1 + I/200) = 0.95212705183$$

$$g = 12.0$$

$$n = \approx 2 a_n^i =$$

$$(1 - V_i^n)/(I/200) =$$

$$= (1 - 0.90654592283)/(10.056/200) = 1.858672974811$$

$$e = 1$$

$$\begin{aligned}
All-in-price &= 0.9952127052^{\frac{120}{184}} \left\{ \frac{1}{2} 12.0 \times (1.858672974811 + 1) + 100 \times 0.9065492283 \right\} \\
&= 0.968512817 \{ 17.1520378488 + 90.6542283 \} \\
&= 0.968512817 (17.1520378488) \\
&= N\$104.4117505 \\
&\text{per N\$100}
\end{aligned}$$

This price represents the present value of the expected cash flows of coupon payments (N\$6 for each coupon payment) and nominal value (N\$100) at redemption discounted at the desired yield of 10.056%.

$$\begin{aligned}
\text{Accrued Interest} &= \frac{d_2 e - d_1}{365} \times g \\
&= \frac{184 \times 1 - 120}{365} \times 12.0 = N\$2.104109589
\end{aligned}$$

$$\begin{aligned}
\text{Clean Price} &= N\$104.4117505 - N\$2.104109589 \\
&= N\$102.307640911 \text{ per N\$100}
\end{aligned}$$

A1: rounding convention

To arrive at the all-in-price on which the consideration is based, the following basic steps are employed in rounding the price:

- a. clean price(N\$102.307640911) is rounded to 5 decimal places: N\$102.30764
- b. accrued interest (N\$2.104109589) then rounded to 5 decimal places: N\$2.10411
- c. all-in-price = N\$102.30764+ N\$2.10411=N\$104.41175

**B. Example: price calculation for bonds with less than six months to redemption**

A bond with less than 12 months to maturity, becomes a money market instrument and for those with less than six months to maturity, a special formula is used to calculate an all-in-price. Let us consider a case where the GC10 is traded six months before maturity:

Settlement date	=	17 September 2009
Redemption date	=	15 January 2010
Coupon	=	12%
Interest dates	=	15 January 2010
Yield to maturity	=	10.056 per cent

Given this set of information, a price at which this bond will trade will be calculated using the following formula:

$$\text{All-in-price} = \frac{100 + e \times \frac{g}{2}}{1 + \frac{d_1}{365} \times \frac{I}{100}}$$

Where:

e	=	1, because the price is cum-interest for the deal take place before the closure of the books on the 15 December 2009 i.e., 30 days before the interest and redemption date (15 January 2010).
g	=	12.0
$d_1$	=	120
I	=	10.056 per cent

Substituting this information into the formula:

$$\text{All-in-price} = \frac{100 + 1 \times \frac{12.0}{2}}{1 + \frac{120}{365} \times \frac{10.056}{100}} = \frac{100}{1.033060821910}$$

$$= \text{N\$}102.60770794 \text{ per N\$}100$$

$$\begin{aligned} \text{Accrued Interest} &= \frac{d_2 e - d_1}{365} \times g \\ &= \frac{184 \times 1 - 120}{365} \times 12.0 = \text{N\$}2.104109589 \end{aligned}$$

$$\begin{aligned} \text{Clean price} &= \text{N\$}102.60770794 - (\text{N\$}2.104109589) \\ &= \text{N\$} 100.503598351 \text{ per N\$}100 \end{aligned}$$

B1: rounding convention

The correct all-in-price on which the consideration is based, is derived using the steps explained above in the first rounding convention example.

- a. clean price(N\$ 100.503598351) is rounded to 5 decimal places: N\$ 100.50360
- b. accrued interest (N\$ 2.104109589) then rounded to 5 decimal places: N\$2.10411
- c. all-in-price = N\$100.50356 + 2.10411  
=N\$102.60767

**Note:** It is, however, possible that a holder may lose an IRS certificate through theft or destruction. Please refer to ***“Procedures for reporting lost certificate(s) and requesting replacement certificate(s) or payment at maturity”***. This document sets out the procedures that will facilitate the possibility of reissuing a new IRS certificate or receiving the payment for the face value at maturity when the certificate is lost, stolen, or destroyed.

**TABLE 2. INTERNAL REGISTERED STOCK  
(Interest Payments)**

Bond Type	Books Closure	1st Interest Month	Books Closure	2 <sup>nd</sup> Interest Month	Coupon rate	Maturity Date
GC10	15 Dec	15 Jan	14 Jun	15 July	12.00	15.01.2010
GC12	15 Mar	15 Apr	14 Sept	15 Oct	10.50	15.10.2012
GC15	15 Mar	15 Apr	14 Sept	15 Oct	13.00	15.04.2015
GC18	15 Dec	15 Jan	14 Jun	15 July	9.50	15.07.2018
GC24	15 Mar	15 Apr	14 Sept	15 Oct	10.50	15.10.2024

## **6. TAXATION**

Section (16)(1)(l) of the Namibian Income Tax Act no. 24 of 1981 exempts interest income, received by or accrued to any person (other than a company) or any external company not carrying on business in Namibia, from TBs and IRS issued by the Government or any representative authority or local authority in Namibia. Capital gains are usually not taxable. However, should a taxpayer's activity of making capital gains be of such a nature that it can be construed as trading, it may be taxable. Determination of the taxability of capital gains should therefore be referred to Inland Revenue.

## **7. BOOK ENTRY SYSTEM (BES)**

- 7.1 The objective of the book-entry system is to provide participants in the market for Government securities with a format for holding securities without physically holding certificates that is, dematerializing the securities. This is achieved by creating an electronic ownership record for both TB's and IRS issued by the Government of the Republic of Namibia through its agent the Bank. Participants in the System are entitled to statement of their holdings after every transaction, on a monthly basis and upon demand.
- 7.2 It eliminates the need to print and manually handle securities and the risk of papers being lost or miss-placed is therefore eliminated. The system also reduces the amount of time needed to deliver securities and if it is linked to the Settlement System it reduces the amount of time needed to settle and altogether minimize settlement risk. Its efficiency is expected to stimulate secondary market activities and facilitate open market operations. Further, it will make it easy for commercial banks to pledge bills to the central bank.
- 7.3 The system entails two main functions, namely, securities dealing and accounting (settlement). Functions like initial data entry, primary sale,

secondary sale, and debt service fall under the two broad categories stated above. Operational Details about the Book Entry System can be obtained from the Bank and its web page.

### **8. CONVENTIONS IN THE GOVERNMENT SECURITIES MARKET**

In a bid to enhance public knowledge and smooth trading in Government securities market, this section presents basic features of the Government securities and conventions in their primary and secondary markets. In addition to providing information to potential investors and prevent disagreements in these markets, these conventions can serve as a guide to those intending to transact in the primary and secondary over-the-counter market for Government securities. Furthermore, this information can be used as a model in formulating contracts in corresponding non-Government securities.

<b>Item</b>	<b>Money Market</b>	<b>Bond Market</b>
Coupon	N/A	Semi-annual
Special price calculation	No	Yes <sup>i</sup>
Ex-interest (days)	N/A	Yes <sup>ii</sup>
Accrual basis	Actual	Actual
Year basis	Actual/365	Actual/365
Settlement date	T+1	T+1
Value date	Settlement date	Settlement date
Settlement on coupon date	N/A	Cum-interest
Holidays	Namibian Public Holidays	Namibian Public Holidays
Interest payments or maturities falling on non-working days and holidays	Payment made on next working day and no compensation	Payment made on next working day and no compensation
Quotation: Primary market Secondary market	Price, settlement in values Money market Yield, settlement in values	Yield to Maturity, settlement in values Yield to maturity, settlement in values
Tick (quotation): Primary Market Secondary market	0.00001 (N\$) Basis points (%)	Basis points (%) Basis points (%)
Rounding Convention Primary Market Secondary Market	5 decimal place (N\$) 5 decimal places (%)	5 decimal places (%) 5 decimal places (%)
Tax	Yes – according to Income Tax Act <sup>iii</sup>	Yes – according to Income Tax Act <sup>iv</sup>

Denomination: Primary Market	Minimum of N\$10,000, Multiples of N\$10,000	Minimum of N\$50,000, Multiples of N\$10,000
Secondary Market	Minimum of N\$10,000, Multiples of N\$10,000	Minimum of N\$50,000, Multiples of N\$10,000 <sup>v</sup>
Business Days <sup>vi</sup>	Monday - Friday	Monday – Friday
Issuance	Book Entry System <sup>vii</sup>	Certificates
Transaction costs	Varies <sup>viii</sup>	Varies <sup>ix</sup>
Limits to secondary trading	No transfers allowed two working days before maturity	No transfers allowed five working days before maturity

## 9. GENERAL

Members of the public, who are interested in investing in Government Debt Securities and would like to obtain more information can contact the **Treasury Operations Division, Bank of Namibia, 71 Robert Mugabe Avenue, PO Box 2882, Windhoek, Telephone (061) 283-5208 or 283-5222.**

## 10. GLOSSARY

**Accrued Interest:** Coupon interest on Government stock accumulated since the date of issue or last coupon payment. Coupon interest is paid semi-annually and accrues between interest payment dates.

**All-in-Price:** The clean price plus the accrued interest of a stock expressed as a percentage of the nominal value.

**Allotment:** The determination or the decision on who gets the securities and of what value, based on the prices provided on tender forms. A part of a stock issued apportioned or assigned by Government (issuer) to a purchaser or subscriber.

**Annuity:** A series of equal payments at fixed intervals. E.g., coupon income from a stock is a steady fixed stream of payments received semi-annually for the period that particular stock is in issue.

**Bearer Instrument:** A negotiable instrument payable to the holder upon maturity. Title (ownership) passes without endorsement or registration. Proof of ownership of a bearer instrument is possession of the security certificate. E.g. treasury bills are bearer instruments, while stocks are registered instruments.

**Bid (purchase) Price:** The quoted price, at which a particular market participant is willing to buy, say a security.

**Bidder:** A market participant who quotes a bid price.

**Book Entry System:** An electronic registered that keeps records of ownership and transactions in financial instruments. The system replaces the paper based instruments and the physical exchange (trading) of such instruments. Its advantage lies in reduced paper work, reduced administrative loads and increased safety in dealing with given financial assets.

**Capital Gains and Losses:** The difference (gain or loss) between the market or book value at purchase or other acquisition and the value realized from the sale or dispensation of a capital asset. I.e., income or extra worth received (or lost) in the form of an increase (or decrease) in the market value of an asset.

**Capital Market Instrument:** (As opposed to Money Market Instrument). A long-term security i.e., issues with maturity of more than 12 months.

**Cash Flow:** Amount of cash received (receivable) over a given period of time.

**Clean Price:** The present value of the future interest receipts and redemption proceeds of a stock discounted at the yield to maturity and expressed as a percentage of the nominal value. In other words, the price quoted excluding accrued interest since the previous coupon payment.

**Closing Date:** A date on which the tender closes to the public i.e., when all the tenders must be submitted and beyond which tenders cannot be accepted.

**Compound Interest Rate:** See Effective Yield.

**Consideration:** An amount that an allotted (successful) participant pays for a security. I.e., the price at which a security is bought.

**Coupon Date:** The date on which coupon interest is payable each year. E.g., Coupon dates for both GC12 and GC24 are 15 April and 15 October, while for GC10 coupon interest is payable on 15 January and 15 July.

**Coupon Rate:** The rate of interest paid by a fixed interest bearing stock. E.g., Namibian Government stock pays a 12 per cent coupon semi-annually implying that the Government pays each stockholder 12 per cent of the nominal value of their Stock.

**Coupon:** Interest amount payable semi-annually until maturity on the nominal amount of the stock. If a participant buys a stock cum-interest (before the

closure of the register i.e., one month before the coupon date) s/he is entitled to receive coupon payment from the Government. However, if a stock is bought ex-interest (after the closure of the register i.e., less than one month before the coupon date), the buyer is not entitled to receive coupon payment from the Government.

**Cum-Interest (With interest):** When the stock is sold cum-interest, the buyer receives coupon interest on a coupon date, but compensates the seller by adding accrued interest to the clean price i.e., by paying the seller a dirty price or an all-in-price.

**Dirty Price:** See All-in-Price.

**Discount Basis:** If an instrument is bought at a price below its nominal value such that profit is the difference between the purchase price and the nominal value of such an instrument.

**Discount Rate:** A rate that equates the future value (nominal amount) to the equivalent value at present.

**Discount:** A deduction from a security when it is purchased before its maturity date. The party that purchases (discounts) the bill pays less than its face value and therefore makes a profit when it matures.

**Effective Yield:** The rate of return created by the periodic addition of simple interest to the principal amount (amount invested), the new base thus established being the principal for the calculation of additional interest.

**Ex-Interest (Without interest):** When the stock is sold ex-interest (i.e., after the closure of the register), the buyer does not receive coupon interest. Coupon interest is instead received by the seller (i.e., the owner of the stock before the closure of the register) on a coupon date. However, the buyer recoups the accrued interest by paying less (equivalent of accrued interest) to the seller i.e., clean price less accrued interest.

**Face Value:** See Par value.

**Internal Registered Stock:** A fixed-interest bearing security or stock issued by the Government of the Republic of Namibia in the form of a bond. These are debt securities or capital market instruments, usually issued in series by which the Government obligates itself to pay the principal amount at the specified time and to pay interest periodically, usually semi-annually.

**IOU:** A declaration of indebtedness. An issuer of an IOU declares that s/he owes the holder of such a note an X amount of money. These notes vary in complexity ranging from simple notes, non-negotiable notes without maturity dates to more complex instruments.

**Issue Date:** The date on which a security is issued i.e., when the life-span of a security starts.

**Liquid Asset Requirement:** A legal requirement for commercial banks to hold instruments that can be easily converted (liquidated) into cash. This is to enable commercial banks to meet their liability obligations (e.g., withdrawals against deposits) on demand.

**Maturity Value:** See par value.

**Money Market Instrument:** An instrument that is traded in money markets, maturing in the short-term.

**Money Market:** The market for short-term loans in which liquid assets or short-term instruments are traded. Short-term instruments normally refer to instruments of maturities equal to or less than 12 months.

**Nominal Interest:** See Discount Rate.

**Nominal Value:** See Par Value.

**Nominal Yield:** See Simple Yield.

**Par Value:** The amount that the issuer agrees to repay the security holder at the maturity date. In terms of pricing a security, it is a price of 100 per cent such that investors tender an X amount for every N\$100 which they receive on maturity of such a security.

**Power of Attorney (PA):** A formal document giving one person the right to act for another.

**Present Value:** The equivalent in present value, receivable only in the future. The values are discounted to allow for interest that cannot be earned between the present and the future date of expected receipt.

**Primary Market:** Markets for newly issued debts or securities i.e., the initial market for new issues or the market in which securities are first issued.

**Redemption Value:** See Par Value.

**Register:** A formal record of names of holders of Government securities. This record shows who are stockholders, value of stock held and entitlement to

coupon payments. Note: A stockholder who purchased a stock within one month before the coupon date i.e., after the closure of the register, will not receive coupon interest. Instead coupon interest will be paid to the holder of the stock that purchased it more than one month before the coupon date i.e., before the closure of the register.

**Secondary Market (As opposed to primary market):** A market in which existing securities are traded. Secondary markets provide liquidity (tradability) and thus create conditions for a healthy primary market.

**Semi-annually (half-yearly):** This refers to coupon payments that are made twice in a year i.e., after every six months. See also Coupon Date.

**Settlement Date:** The deadline by which a purchaser of a stock must pay for what has been bought and the seller must deliver the certificate for the securities that have been sold. Settlement date usually coincide with the issue date. In the primary market, the settlement date is usually the second business day following the closing date of the tender.

**Settlement:** Completion of a security transaction by delivering required stock certificates and/or funds.

**Simple Yield:** Interest calculated on a principal sum and not any interest that has been earned by that sum.

**Stock Exchange:** An organization that provides a market for trading of equity instruments (shares) and stock/bonds. All Government Stocks are listed on the Namibian Stock Exchange.

**Tick:** Minimum (smallest) allowed upward or downward movement in price or yield.

**Treasury Bills (TBs):** These are money market (short-term) instruments representing Government debt issued at discount from face value and returning the face value at maturity. Hence, the return from investing in TB is the discount i.e., difference between the purchase price and the redemption value.

**Value Date (or Effective Date):** The date on which the transaction takes effect.

## 11. APPENDIX I

### Treasury Bills – Formula Schedule

**1. Discount rate**

$$D = (F - P) \times \frac{365}{d}$$

**2. Price**

$$P = 100 - \left( D \times \frac{d}{365} \right)$$

$$P = \frac{F}{\left( 1 + \frac{d}{365} \times \frac{S}{100} \right)}$$

$$P = \frac{F}{\left( \frac{E}{100} + 1 \right)^{\frac{d}{365}}}$$

**3. Simple (Nominal) rate**

$$S = \frac{(100 - P)}{P} \times \frac{365}{d}$$

**4. Consideration**

$$C = \frac{N \times P}{100}$$

**5. Effective yield**

$$E = \left( \left( \left( 1 + \frac{\frac{S}{100}}{\frac{d}{365}} \right)^{\frac{365}{d}} \right) - 1 \right) \times 100$$

**6. Weighted average price**

$$W.A.P = \frac{C}{A} \times 100$$

**7. Weighted average discount rate**

$$W.A.D = (100 - W.A.P) \times \frac{365}{d}$$

**8. Weighted average simple rate**

$$W.A.S = \frac{100 - W.A.P}{W.A.P} \times \frac{365}{d}$$

**9. Weighted average effective yield**

$$W.A.E = \left( \left( \left( 1 + \frac{\frac{W.A.S}{100}}{\frac{d}{365}} \right)^{\frac{365}{d}} \right) - 1 \right) \times 100$$

D = Discount rate  
 F = Face or Nominal value = 100  
 d = Number of days to maturity  
 P = Price  
 S = Simple or Nominal rate  
 E = Effective yield  
 W.A.P = Weighted average price  
 C = Consideration  
 A = Total Allotment  
 W.A.D = Weighted Average discount rate  
 W.A.S = Weighted average simple rate  
 W.A.E = Weighted average effective yield  
 N = Nominal amount allotted

## **12. DISCLAIMER**

This brochure is prepared as a guide to investing in Namibian Government securities with the sole purpose of familiarizing investors with the tender process for government securities. Therefore this brochure does neither constitute an offer to buy or sell Government securities nor is it advising investors to buy or sell such securities. While the information contained in this brochure is believed to be reliable and all care has been taken in preparing it to ensure the reliability and accuracy of such information, the Bank of Namibia does not warrant its correctness and hence will not accept any liability or responsibility for any damages or loss suffered by any person and or institution resulting from its reliance on any information contained in this brochure.

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<sup>i</sup> South African Bond Exchange formula is used for the Government of the Republic of Namibia Internal Registered Stock (IRS).

<sup>ii</sup> Securities are priced ex-interest during the period from the closing date of the register to the next coupon date. The register normally closes on the same calendar date of the preceding month to coupon payment date. E.g., if the coupon date is 15 April, the register would close on 15 March. Thus, in this example from 15 March to 15 April, securities would be priced ex-interest i.e., after the closure of the register, the IRS will be priced ex-interest. However, trade settling on the register closure date is cum-interest. When the stock is sold ex-interest, the buyer does not receive coupon interest, but is compensated by the seller by paying less i.e., clean price less accrued interest.

<sup>iii</sup> Individuals and non-resident entities are exempted from paying tax on the Government of the Republic of Namibia's Treasury Bills (Income Tax Act No. 24, 1981). See a section on taxation.

<sup>iv</sup> Individuals and non-resident entities are exempted from paying tax on the Government of the Republic of Namibia's Internal Registered Stock (Income Tax Act No. 24, 1981). See a section on taxation.

<sup>v</sup> Exceptions might occur during Government debt restructuring e.g., switches, conversions, consolidations, etc.

<sup>vi</sup> Government of the Republic of Namibia's Internal Registered Stock are listed on the Namibian Stock Exchange, while treasury bills are not traded on a formal platform.

<sup>vii</sup> Government of the Republic of Namibia securities are issued in an electronic format or in a book entry system. There are no costs associated with issuing and handling securities in the Book Entry System.

<sup>viii</sup> No standard transaction costs and costs varies with instruments and institutions. Government securities do not have transaction costs at the primary level. However, handling fees and other costs may be charged in respect of private services rendered on Government securities.

<sup>ix</sup> see note no.9