

QATAR GOVERNMENT BONDS

Qatar Exchange is introducing Qatar Government bonds as tradable instruments. The trading of Bonds (maturities of greater than one year) will be in addition to the existing trading of TBills (maturities of less than one year).

WHAT IS A BOND?

A bond is a debt security which represents a loan to a borrower (also known as the issuer) by a lender (the investor). The issuer, in this instance the Qatar Central Bank on behalf of the State of Qatar, promises to pay the investor a specified rate of interest (the coupon rate) on the amount it has borrowed. This interest, the coupon payment, is usually paid every six months until the maturity date, and then the issuer repays the borrowed amount (the principal) to the investor. Bonds are also referred to as fixed-income securities because the income that an investor receives from the bond investment is usually fixed and paid on a regular and predictable basis.

WHY INVEST IN BONDS?

Income: An investor benefits from holding bonds in their portfolio through the receipt of regular and predictable income, the coupon payments.

Diversification: Bonds provide the means to reduce portfolio risks through diversification. Bonds are less volatile than equities and are generally assumed to carry less risk.

Safety: The higher the quality of a bond, in terms of credit rating, the greater confidence an investor can have that the issuer will meet its coupon and maturity payment obligations. Generally, Government Bond issues are considered to carry the lowest Credit Risk.

PRODUCT COMPARISON

Equities	TBills	TBonds
A shareholder becomes a part owner of the company in which shares are held	The TBill holder is a lender	The bondholder is a lender
Higher volatility	Lower volatility	Lower volatility
Dividend income is dependent on the performance of the company	Single payment of the par value at maturity	Coupon income is fixed
Shares in the profits/losses of the company	Receives the par value at maturity	Receives the coupon and par value
Issued at a pre determined price	Always issued at discount	Can be issued at a discount, par or a premium
No repayments, but investor may receive dividends	Repayment at maturity	Regular coupon payments plus repayment at maturity
No maturity period	Maturity period at issue is always less than one year	Maturity period at issue is always greater than one year

WHAT ARE THE RISKS?

Credit Risk: If an issuer is unable to meet coupon or maturity repayment obligations, this may result in default and losses being incurred by the investor.

Liquidity Risk: If there is insufficient liquidity in the market, this may prevent an investor from selling or he may have to accept a lower price for his bond holdings, resulting in a loss.

Inflationary Risk: Rising inflation erodes the value of money over time and the fixed payments received by the bondholder in the future may be worth less in real terms than they are today.

Maturity Risk: Reinvestment of the lump sums received by the investor on the coupon and maturity dates will be done at prevailing market rates, which may be lower and less attractive than those on the existing bond investment.

WHY DO BOND PRICES FLUCTUATE?

The level of prevailing market interest rates and any expectations that these rates may change over time are key factors that influence the price of a bond. As fixed income securities, with constant coupons throughout their lives, bonds become more valuable as market interest rates fall and less valuable as market interest rates rise. Because of this, bond prices move inversely to interest rates, in that as interest rates rise, prices will fall and vice versa. As an example, if a bond's coupon rate is 3% and market interest rates are 5%, investors will sell bond holdings to place the funds on deposit to benefit from the higher market interest rate. The price of the bond will then fall. Conversely, if the coupon rate is 3% and market rates are 1%, investors will purchase bonds to benefit from the higher yield, resulting in higher prices. In general terms, the lower the coupon rate of a bond and the greater it's time to maturity, the more sensitive the price will be to changes in market interest rates.

TRADING ON QATAR EXCHANGE

QE will list government bonds, issued to the market by the Qatar Central Bank. All listed bonds will be traded in units with a par value of QAR 10,000. Prices quoted will be in percentages (per 100) and all prices and trade executions for bonds on QE will be clean, in that the price will exclude any interest that has accrued since the bond was issued, or since the most recent coupon payment. In other words, the prices at which orders are executed differ from the prices at which the transactions are settled.

QE TRADING ATTRIBUTES

Equities	TBills	TBonds
Price quoted is per share	Price quoted is per 10,000 par value	Price quoted is percentage of par value
Minimum size of trade is 1 share	Minimum size of trade is 1 unit of par value 10,000	Minimum size of trade is 1 unit of par value 10,000
No price constraints	Price can never exceed the 10,000 par value	Price can be less than, equal to or greater than 100.00%
Tick size is dependent on price	Tick size is always 0.01	Tick size is always 0.01
Settlement is T+3	Settlement is T+3	Settlement is T+3
Settlement value is Number of shares x price	Settlement value is number of units x price x par value	Settlement value is number of units x price x par value + accrued interest
Shown on the Equity Market Watch	Shown on the Debt Market Watch	Shown on the Debt Market Watch

BOND TERMINOLOGY

Par Value: The par value of a bond (the face value or principal) is the amount of money the investor receives from the issuer on the bond's maturity date. A bond's price will fluctuate throughout its life and the par value and quoted price of the bond will often differ.

Bond Price: Bond prices are quoted as a percentage of the par value and are clean, in that they do not include the accrued interest. If a bond's price is 100.00 it is said to be trading at par, or 100% of its par value. If the price on a bond was 95.00, an investor could purchase the bond at 95.00% of its par value. As an example, if an investor purchased QAR 10,000 at this price, it would cost QAR 9,500.00 to purchase ($\text{QAR } 10,000 \times 0.95$) and the bond would be trading at a discount. If the quote was 102.50, then the cost will be QAR 10,250.00 and the bond would be trading at a premium.

Coupon: The coupon is the amount of interest that an investor will receive and is calculated from the coupon rate which is stated as a percentage of the par value. Bonds pay interest in regular instalments, usually semi-annually. As an example, a QAR 10,000 par value bond with a 3% coupon will pay its bondholders QAR 150 every six months, or QAR 300 a year until the maturity date. When the bond matures the investor receives back the full par value of QAR10,000.

Yield: A bond's yield is an indication of the return that an investor receives on the bond. Bond yields can be shown as the current yield or as the yield to maturity. Current yield is the annual return on the price paid for the bond and is calculated by dividing the coupon amount by the book value. For example, a QAR 10,000 par value bond with a 3% coupon, purchased at 100.00, has a current yield of 3.00% (coupon amount of QAR 300.00 divided by the book value of QAR 10,000). If the price of the bond should fall to 95.00, the yield rises to 3.15% (you get the same guaranteed QAR 300.00 coupon on an asset for which you paid QAR 9,500). Conversely, if the price of the bond goes up to 105.00, the yield will fall to 2.85% ($\text{QAR } 300/\text{QAR } 10,500$). Yield to Maturity (YTM) provides a more accurate indication of the total return that an investor receives if they hold the bond to maturity. The YTM is the rate of return earned by an investor who buys the bond today at the market price, assuming that the bond will be held until maturity and that all coupon and principal payments will be made on schedule. YTM is useful because it allows for comparison between bonds of differing maturities and coupons. The calculation for YTM is complex and beyond the scope of this document. Interested parties should refer to their investment adviser or the QE website for more information.

Settlement Date: The settlement date is the date on which the purchaser must pay the settlement value of the bond purchase and the seller provides delivery of the bonds in exchange for that settlement value. On QE this settlement date occurs on the third day after the trade date (T+3).

Accrued Interest: Accrued interest is the coupon amount that has accumulated since the issue date or the last coupon payment date. The accrued interest is added to the book value (see the example below) to calculate the settlement value. In essence, the buyer is compensating the seller for the interest earned up to that date, as the buyer will subsequently receive the full coupon amount on the next coupon payment date.

The accrued interest is determined as follows:

$$\frac{\text{Coupon Rate}}{2} \times \frac{\text{Days from Last Coupon to Settlement Date}}{\text{Days from last coupon to next coupon}} \times \text{Par Value} \times \text{No.of Units}$$

Example: Buy 10 bond units at 103.00 and a settlement date of July 15th.

- Coupon payments are made semi-annually on March 10th and September 10th
- Days from Last Coupon to Settlement Date = 127
- Days from Last Coupon to Next Coupon = 184
- Par Value = QAR 10,000
- Number of Units = 10
- Coupon = 3%

$$\text{Accrued interest} = \frac{3/2}{100} \times \frac{127}{184} \times 10,000 \times 10 = \text{QAR } 1035.33$$

Book Value: The book value of a bond trade is determined as follows:

$$\frac{\text{Price x Par Value}}{100} \times \text{No. of units}$$

Example:

- Traded price = 103.00
- Par Value = QAR 10,000
- Number of Units = 10

$$\text{Book Value} = \frac{103.00 \times 10,000}{100} \times 10 = \text{QAR } 103,000.00$$

Settlement Value: To determine the settlement value on the settlement date (the third business day following the trade date) that is to be paid by the buyer to the seller, the accrued interest is added to the book value. From the above examples:

$$\text{Settlement Value} = \text{QAR } 103,000.00 + 1035.33 = \text{QAR } 104,035.33$$

It is important to research and understand any product before investing to ensure that the risk, exposure and income characteristics are consistent with your investment goals and risk tolerance. You should also consider consulting with your investment adviser or broker before making a decision to invest.

