

Bond Price & Yield Tool

It allows you to calculate annual or semi-annual coupons bonds with actual calendar or 360 day per year. To show it, touch the “OPT” and in the “4) Finance:” section touch the “BOND Calc.” button.

| | | |
|-------------------------------------|-----------------------------------|-------------------------|
| Calendar | Coupon | |
| Act. 360 | Semi Ann. | CPN% +0.00% |
| Bond Dates (M.DY) | | |
| Settlement 05/19/2003 Mon | Maturity 06/30/2017 Fri | CALL +100.00% |
| PRICE +25.23 | YIELD% +10.00% | ACCR |

| Key | Action |
|----------------------|---|
| [Act] [360] | Set the bond calendar to Actual or 30/360. |
| [Semi] [Ann.] | Set the bond type to Annual or SemiAnnual coupons. |
| [Settlement] | Stores the bond settlement (purchase) date in the current date format (M.DY, D.MY or Y.MD). |
| [Maturity] | Stores the bond maturity or call date in the current date format (M.DY, D.MY or Y.MD). |
| [CALL] | Stores the Call price per \$100 face value. |
| [CPN%] | Stores the bond annual coupon rate as percentage. |
| [PRICE] | Stores or calculates the bond prices per \$100 face value. |

| Key | Action |
|----------|---|
| [YIELD%] | Stores or calculates the bond yield to maturity or yield to call date as an annual percentage. |
| [ACCR] | Calculates the interest accrued from the last coupon payment date until the settlement date per \$100 face value. |

The [PRICE] or [YIELD%] buttons calculates the value if the immediate previous key pressed was one of the keys in this tool. See the examples below to have a better understanding about.

To enter dates (Settlement and Maturity) use the current date format indicated in the status bar (M.DY, D.MY or Y.MD). To set the date format touch the [g] [PREF] keys and select the desire format in the list. The following examples assumes “M.DY” date format.

Example 1: Price & Yield of a Bond

What price should you pay on August 10, 2003 for a 6¾% U.S. Treasury bond that matures on May 1, 2018 if you wish a yield of 8⅜%? The calendar basis is actual and the coupon payments are semi-annually.

Solution:

| Keystrokes | Description |
|----------------------------|--|
| [Act] [Semi] | Sets the calendar to Actual . Sets the bond payment period to Semi-Annual . |
| “8.102003” [Settlement] | Type the settlement date and enter it. (M.DDYYYY entry for M.DY format). |
| “5.012018” [Maturity] | Type the maturity date and enter it. |
| “6.75” [CPN%] | Type the annual coupon rate and enter it. |

| Keystrokes | Description |
|------------------|---|
| "8.375" [YIELD%] | Type the desired yield and enter it. |
| [PRICE] | Calculates the bond price. Result = 86.38 |
| [ACCR] | Calculates the interest accrued since last coupon to the settlement date. Result = 1.85. |
| [+] | Adds the bond price and the accrued interest to calculate the net price. Result = 88.23 |

Suppose that the market quote for the bond is $88\frac{1}{4}$. What yield does it represent?

| Keystrokes | Description |
|-----------------|---|
| "88.25" [PRICE] | Type the market quote and enter it. |
| [YIELD%] | Calculates the bond yield to maturity. Result = 8.13 |

Example 2: A Bond with a Call feature

What is the price of a 6% corporate bond maturing on March 3, 2022 and purchased on May 2, 2003 to yield 5.7%? It is callable on March 3, 2006 (a coupon date), at a value of 102.75. What is the yield to the call date? Use a 30/360 calendar with semi-annual coupon payments.

Solution:

| Keystrokes | Description |
|-----------------------|---|
| Set Calendar to [360] | Sets the bond calendar to 30/360 calendar. |
| Set Coupon to [Semi] | Sets the bond type to semi-annual coupons. |

| Keystrokes | Description |
|----------------------------|--|
| “5.022003” [Settlement] | Type the settlement date and enter it. |
| “3.032022” [Maturity] | Type the maturity date and enter it. |
| “6” [CPN%] | Type the annual coupon rate and enter it. |
| “5.7” [YIELD%] | Type the desired yield and enter it. |
| [PRICE] | Calculates the bond price. Result = 103.43 |
| “3.032006” [Maturity] | Change maturity date to call date and enter it. |
| “102.75” [CALL] | Type the call value and enter it. |
| [YIELD%] | Calculates yield to call date. Result = 5.58 |

Example 3: A Zero-Coupon Bond

Calculate the price of a zero-coupon, semi-annual bond using a 30/360 calendar basis. The bond was purchased on May 19, 2003 and will mature on June 30, 2017, and has a yield to maturity of 10%.

Solution:

| Keystrokes | Description |
|----------------------------|---|
| Set Calendar to [360] | Sets the bond calendar to 30/360 calendar. |
| Set Calendar to [Semi] | Sets the bond type to semi-annual coupons. |
| “5.192003” [Settlement] | Type the settlement date and enter it. |

| Keystrokes | Description |
|----------------------------------|---|
| “6.302017” [Maturity] | Type the maturity date and enter it. |
| “100” [CALL] | Reset the CALL value to 100% |
| “0” [CPN%] | Type zero coupon rate and enter it. |
| “10” [YIELD%] | Type the desired yield and enter it. |
| [PRICE] | Calculates the bond price Result = 25.23 |