

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.

The screenshot shows a control panel for bond calculations. It is divided into sections for 'Calendar' and 'Coupon' settings, 'Bond Dates', and calculation results.

- Calendar:** Buttons for 'Act.' and '360' (highlighted in green).
- Coupon:** Buttons for 'Semi' (highlighted in green) and 'Ann.'.
- Bond Dates (M.DY):** 'Settlement' (05/19/2003 Mon) and 'Maturity' (06/30/2017 Fri).
- CPN%:** A field showing '+0.00%'.
- CALL:** A field showing '+100.00%'.
- PRICE:** A blue button showing '+25.23'.
- YIELD%:** A blue button showing '+10.00%'.
- ACCR:** A red button.

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