PRICE

Updated: 31 Mar 2016

Use PRICE to calculate the price for a security that pays periodic interest and has a par value of 100. The formula for PRICE with more than one coupon period to redemption is:

$$PRICE = \left(\frac{\frac{-C}{Y} + RV}{(1+Y)^N} - \frac{-C}{Y} \right) * (1+Y)^{1-\frac{DSC}{E}} - A$$

Where

      C = 100 * coupon rate / frequency
      Y = yield / frequency
      RV = redemption value
      DSC = number of days from settlement to coupon
      N = the number of coupons between the settlement date and the maturity date
      E = the number of days in the current coupon period
      A = C * accrued days / E

When the settlement date is greater than or equal to the last coupon date, the formula for PRICE is:

$$PRICE = \frac{RV + C}{1 + \left(Y * \frac{DSR}{E} \right)} - A$$

Where

      C = 100 * coupon rate / frequency
      Y = yield / frequency
      RV = redemption value
      DSR = number of days from settlement to redemption
      E = the number of days in the current coupon period
      A = C * accrued days / E

Syntax

```
Public Shared Function PRICE(
    ByVal Settlement As Date,
    ByVal Maturity As Date,
    ByVal Rate As Double,
    ByVal Yld As Double,
    ByVal Redemption As Double,
    ByVal Frequency As Double,
    ByVal Basis As String,)
```

Arguments

Settlement

      the settlement date of the bond. *Settlement* is an expression that returns a **Date**, or of a type that can be implicitly converted to **Date**.

Maturity

> the maturity date of the bond. *Maturity* is an expression that returns a **Date**, or of a type that can be implicitly converted to **Date**.

Rate

> the coupon rate of the bond in decimal format (10% = 0.10). *Rate* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Yld

> the yield on the bond in decimal format (10% - 0.10). *Yld* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Redemption

> the redemption value of bond. *Redemption* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Frequency

> the number of coupon payments per year. For annual payments, @Frequency = 1; for semi-annual, @Frequency = 2; for quarterly, @Frequency = 4; for bimonthly @Frequency = 6; for monthly, @Frequency = 12. For bonds with @Basis = "A/364" or 9, you can enter 364 for payments made every 52 weeks, 182 for payments made every 26 weeks, 91 for payments made every 13 weeks, 28 for payments made every 4 weeks, 14 for payments made every 2 weeks, and 7 for weekly payments.. *Frequency* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Basis

> the daycount convention associated with the bond. *Basis* is an expression that returns a **String**, or of a type that can be implicitly converted to **String**. Permissible values are:

Basis	Daycount convention
0, "BOND"	US (NASD) 30/360
1, "ACTUAL"	Actual/Actual
2, "A360"	Actual/360
3, "A365"	Actual/365
4, "30E/360 (ISDA)", "30E/360", "ISDA", "30E/360 ISDA", "EBOND"	European 30/360
5, "30/360", "30/360 ISDA", "GERMAN"	30/360 ISDA
6, "NL/ACT"	No Leap Year/ACT
7, "NL/365"	No Leap Year /365
8, "NL/360"	No Leap Year /360
9, "A/364"	Actual/364
10, "BOND NON-EOM"	US (NASD) 30/360 non-end-of-month
11, "ACTUAL NON-EOM"	Actual/Actual non-end-of-month
12, "A360 NON-EOM"	Actual/360 non-end-of-month
13, "A365 NON-EOM"	Actual/365 non-end-of-month

14, "30E/360 NON-EOM", "30E/360 ICMA NON-EOM", "EBOND NON-EOM"	European 30/360 non-end-of-month
15, "30/360 NON-EOM", "30/360 ISDA NON-EOM", "GERMAN NON-EOM"	30/360 ISDA non-end-of-month
16, "NL/ACT NON-EOM"	No Leap Year/ACT non-end-of-month
17, "NL/365 NON-EOM"	No Leap Year/365 non-end-of-month
18, "NL/360 NON-EOM"	No Leap Year/360 non-end-of-month
19, "A/364 NON-EOM"	Actual/364 non-end-of-month

Return Type

Double

Remarks

- If Settlement is NULL then Settlement equals the current system processing date.
- If Maturity is NULL then Maturity equals the current system processing date.
- If Rate is NULL then Rate = 0.
- If Yield is NULL then Yield = 0.
- If Redemption is NULL then Redemption = 100.
- If Frequency is NULL then Frequency = 2.
- If Basis is NULL then Basis = 0.
- If Frequency is any number other than 1, 2, 4, 6 or 12, or for Basis = "A/364" any number other than 1, 2, 4, 6, or 12 as well as 7, 14, 28, 91, 182, or 364 an error is returned.
- If Basis is invalid (see above list) an error is returned.

See Also

- BONDCF - Cash flows for a bond paying regular periodic interest
- DIRTYPRICE - Dirty price of a bond
- DIRTYYIELD - Yield of a bond from the dirty price
- DIS - Price, discount rate, and/or yield of a discount security
- DISC - Discount rate
- DISFACTORS - Factors for the price calculation of a discount security
- IAM - Price and/or yield of a security paying interest at maturity
- IAMFACTORS - Factors for the price calculation of a security paying interest at maturity
- ODDFPRICE - Price of a bond with an odd first coupon
- ODDFYIELD - Yield of a bond with an odd first coupon
- ODDLPRICE - Price of a bond with an odd last coupon
- ODDLYIELD - Yield of a bond with an odd last coupon
- OFC - Calculate the price and/or yield of a bond with an odd first coupon using the ODDFPRICE equation
- OFCFACTORS - Returns the components of the ODDFPRICE equation

- OFL - Calculate the price and/or yield of a bond with an odd first and an odd last coupon using the OFLPRICE equation
- OFLFACTORS - Returns the components of the OFLPRICE equation
- OFLPRICE - Calculate the price of a security with an odd first and odd last period
- OFLYIELD - Calculate the yield of a security with an odd first and odd last period
- OLC - Calculate the price and/or yield of a bond with an odd last coupon using the ODDLPRICE equation
- OLCFACTORS - Returns the components of the ODDLPRICE equation
- PRICEACT - Price of a bond where coupon amounts are based on number of days in the coupon period
- PRICEACTV - Cash flows and discount factors for a bond where coupon amounts are based on number of days in the coupon period
- PRICEDISC - Price of a discounted security
- PRICEFR - Price of a bond with forced redemptions
- PRICEMAT - Price of an interest-at-maturity security
- PRICESTEP - Price of a security with step-up rates
- RPI - Calculate the price and/or yield of a bond with regular periodic coupons
- RPIFACTORS - Factors for the calculation of the price of a bond that pays regular periodic interest
- TBILLEQ - Bond equivalent yield of a Treasury Bill
- TBILLPRICE - Price of a Treasury Bill
- TBILLYIELD - Yield of a Treasury Bill
- YIELD - Yield of a bond paying regular periodic interest
- YIELDACT - Yield of a bond where coupon amounts are based on number of days in the coupon period
- YIELDDISC - Yield on a discount security
- YIELDFR - Yield of a bond with forced redemptions
- YIELDMAT - Yield on an interest-at-maturity security
- YIELDSTEP - Yield of a security with step-up rates