YIELDACT

Updated: 31 Mar 2016

Use YIELDACT to calculate the yield on a bond given the price, where the coupon amounts are calculated as the actual number of days in the coupon period divided by the number of days in the year. This means that the coupon amounts will vary from period. The number of days in the year is either 360, 365, or 366 based upon the day-count convention. YIELDACT also allows the entry of a forced redemption schedule. There is no closed-form solution for the calculation of yield from price if there is more than one coupon period to redemption.

Syntax

```
Public Shared Function YIELDACT(
    ByVal Settlement As Date,
    ByVal Maturity As Date,
    ByVal Rate As Double,
    ByVal Par As Double,
    ByVal Price As Double,
    ByVal Frequency As Double,
    ByVal Basis As String,
    ByVal Repayments As String,)
```

Arguments

Settlement

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

Rate

the security's annual coupon rate. *Rate* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Par

the par value of the security. Any forced redemptions are subtracted from the par value on the redemption date and the adjusted balance is used in calculating the subsequent coupon interest. *Par* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Price

the clean price of the security. *Price* 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 bi-monthly, *Frequency* = 6, for monthly, *Frequency* = 12. *Frequency* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Basis

the type of day count to use.

Basis	Day count basis
1, 'ACTUAL'	Actual/Actual
2, 'A360'	Actual/360
3, 'A365'	Actual/365
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

Basis is an expression that returns a **String**, or of a type that can be implicitly converted to **String**.

Repayments

a SELECT statement, as a string, which identifies the coupon dates and the forced redemption amounts to be used in the price calculation. *Repayments* is an expression that returns a **String**, or of a type that can be implicitly converted to **String**.

Return Type
Double

Remarks
- If *Basis* is invalid an error is returned.
- If *Frequency* is invalid an error is returned.
- If *Maturity* < *Settlement* then NULL is returned.
- If *Repayments* returns NULL then *Par* is used for all interest calculations and as the redemption value.
- If *Settlement* is NULL, *Settlement* equals the current system processing date.
- If *Frequency* is NULL, *Frequency* = 2.
- If *Basis* is NULL, *Basis* = 1.
- YIELDACT forces the principal balance of the bond to zero at maturity.
- If *Par* is NULL then *Par* = 100.
- If *Rate* is NULL then *Rate* = 0.
- If *Price* is NULL then *Price* = *Par*.
- If *Maturity* is NULL then YIELDACT returns NULL.
- If *Basis* = 3 or *Basis* = 13 then the number of days in a year is always 365.
- If *Basis* =2 or *Basis* = 12 then the number of days in a year is always 360.

- If *Basis* =1 or *Basis* = 1 then the number of days in a year is determined by the actual number of days in the year of coupon period end date.

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
- PRICE - Price of a security paying regular periodic interest
- 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
- 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