OFCFACTORS

Updated: 31 Mar 2016

Use OFCFACTORS to return the components used in the calculation of price and yield for a bond with an odd first coupon. OFCFACTORS supports odd first coupon bonds with up to 2 quasi-coupon periods.

Syntax

```
Public Shared Function OFCFACTORS(
    ByVal Settlement As Date,
    ByVal Maturity As Date,
    ByVal Issue As Date,
    ByVal FirstCoupon As Date,
    ByVal Rate As Double,
    ByVal Price As Double,
    ByVal Yield As Double,
    ByVal Redemption As Double,
    ByVal Frequency As Double,
    ByVal Basis 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**.

Issue

> the issue date of the security; the date from which the security starts accruing interest. *Issue* is an expression that returns a **Date**, or of a type that can be implicitly converted to **Date**.

FirstCoupon

> the first coupon date of the security. The period from the issue date until the first coupon date defines the odd interest period. All subsequent coupon dates are assumed to occur at regular periodic intervals as defined by *Frequency*. *FirstCoupon* 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**.

Price

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

Yield

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

Redemption

the security's redemption value per 100 face value. *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 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 type of day count to use.

Basis	Day count basis
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/365"	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/365 NON-EOM"	Actual/364 non-end-of-month

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

Return Type

`FinancialTypes.OFCFACTORS_table`

```vb
Class OFCFACTORS_table
    Inherits Data.DataTable
    Property Item(RowIndex As Integer) As FinancialTypes.OutputRow_OFCFACTORS

Class OutputRow_OFCFACTORS
    Public E As Double
    Public DSC As Double
    Public N As Integer
    Public NCF As Integer
    Public A1 As Double
    Public DFC1 As Double
    Public NLF1 As Double
    Public A2 As Double
    Public DFC2 As Double
    Public NLF2 As Double
    Public Nqf As Double
    Public quasistart As Date
    Public quasicoup As Date
    Public C As Double
    Public FC As Double
    Public P As Double
    Public AI As Double
    Public Y As Double
End Class
```

Column	Description
E	Number of coupon days in the quasi-coupon period in which the settlement date falls.
DSC	Number of days from the settlement date to the next quasi-coupon date.
N	Number of coupons between the first coupon date and the maturity date.
NCF	Number of quasi-coupon periods in the odd period (1 or 2).
A1	Number of accrued days in the first quasi-coupon period.
DFC1	Number of accrued days from the issue date to the next quasi-coupon date.
NLF1	Normal length of the first quasi-coupon period.
A2	Number of accrued days in the second quasi-coupon period.
DFC2	Number of accrued days from the quasicoup date to to the first coupon date.
NLF2	Normal length of the period from the quasicoup date to the first coupon date.
Nqf	Number of whole coupons between the settlement date and the first coupon date.
quasistart	Implied previous coupon date with respect to the issue date.
quasicoup	Implied next coupon date with respect to the issue date when NCF = 2.
C	Coupon amount
FC	Coupon amount

P	First coupon amount
AI	Price. If *Yield* is NOT NULL then P is calculated from the inputs otherwise P is the value entered in *Price*.
Y	Accrued interest as of the settlement date.

Remarks

- If *Settlement* is NULL then *Settlement* equals the current system processing date.
- If *Rate* is NULL then *Rate* = 0.
- If *Redemption* is NULL then *Redemption* = 100.
- If *Frequency* is NULL then *Frequency* = 2.
- If *Basis* is NULL then *Basis* = 0.
- If *Frequency* invalid an error is returned.
- If *Basis* invalid (see above list) an error is returned.
- If *Maturity* is NULL then an error is returned.
- If *Issue* is NULL then an error is returned.
- If *FirstCoupon* is NULL then an error is returned.
- If *Settlement* >= *FirstCoupon* then nothing is returned.
- The first quasi-coupon period is always the quasi-coupon period in which the issue date occurs.
- The previous coupon date for the first quasi-coupon period is calculated using *Frequency*, *Basis*, and *Maturity*. This is the value returned in quasistart.
- If there is only one quasi-coupon period then quasicoup is NULL. Otherwise the previous coupon date for the second quasi-coupon period is calculated using *Frequency*, *Basis*, and *Maturity*.
- If there are 2 quasi-coupon periods then DFC2 = NLF2.

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

- 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
- 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