OFLFACTORS

Updated: 31 Mar 2016

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

Syntax

```
Public Shared Function OFLFACTORS(
    ByVal Settlement As Date,
    ByVal Maturity As Date,
    ByVal Issue As Date,
    ByVal FirstCoupon As Date,
    ByVal LastCoupon 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 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**.

Issue

the issue date of the bond; the date from which the bond 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 bond. 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**.

LastCoupon

the last coupon date of the bond prior to the maturity. The period from the last interest date until the maturity date defines the odd interest period. All coupon dates from *FirstCoupon* to *LastCoupon* are assumed to occur at regular periodic intervals as defined by *Frequency*.

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

Rate

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

Redemption

the bond'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 bi-monthly, *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

is 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.OFLFACTORS_table`

```
Class OFLFACTORS_table
  Inherits Data.DataTable
  Property Item(RowIndex As Integer) As FinancialTypes.OutputRow_OFLFACTORS

Class OutputRow_OFLFACTORS
  Public A1 As Double
  Public A2 As Double
  Public DSC As Double
  Public E As Double
  Public N As Integer
  Public NCL As Integer
  Public NCF As Integer
  Public DLC1 As Double
  Public DLC2 As Double
  Public NLL1 As Double
  Public NLL2 As Double
  Public DFC1 As Double
  Public DFC2 As Double
  Public NLF1 As Double
  Public NLF2 As Double
  Public Nqf As Double
  Public quasistart As Date
  Public quasicoupfirst As Date
  Public quasicouplast As Date
  Public quasimaturity As Date
  Public C As Double
  Public LC As Double
  Public FC As Double
  Public P As Double
  Public AI As Double
  Public Y As Double
```

```
End Class
```

Column	Description
A1	If **NCF** = 1, the number of days from *Issue* to the *Settlement*. If **NCF** = 2 and *Settlement* >= **quasicoupfirst** then **DFC1** else the number of days from **quasicoupfirst** to *Settlement*.
A2	If **NCF** = 1 then NULL. If **NCF** = 2 and *Settlement* >= **quasicoupfirst** then the number of days from **quasicoupfirst** to *Settlement* else 0.
DSC	Number of days from the *Settlement* to the next quasi-coupon date.
E	Number of coupon days in the quasi-coupon period in which the settlement date falls.
N	Number of coupons between *FirstCoupon* and *LastCoupon*.
NCL	Number of quasi-coupon periods in the odd last period (1 or 2).
NCF	Number of quasi-coupon periods in the odd first period (1 or 2).
DLC1	If **NCL** = 1, the number of days from *LastCoupon* to *Maturity* else **NLL1**
DLC2	If **NCL** =2 then NULL else the number of days from **quasicouplast** to *Maturity*.
NLL1	The normal length of the first quasi-coupon period in the last coupon period. If **NCL** = 1 the length of the period from *LastCoupon* to **quasimaturity** else the length of the period from *LastCoupon* to **quasimaturity**.
NLL2	If **NCL** = 1 then NULL else the normal length of the period from **quasicouplast** to **quasimaturity**.
DFC1	The normal length of the first quasi-coupon period minus the number of days from **quasistart** to *Issue*.
DFC2	If **NCF** = 2 then NULL else **NLF2**
NLF1	The normal length of the first quasi-coupon period in the odd first period. If **NCF** = 1 then number of days from **quasistart** to *FirstCoupon* else the number of days from **quasistart** to **quasicoupfirst**.
NLF2	The normal length for the second quasi-coupon period in the odd first period. If **NCF** = 1 then NULL else the number of days from **quasicoupfirst** to *FirstCoupon*.
Nqf	Number of whole coupons between *Settlement* and *FirstCoupon*.
quasistart	Implied previous coupon date with respect to *Issue*.
quasicoupfirst	If **NCF** = 1 then NULL else the implied next coupon date with respect to *Issue*.
quasicouplast	If **NCL** = 1 then NULL else the implied next coupon date with respect to *LastCoupon*.
quasimaturity	The implied next coupon date with respect to *Maturity*.
C	Coupon amount
LC	Last coupon amount
FC	First coupon amount
P	Price. If *Yield* is NOT NULL then P is calculated from the inputs otherwise P is the value entered in *Price*.
AI	Accrued interest as of the settlement date.
Y	Yield. If *Yield* is NOT NULL then Y is the value entered in *Yield* otherwise Y is calculated from the inputs.

Remarks

- If *Settlement* is NULL then *Settlement* equals the 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 *LastCoupon* is NULL then an error is returned.
- If *Settlement* >= *FirstCoupon* then nothing is returned.
- The first quasi-coupon period in the odd first period is always the quasi-coupon period in which *Issue* occurs.
- The first quasi-coupon in the odd last period is always the quasi-coupon period in which *LastCoupon* occurs.
- The previous coupon date for the first quasi-coupon period is calculated using *Frequency*, *Basis*, and *LastCoupon*. This is the value returned in **quasistart**.
- If there is only one quasi-coupon in the odd first period then **quasicoupfirst** is NULL. Otherwise the previous coupon date for the second quasi-coupon period is calculated using *Frequency*, *Basis*, and *LastCoupon*.
- If there is only on quasi-coupon period in the odd last period the **quasicouplast** is NULL.

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
- 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