DFINTERP

Updated: 31 Mar 2016

Use `DFINTERP` to calculate the interpolated discount factor given a date. `DFINTERP` uses log-linear interpolation to calculate the interpolated discount factor. `DFINTERP` is not sensitive to order. The interpolation formula is:

$$df = df_1^{(1-\alpha)*d/d_1} * df_2^{\alpha*d/d_2}$$

$$\alpha = \frac{d - d_1}{d_2 - d_1}$$

Where

d	number of days from *StartDate* to *NewDate*
d_1	number of days from *StartDate* to MAX(*DFDate*) <= *NewDate*
d_2	number of days from *StartDate* to MIN(*DFDate*) > *NewDate*
df_1	discount factor for d_1
df_2	discount factor for d_2

Syntax

```
Public Shared Function DFINTERP(
    ByVal DFdate As Date,
    ByVal DF As Double,
    ByVal NewDate As Date,
    ByVal StartDate As Date,
    ByVal RV As String,)
```

Arguments

DFdate

the discount factor date. *DFdate* is an expression that returns a **Date**, or of a type that can be implicitly converted to **Date**.

DF

the discount factor. *DF* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

NewDate

the new date value used to calculate the interpolated discount factor. *NewDate* is an expression that returns a **Date**, or of a type that can be implicitly converted to **Date**.

StartDate

the starting date used in the calculation of the discount factors. *StartDate* is an expression that returns a **Date**, or of a type that can be implicitly converted to **Date**.

RV

the return value; discount factor, zero-coupon rate, or continuously compounded zero coupon rate. *RV* is an expression that returns a **String**, or of a type that can be implicitly converted to **String**.

Return Type

Double

Remarks

- If *StartDate* is NULL, *StartDate* is set to the current date.
- If *NewDate* is NULL and error will be returned.
- If a *DFDate-DF* pair contains a NULL, then the pair is not used in the interpolation calculation.
- *StartDate* must remain invariant for the GROUP.
- *NewDate* must remain invariant for the GROUP.
- *RV* must be either `'DF'` (discount factor), `'ZC'` (zero coupon), or `'CC'` (continuously compounded zero coupon).
- In situations where you want to calculate interpolated results for multiple dates, consider using the `INTERDFACT` table-valued function.
- For straight-line interpolation of the discount factors, consider using the `INTERP` function.
- For cubic spline interpolation of the discount factors, consider usign the `SPLINE` function.

See Also

- ED_FUT_CONV_ADJ_HL - Convert Eurodollars futures price to forward rate using Ho Lee convexity adjustment
- INTERPDFACT - Interpolated discount factors for a range of dates
- SWAPCURVE - Discount factors from a series of cash, futures, and swaps rates
- ZEROCOUPON - Interpolated zero-coupon rate from a series of cash, futures, or swaps rates