

# CFCONVEXITY

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Use **CFCONVEXITY** to calculate the convexity of a series of cash flows. The cash flow convexity is calculated as the second derivative of the present value of the cash flows divided by the present value of the cash flows. The unit of convexity is years.

## Syntax

```
Public Shared Function CFCONVEXITY(  
    ByVal Disc_rate As Double,  
    ByVal VDate As Date(),  
    ByVal CFamt As Double(),  
    ByVal CFdate As Date(),)
```

## Arguments

### *Disc\_rate*

the annual interest rate used to discount the cash flows to *vDate*. *Disc\_rate* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

### *VDate*

the date to which the cash flows are discounted. *VDate* is an expression that returns an Array of **Date**, or of a type that can be implicitly converted to an Array of **Date**.

### *CFamt*

the amount of the cash flow. *CFamt* is an expression that returns an Array of **Double**, or of a type that can be implicitly converted to an Array of **Double**.

### *CFdate*

the date of the cash flow. *CFdate* is an expression that returns an Array of **Date**, or of a type that can be implicitly converted to and Array of **Date**.

## Return Type

Double

## Remarks

- If *vDate* IS NULL then *vDate* is set equal to current system processing date
- *Disc\_rate* must be greater than -1
- Each cash flows is discounted using the formula  $CFamt * POWER(1+Disc\_rate, -DATEDIFF(d,vDate,CFdate) / 365)$ .

## See Also

- CFDURATION - Duration of a series of cash flows
- CFMDURATION - Modified duration of a series of cash flows
- CONVEXITY - Convexity of an option free bond
- DURATION - Duration of a security
- MDURATION - Macauley Duration
- OFCCONVEXITY - Convexity of a bond with and odd first coupon
- OFCDURATION - Duration of a bond with an odd first coupon
- OFCMDURATION - Modified duration of a bond with an odd first coupon
- OFLCONVEXITY - Convexity of a bond with an odd first and odd last coupon
- OFLDURATION - Duration of a bond with an odd first and odd last coupon
- OFLMDURATION - Modified duration of a bond with an odd first and odd last coupon
- OLCCONVEXITY - Convexity of a bond with an odd last coupon
- OLCDURATION - Duration of a bond with an odd last coupon
- OLCMDURATION - Modified duration of a bond with an odd last coupon
- RPICONVEXITY - Convexity of a bond paying regular periodic interest
- RPIDURATION - Duration of a bond paying regular periodic interest
- RPIMDURATION - Modified duration of a bond paying regular periodic interest
- STEPCONVEXITY - Convexity of a stepped-coupon bond
- STEPDURATION - Duration of a stepped-coupon bond
- STEPMDURATION - Modified duration of a stepped-coupon bond