

SORTINO2

Updated: 31 Mar 2016

Use `SORTINO2` to calculate the Sortino ratio based upon price data. The Sortino ratio is calculated as the mean difference of the returns (R) and the minimum acceptable return (R_m) divided by the downside deviation.

$$\text{SORTINO} = \frac{\bar{R} - R_m}{\sqrt{\frac{\sum_{i=1}^n \max(0, R_i - R_m)^2}{n}}}$$

Where

\bar{R} = the average of the returns

R_m = the minimum acceptable return

R_i = the i^{th} return

n = When `Full` = TRUE then the number of rows passed into the function minus 1; else the number of rows where $\max(0, R_i - R_m) < 0$.

Syntax

```
Public Shared Function SORTINO2(  
    ByVal PDate As Date(),  
    ByVal PValue As Double(),  
    ByVal MAR As Double,  
    ByVal Full As Boolean,)
```

Arguments

PDate

the date associated with the price or valuation. *PDate* is an expression that returns an Array of **Date**, or of a type that can be implicitly converted to an Array of **Date**.

PValue

the price or value for the *PDate*. *PValue* is an expression that returns an Array of **Double**, or of a type that can be implicitly converted to an Array of **Double**.

MAR

the minimum acceptable return. *MAR* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Full

defines how to calculate the downside deviation. When *Full* = TRUE the downside deviation is calculated with n equal to the number of rows passed into the function minus 1. When *Full* = FALSE n is equal to the number of rows where $\max(0, R - R_m) < 0$. *Full* is an expression that returns a **Boolean**, or of a type that can be implicitly converted to **Boolean**.

Return Type

Double

Remarks

- If there are no negative returns, then **SORTINO2** is NULL.
- *Full* defaults to FALSE

See Also

- EQALPHA - Intercept of the security characteristic line between an asset and a specified benchmark
- EQBETA - Correlated volatility (beta) between an asset and a specified benchmark
- EQVOLATILITY - Historical volatility based upon price or valuation data
- INFORATIO - Information ratio based upon return data
- INFORATIO2 - Information ratio based upon price or valuation data
- MAXDD - Maximum drawdown based on net asset or portfolio values
- MAXDD2 - Maximum drawdown based on net asset or portfolio returns
- MOIC - Multiple of Invested Capital
- SHARPE - Sharpe ratio based upon return data
- SHARPE2 - Sharpe ratio based upon price or valuation data
- SORTINO - Sortino ratio based upon return data
- TREYNOR - Treynor ratio based upon return data
- TREYNOR2 - Treynor ratio based upon price or valuation data