INFORATIO

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Use the aggregate function `INFORATIO` to calculate the Information ratio based upon return data. You have the option of computing the Information ratio using either simple returns or geometric returns. For simple returns, the Information ratio is calculated as the mean difference of the returns divided by the standard deviation of the differences multiplied by the square root of a scale factor supplied to the function. For daily returns the scale factor might be 252; for weekly returns 52; for monthly returns 12. For the sake of consistency, the risk-free rate should be in the same units as the scaling factor.

$$INFORATIO = \frac{\bar{R} - \overline{Rb}}{\sqrt{\sigma_{(R-Rb)}}} * \sqrt{scale}$$

For geometric returns, the Information ratio is calculated as the difference in the geometric mean of the return and the geometric mean of the benchmark, divided by the square root of the scaling factor times the standard deviation.

$$INFORATIO = \frac{[\prod_{i=1}^{n} 1 + R_i]^{scale/n} - [\prod_{i=1}^{n} 1 + Rb_i]^{scale/n}}{\sqrt{\sigma_{(R-Rb)}} * \sqrt{scale}}$$

Syntax

```
Public Shared Function INFORATIO(
    ByVal R As Double(),
    ByVal RB As Double(),
    ByVal Scale As Double,
    ByVal Geometric As Boolean,)
```

Arguments

R

the return value; the percentage return in floating point format (i.e. 10% = .01). *R* is an expression that returns an Array of **Double**, or of a type that can be implicitly converted to an Array of **Double**.

RB

the risk-free rate. *RB* is an expression that returns an Array of **Double**, or of a type that can be implicitly converted to an Array of **Double**.

Scale

the scaling factor used in the calculation. *Scale* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Geometric

identifies whether or not to use geometric returns in the calculation. *Geometric* is an expression that returns a **Boolean**, or of a type that can be implicitly converted to **Boolean**.

Return Type

Double

Remarks

- If *Geometric* IS NULL then *Geometric* is set equal to False.
- If *Scale* IS NULL them *Scale* is set to 1.
- For daily returns set *Scale* = 252.
- For weekly returns set *Scale* = 52.
- For monthly returns set *Scale* = 12.
- For quarterly returns set *Scale* = 4.
- To calculate the Information ratio using price data or portfolio values, use the `INFORATIO2` aggregate function.

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
- 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
- SORTINO2 - Sortino ratio based upon price data
- TREYNOR - Treynor ratio based upon return data
- TREYNOR2 - Treynor ratio based upon price or valuation data