SemiDeviation

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Use the aggregate function SemiDeviation to calculate the semi-deviation of asset returns. The formula for SemiDeviation is:

$$\text{SemiDeviation} = \sqrt{\text{AVG}(\min(0, \text{R} - \overline{\text{R}})^2)}$$

Where

R = asset return

$\overline{\text{R}}$ = average asset return

Syntax

```
Public Shared Function SemiDeviation(
    ByVal R As Double(),)
```

Arguments

R

the asset return for a period; the percentage return in floating point format (i.e. 10% = 0.10). *R* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Return Type

Double

Remarks

- If *R* IS NULL it is not included in the calculation.
- If there are no non-NULL then NULL is returned.

See Also

- BetaCoKurt - Calculate the beta-cokurtosis of an asset return and a benchmark return
- BetaCoSkew - Calculate the beta-coskewness of an asset return and a benchmark return
- BetaCoVar - Calculate the beta-covariance of an asset return and a benchmark return
- DownsideDeviation - Calculate the downside deviation of asset returns
- DownsideFrequency - Calculate the downside frequency of asset returns
- DownsidePotential - Calculate the downside potential of asset returns
- FinCoKurt - Calculate the cokurtosis of an asset return and a benchmark return
- FinCoSkew - Calculate the coskewness of an asset return and a benchmark return
- Omega - Calculate the Omega of asset returns
- OmegaExcessReturn - Calculate the Omega Excess Return
- OmegaSharpeRatio - Calculate the Omega-Sharpe ratio of asset returns
- SemiVariance - Calculate the semi-variance of asset returns

- SpecificRisk - Calculate Specific Risk, the standard deviation of the error term in the regression equation
- SystematicRisk - Calculate the Systematic Risk
- TotalRisk - Calculate Total Risk
- UpsideFrequency - Calculate the upside frequency of asset returns
- UpsidePotentialRatio - Calculate the Upside Potential Ratio
- UpsideRisk - Calculate the Upside Risk, Upside Variance or Upside Deviation