

SemiVariance

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Use the aggregate function [SemiVariance](#) to calculate the semi-variance of asset returns. The formula for [SemiVariance](#) is:

$$\text{SemiVariance} = \sqrt{\frac{\min(0, R - \bar{R})^2}{n}}$$

Where

- R = asset return
- \bar{R} = average asset return
- n = number of rows where $R < \bar{R}$

Syntax

```
Public Shared Function SemiVariance(  
    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 an Array of **Double**, or of a type that can be implicitly converted to an Array of **Double**.

Return Type

Double

Remarks

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

- SemiDeviation - Calculate the semi-deviation 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