



S-Trader





HVI | Historical Volatility Index

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Description

The Historical Volatility Index over a certain period is an annualized measure of dispersion of single period returns.

Formula

Step 1: Calculate $Value_i / Value_{i-1}$ ratios;

Step 2: Calculate LN – or natural logarithm – of the values obtained at Step 1;

Step 3: For the required n periods, calculate the Standard Deviation of the values obtained at Step 2 based on a simple moving average;

Step 4: for the selected number q of StDevs and d number of days to annualize,

$$HVI = \text{Historical Volatility Index} = 100 * q * \text{StDev} * \text{SQRT}(d).$$

Parameters

Source	Any price source (O, H, L, C, Vol, OI) or any other built-in or custom study
Periods	Any number of periods
Periods per year	Any number of periods
StandardDeviations	Any number of standard deviations



Output value(s)

There is one output value resulting from the formula, the Historical Volatility Index.

Plot

The plot is in a separate panel at the bottom.

Quant Script™ Syntax

Short Form	<i>HVI</i> (Source, Periods, MA Type, Periods Per Year, Standard Deviations)
Long Form	<i>HistoricalVolatilityIndex</i> (Source, Periods, MA Type, Periods Per Year, Standard Deviations)



Dialogs

Chart Study Dialog

Historical Vol Index ✕

Indicator Parameters

Source

Period

BarHistory

StandardDeviations

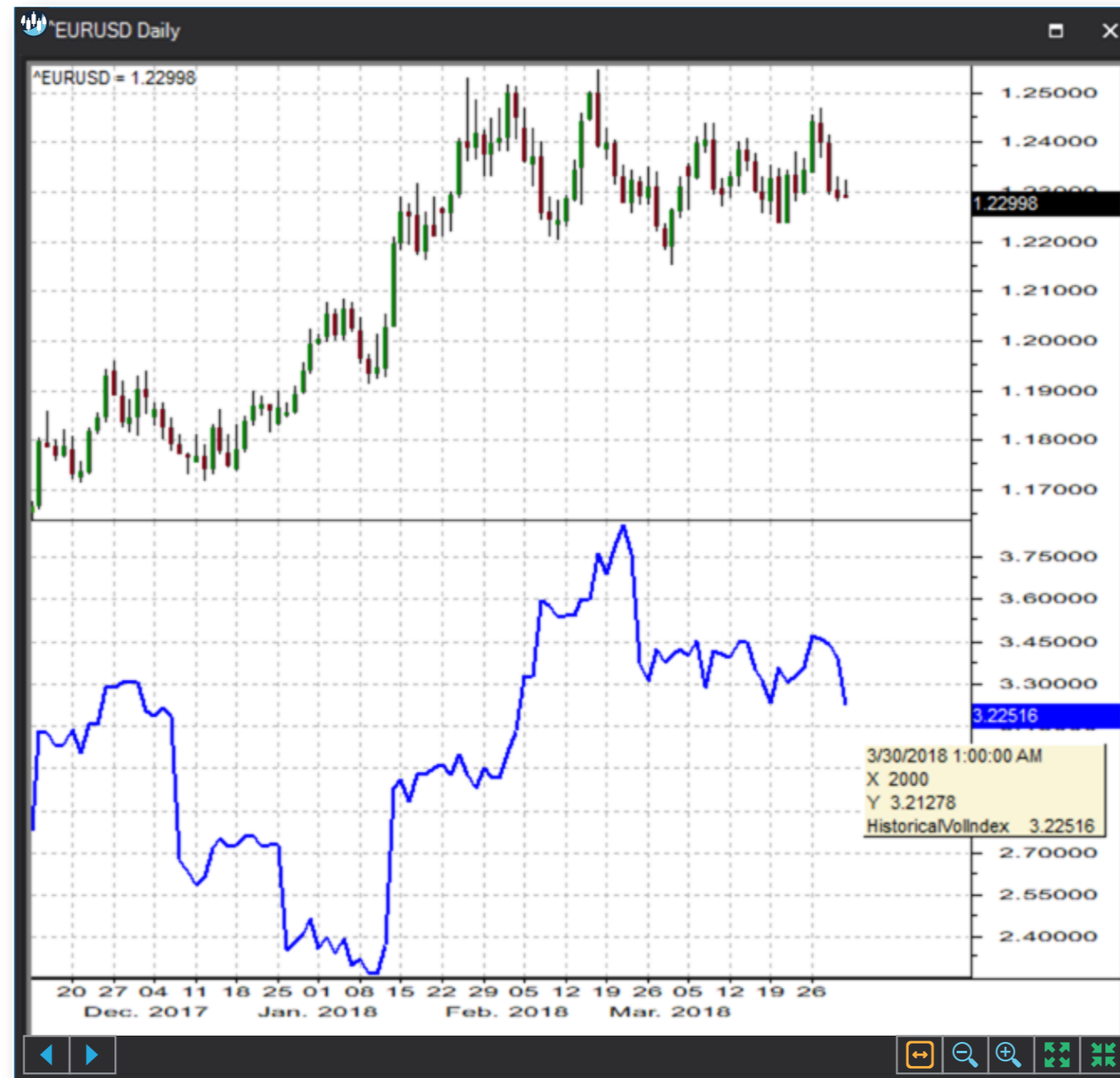
Series Configuration

Main

Save as Default Setting



Sample Chart With Study





Quant Script™ Wizard Study Dialog

The image shows two overlapping dialog boxes in the S-Trader desktop platform. The 'Custom Study Wizard' dialog is on the left, and the 'Add Variable' dialog is on the right.

Custom Study Wizard

- Save To Group: Default
- Custom Study Name: [Empty text box]
- Password: [Empty text box]
- Result: Line, Solid, 2, [Color selection]
- Reverse_Result: Line, Solid, 2, [Color selection]
- Buttons: Add To New Panel (checked), Add New Variable, Edit Selected Variable
- Table:

Name	Description
------	-------------
- Buttons: OK, Cancel

Add Variable

- Name: [Empty text box]
- Description: [Empty text box]
- Variable List:
 - ATR
 - AverageTrueRange
 - ChaikinVolatility
 - CV
 - EFT
 - EFTS
 - EhlerFisherTransform
 - EhlerFisherTransformSignal
 - HighMinusLow
 - HistoricalVolatilityIndex (Selected)
 - HML
 - HVI
 - MassIndex
 - MI
 - TR
 - TrueRange
 - ZVAL
 - ZValue
- Parameters:
 - Source: CLOSE
 - Period: 30
 - BarHistory: 254
 - StandardDeviations: 1
- Button: Create Script Line
- Code Field: HistoricalVolatilityIndex(CLOSE, 30, 254, 1)
- Buttons: OK, Cancel



Quant Script™ Study Dialog

Custom Study Editor [Close]

Save To Group: 6_VOLATILITY [Dropdown] A 15.25 [Dropdown]

Custom Study Name: HVI

Password: [Empty Field]

Result: Line [Dropdown] Solid [Dropdown] 2 [Spinner] [Color Picker]

Reverse_Result: Line [Dropdown] Solid [Dropdown] 2 [Spinner] [Color Picker]

Formula Add To New Panel

```
SET RESULT = HVI(CLOSE, 30, 254, 1)
SET REVERSE_RESULT = HistoricalVolatilityIndex(CLOSE, 30, 254, 1)
```

[OK] [Cancel]