



S-Trader





SERR | Standard Error

Contents

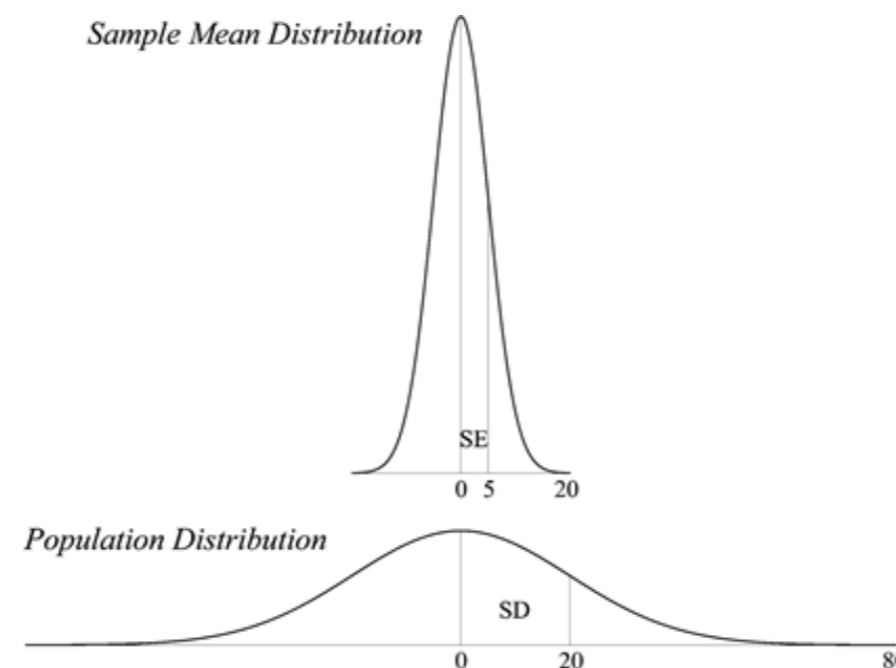
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Description

The standard error (SE) of a statistic (most commonly the mean) is the standard deviation of its sampling distribution, or sometimes an estimate of that standard deviation. The equation for the standard error of the mean (SEM) depicts the relationship between the dispersion of individual observations around the population mean (the standard deviation), and the dispersion of sample means around the population mean (the standard error). Different samples drawn from that same population would in general have different values of the sample mean, so there is a distribution of sampled means (with its own mean and variance). The relationship with the standard deviation is such that, for a given sample size, the standard error equals the standard deviation divided by the square root of the sample size. As the sample size increases, the sample means cluster more closely around the population mean and the standard error decreases.

A distinction must be made here. In regression analysis, the term "standard error" is also used in the phrase standard error of the regression to mean the ordinary least squares estimate of the standard deviation of the underlying errors. These are two different concepts and should not be confused.





Formula

Step 1: Calculate the Standard Deviation using the appropriate moving average type for the specified source and n periods using existing formulas;

Step 2: Calculate $SERR = \text{Multiple} * (\text{Standard Deviation}) / [\text{SquareRoot}(n \text{ periods})]$

Parameters

Source	Any price source (O, H, L, C, Vol, OI) or any other built-in or custom study
Periods	Any number of periods
StError Multiple	Any rational number greater than 0
MA Type	Any available moving average type

Output value(s)

There is one output value resulting from the formula, the Standard Error.

Plot

The plot is in a separate panel at the bottom.



Quant Script Syntax

Short Form	<i>SERR</i> (Source, Periods, Multiple, MA Type)
Long Form	<i>StandardError</i> (Source, Periods, Multiple, MA Type)

Dialogs

Chart Study Dialog

Standart Error [X]

Indicator Parameters

Source: ^EURUSD.close

Period: 21

Multiplier: 2.00000

MaType: Weighted

Series Configuration

Main: Line

Solid

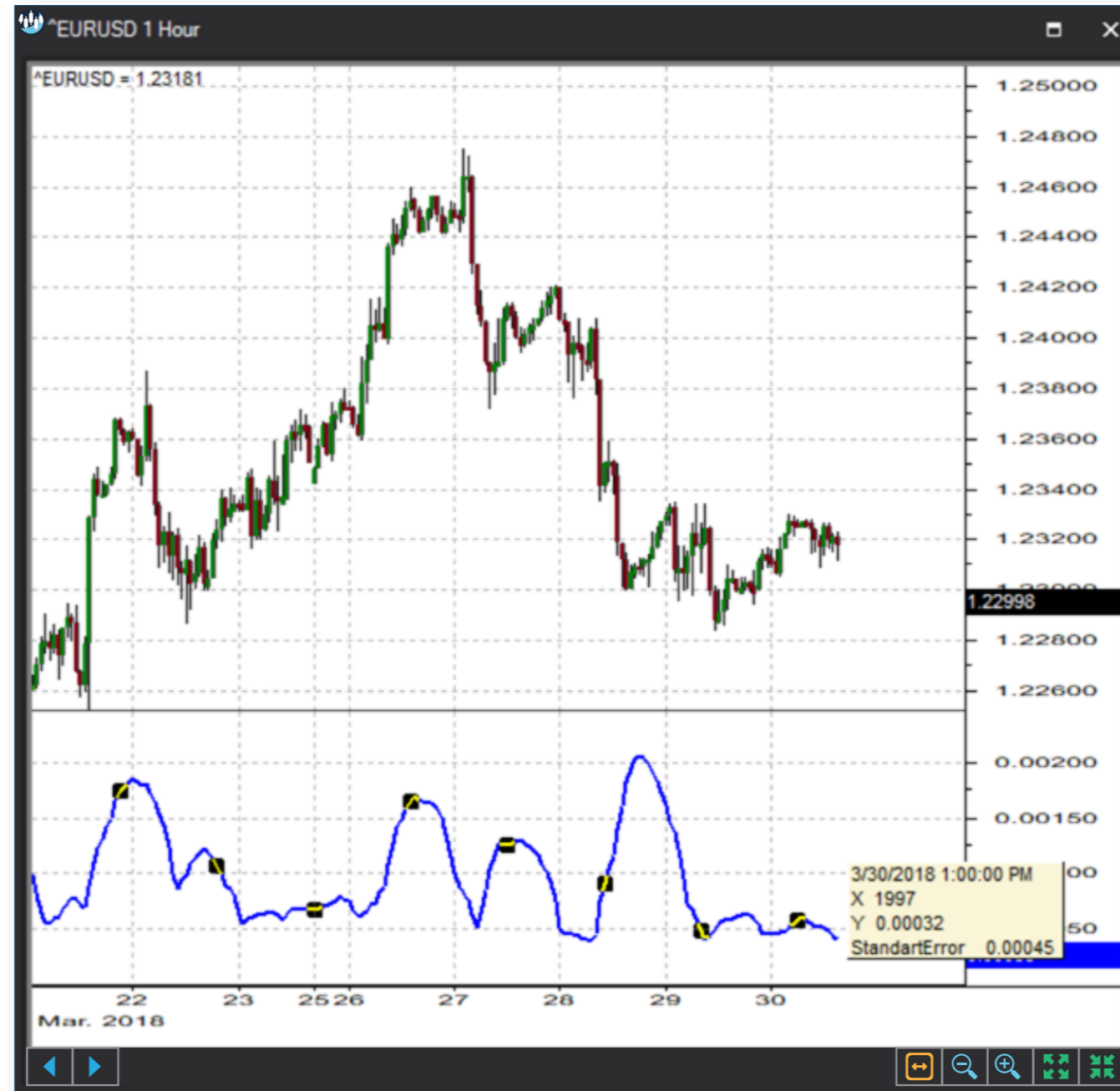
2

Save as Default Setting

Add Cancel



Sample Chart With Study





Quant Script™ Wizard Study Dialog

The image shows two overlapping dialog boxes from the S-Trader 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 swatches]
- Reverse_Result: Line, Solid, 2, [Color swatches]
- 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:
 - Average
 - AVG
 - CA
 - CorrelationAnalysis
 - KURT
 - Kurtosis
 - MedianPrice
 - MP
 - SDV
 - SERR
 - SKEW
 - SKEWNESS
 - StandardDeviations
 - StandardError
 - TP
 - TypicalPrice
 - WC
 - WeightedClose
- Parameters:
 - Source: CLOSE
 - Period: 21
 - Multiplier: 2.00
 - MaType: Weighted
- Button: Create Script Line
- Preview: StandardError(CLOSE, 21, 2.00, Weighted)
- Buttons: OK, Cancel



Quant Script™ Study Dialog

Custom Study Editor [Close]

Save To Group: 7_STATISTICS [Dropdown] A 14.25 [Dropdown]

Custom Study Name: SERR

Password: [Text Field]

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

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

Formula Add To New Panel

```
SET RESULT = SERR(CLOSE, 13, 2, WEIGHTED)
SET REVERSE_RESULT = StandardError(CLOSE, 13, 2, WEIGHTED)
```

[OK] [Cancel]