



S-Trader





SMI | Stochastic Momentum Index

Contents

Description	3
Formula	3
Parameters	4
Output value(s)	4
Plot	4
Quant Script™ Syntax	5
Dialogs	5
Chart Study Dialog	5
Sample Chart With Study	6
Quant Script™ Wizard Study Dialog	7
Quant Script™ Study Dialog	8



Description

The Stochastic Momentum Index (SMI) originates from William Blau who first mentioned the SMI in the January 1993 edition of the "Technical Analysis of Stocks & Commodities" Magazine. The Stochastic Momentum Index (SMI) is an advancement of the Stochastic Oscillator: whereas the Stochastic Oscillator is used to calculate the distance between the Current Close in relation to the recent n periods High/Low range, the Stochastic Momentum Index shows the distance between the Current Close and the Midpoint of the High/Low Range. Therefore, the SMI is reasonably less unpredictable than the Stochastic Oscillator over a single period. The SMI normally ranges in between +100 and -100 and is sometimes used in conjunction with the Tushar Chande Momentum Oscillator. When the Current Close is greater than the Midpoint of the High/Low Range, the SMI is above zero. Similarly, when the Current Close is less than the Midpoint of High/Low Range the SMI is below zero.

Formula

Step 1: Calculate the n Period extremes as $H_n = \text{Highest High during } n \text{ periods}$ and $L_n = \text{Lowest low during } n \text{ periods}$;

Step 2: Calculate Midpoint Delta = $\text{Close} - (H_n + L_n) / 2$;

Step 3: Calculate First Smoothed Midpoint Delta = an average of the Midpoint Delta for the selected %K Smooth periods and the %K moving average type using existing formulas;

Step 4: Calculate Double Smoothed Midpoint Delta = an average of the First Smoothed Midpoint Delta for the selected % K Double Smooth periods and the %K moving average type using existing formulas;

Step 5: Calculate Trading Range = $TR = (H_n - L_n) / 2$;

Step 6: Calculate First Smoothed TR = an average of the TR for the selected %K Smooth periods and the %K moving average type using existing formulas;

Step 7: Calculate Double Smoothed TR = an average of the First Smoothed TR for the selected % K Double Smooth periods and the %K moving average type using existing formulas;



Step 8: Calculate SMI = $100 * (\text{Double Smoothed Midpoint Delta} / \text{Double Smoothed Trading Range})$

Step 9: Calculate Smoothed SMI = an average of the SMI for the selected % D Smooth periods and the %D moving average type using existing formulas.

Parameters

%K Periods	Any number of periods
%K Smooth	Any number of periods
%K Double Smooth	Any number of periods
%D Periods	Any number of periods
%K MA Type	Any available moving average type
%D MA Type	Any available moving average type

Output value(s)

There are two output values resulting from the formula, the Stochastic Momentum Index %K and Stochastic Momentum Index %D.

Plot

The plot is in a separate panel at the bottom.

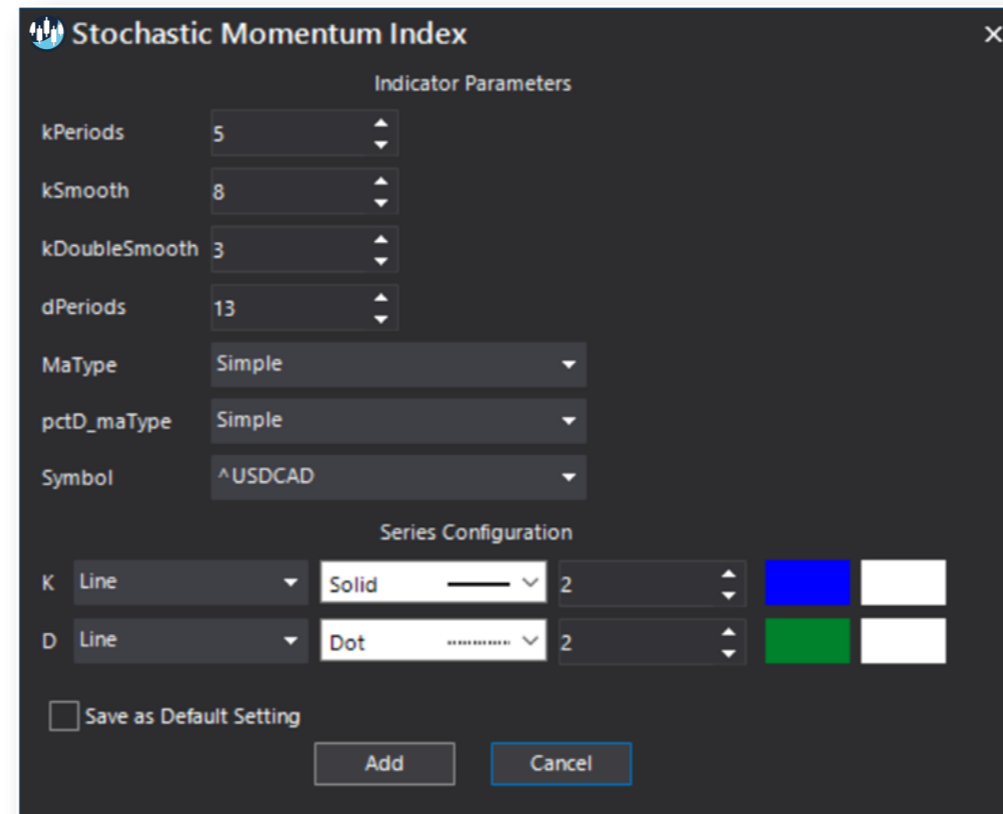


Quant Script™ Syntax

Short Form	SMIK (%K Periods, %K Smooth, %K Double Smooth, %D periods, %K MA Type, %D MA Type)
	SMID (%K Periods, %K Smooth, %K Double Smooth, %D periods, %K MA Type, %D MA Type)
Long Form	StochasticMomentumIndexK (%K Periods, %K Smooth, %K Double Smooth, %D periods, %K MA Type, %D MA Type)
	StochasticMomentumIndexD (%K Periods, %K Smooth, %K Double Smooth, %D periods, %K MA Type, %D MA Type)

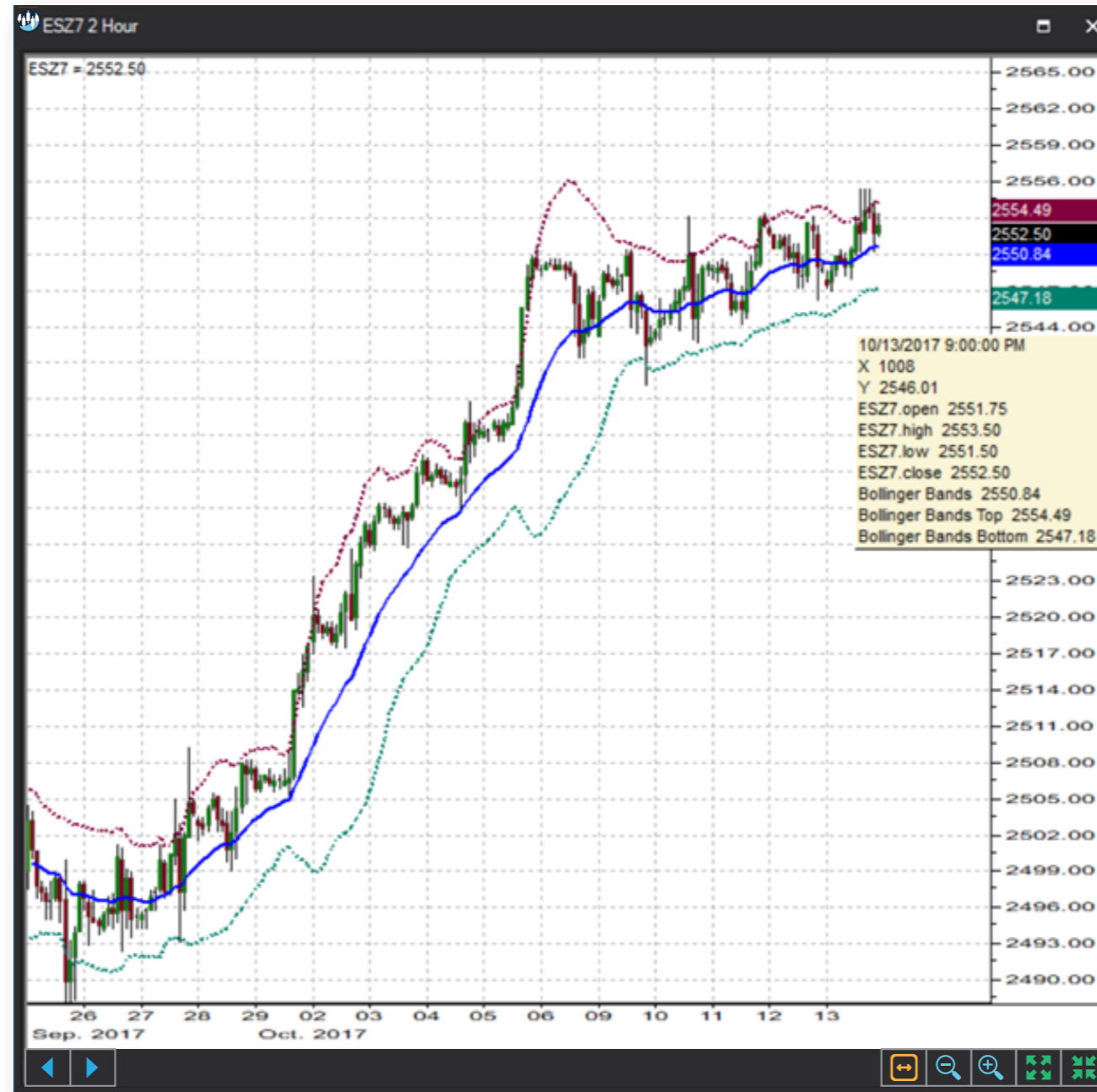
Dialogs

Chart Study Dialog





Sample Chart With Study





Quant Script™ Wizard Study Dialog

Add Variable

Name: BBT21_2_E

Description: Bollinger Bands Top for 21 CLOSE with 2 STDEV from EMA

Envelopes

- BBB
- BBM
- BBT
- BollingerBandsBottom
- BollingerBandsMiddle
- BollingerBandsTop**
- FCBH
- FCBL
- HighLowBandsBottom
- HighLowBandsMain
- HighLowBandsTop
- HLBB
- HLBM
- HLBT
- KCB
- KCM
- KCT

Source: CLOSE

Period: 21

StandardDeviations: 2.00

MaType: EXPONENTIAL

Create Script Line

BollingerBandsTop(CLOSE, 21, 2.00, EXPONENTIAL)

OK Cancel



Quant Script™ Study Dialog

