



InferTrade
PREDICTIVE RESEARCH TOOLS

Predictive Relationship: Stochastic Relative Strength Index

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1 Trading Strategy Description

The Stochastic RSI (StochRSI) is an indicator used in technical analysis to identify overbought and oversold signals. It ranges between zero and one hundred and is created by applying the Stochastic oscillator formula to a set of relative strength index (RSI) values rather than to standard price data. An asset is considered oversold when the StochRSI values is below 20 and considered overbought when the StochRSI value is above 80.

2 How to Trade

In order to trade with the rules InferTrade provides, we calculate allocations for each day. We then allocate that fraction of our total portfolio value (cash and securities) to the market we are trading - to do this we buy or sell securities to reach the target allocation. h

How Allocation Determines Trade Size

The allocation is the fractional amount of the portfolios value used to determine the size of the trading position. For example, if the allocation for Microsoft (MSFT) shares is 50%, and we have \$100, we invest \$50 so that the value of held stock is the same as the value of held cash.

Rule Specific Trading Details

Te strategy is to identify overbought and oversold signals. Bullish Momentum: when StochRSI is above 80. Bearish Momentum: when StochRSI is below 20.

3 Rule Parameters

Below is a table summarizing the parameters specific to this trading rule.

Parameter Name	Default Value	Description	Symbol
Time Length	14 Days	Time frame on which the StochRSI is calculated	L

4 Equation

Below are the equations which govern how this specific trading rule calculates a trading position.

$$RS_t = \frac{AvgU}{AvgD} \quad (1)$$

$$RSI_t = 100 - \frac{100}{(1 + RS_t)} \quad (2)$$

$$RSI_{min} = \min\{RSI_{t-L}, \dots, RSI_t\} \quad (3)$$

$$RSI_{max} = \max\{RSI_{t-L}, \dots, RSI_t\} \quad (4)$$

$$StochRSI_t = \frac{RSI_t - RSI_{min}}{RSI_{max} - RSI_{min}} \quad (5)$$

with:

AvgU : average of all upward movements in the last L price bars.

AvgD : average of all downward movements in the last L price bars.

RS_t : is the relative strength at time t .

RSI_t : is the relative strength index at time t .

RSI_{min} : Lowest RSI in last L periods.

RSI_{max} : Highest RSI in last L periods.

$StochRSI_t$: is the stochastic relative strength index at time t .

5 Glossary

- **Bullish:** Positive outlook on the market. Expectation of positive returns.
- **Bearish:** Negative outlook on the market. Expectation of negative returns.
- **Allocation:** The allocation is the fractional amount of the portfolios value used to determine the size of the trading position.
- **Parameter:** Value used by the trading rule in the calculation for trading position
- **Trading Rule:** Strategy to determine when to buy, hold or sell a position.

Further Links

1. InferTrade: <https://www.infertrade.com>
2. Privacy Policy/Legal notice: <https://www.infertrade.com/privacy-policy>
3. InferStat Ltd: <https://www.inferstat.com>