InferTrade
PREDICTIVE RESEARCH TOOLS

Predictive Relationship: Schaff Trend Cycle

Contents

1 Trading Strategy Description

The Schaff Trend Cycle (STC) Created by Doug Schaff in 1999 is an oscillator-type indicator that can help you identify positive and negative trends, indicate entry and exit points, as well as provide buy and sell signals. The Schaff Trend Cycle is bounded between 0 and 100, when it surpasses 25, it is considered as a bullish signal and when it breaks 75 it is considered as a bearish signal.

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.

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

The strategy is to identify the oversold and overbought markets.
Oversold : when STC value is at 25.
Overbought : when STC value is at 75.

3 Rule Parameters

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

Parameter Name	Default Value	Description	Symbol
Slow Look Back Length	30	Look back length used to compute slow MA.	L_s
Fast Look Back Length	2	Look back length used to compute fast MA.	L_f
Number of periods	10	Number of periods used to compute σ and Δ_t.	n

4 Equation

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

$$EMA(P_t^c, L_s) = \left(P_t^c * \left(\frac{S}{1+L_s}\right)\right) + EMA_{t-1} * \left(1 - \frac{S}{1+L_s}\right) \tag{1}$$

$$EMA(P_t^c, L_l) = \left(P_t^c * \left(\frac{S}{1+L_l}\right)\right) + EMA_{t-1} * \left(1 - \frac{S}{1+L_l}\right) \tag{2}$$

$$MACD = EMA(P_c, L_s) - EMA(P_c, L_l) \tag{3}$$

$$STC = 100 \times \frac{MACD - \%K(MACD)}{\%D(MACD) - \%K(MACD)} \tag{4}$$

where:
P_t^c: is the close price of at time t.
L_s: is the short term look back window.
L_l: is the long term look back window.
$EMA(P_t^c, L_s)$: is the short term exponential moving average at time t.
$\%K$: is the stochastic oscillator whose moving average is $\%D$.
STC: is the Schaff Trend Cycle Indicator.

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`