InferTrade

PREDICTIVE RESEARCH TOOLS

Predictive Relationship: Two Moving Averages

Contents

1 Trading Strategy Description

This price-only rule takes positions based on two moving averages, and a minimum threshold K. It allocates a positive position when the shorter moving average is above K fraction higher than the other average and vice versa.

2 Rule Parameters

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

Parameter Name	Default Value	Description	Symbol
Minimum ratio	0.01	Threshold difference in averages.	K
Short price average length	2	Number of days to include in the fast moving average.	L_1
Long price average length	2	Number of extra days to include in slow moving average.	L_2
Maximum allocation	1.0	Maximum size of position to take.	Z_{max}

3 Equation

$$\Lambda(t, L_1, p) = \frac{1}{L_1} \sum_{n=0}^{L_1-1} p(t-n) \tag{1}$$

$$\Lambda(t, L_2, p) = \frac{1}{L_2} \sum_{n=0}^{L_2-1} p(t-n) \tag{2}$$

$$\Lambda_t = \frac{\Lambda(t, L_1, p)}{\Lambda(t, L_2, p)} \tag{3}$$

$$z_t = \begin{cases} Z_{max}, & \text{if } \Lambda_t > 1 + 2K \\ \frac{\Lambda_t - 1 - K}{K}, & \text{if } 1 + K < \Lambda_t < 1 + 2K \\ 0.0, & \text{if } 1/(1+K) < \Lambda_t < 1 + K \\ -\frac{1/\Lambda_t - 1 - K}{K}, & \text{if } 1/(1+2K) < \Lambda_t < 1/(1+K) \\ -Z_{max}, & \text{if } \Lambda_t < 1/(1+2K) \end{cases} \tag{4}$$

where z_t is the portfolio allocation at time t, and $p = p(t)$ is the value of the price series.

4 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`