



**InferTrade**  
PREDICTIVE RESEARCH TOOLS

# Predictive Relationship: Detrended Price Oscillator

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# 1 Trading Strategy Description

The Detrended Price Oscillator (DPO) is a lagging indicator that attempts to filter out short-term price trends to highlight the broader cycle of price movements. . To accomplish this, the moving average (generally a 14-period) becomes a straight line and price variation above and below the moving average becomes the Price Oscillator. A bullish trend shift is indicated when the DPO crosses above zero and a bearish trend shift if the DPO crosses below zero.

## 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 asset's price cycles. Bullish Reversal - when DPO is above zero & Bearish Reversal - when DPO is below zero.

## 3 Rule Parameters

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

Parameter Name	Default Value	Description	Symbol
Look Back	20	Number of look back periods.	L
Simple Moving Average	20	Simple Moving Average of $n$ periods.	$SMA(L)$

## 4 Equation

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

$$DPO = P_{\frac{L}{2}+1} - SMA(L) \quad (1)$$

where:

$P_{\frac{L}{2}+1}$  : Closing Price of asset where look back periods are determined using  $\frac{L}{2} + 1$ .

e.g. if  $L = 20$  then closing price of asset would be from  $\frac{20}{2} + 1 = 11$  periods ago.

$SMA(L)$  : is the Simple Moving Average with number of periods determined using parameter L.

## 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>