

Mean Reversion Institutional System

Objective and trading philosophy:

This system aims to identify and capitalise on price reversions within relatively stable or consolidating market environments. Rather than chasing trending moves, it focuses on detecting conditions where prices have deviated excessively from their short-term average, signalling likely rebounds or pullbacks within a defined range.

The core idea is that institutional players often operate within controlled volatility bands, and when price moves become too stretched, a correction or mean reversion tends to follow, particularly when confirmed by volume activity and momentum oscillators.

Key Analytical Components

1. Weekly range filter

The system starts by assessing the broader weekly trend context. It calculates two moving averages of weekly closing prices — one long-term and one short-term. If the short-term average lies below the long-term and the long-term average's slope is relatively flat (within a predefined maximum percentage), the market is deemed to be in a range or consolidating mode.

This filter ensures that the system only operates in non-trending or sideways markets, where mean reversion is more likely to succeed, avoiding entries during strong directional trends.

2. Momentum Oscillator for Overbought/Oversold conditions

A smoothed oscillator is applied on recent price data to detect momentum extremes. Values below a low threshold indicate oversold conditions, while values above a high threshold indicate overbought conditions.

This momentum measure helps identify potential turning points by signalling when price momentum is exhausted at extremes.

3. Price Deviation and standardised score

The system calculates the percentage deviation of the current price from a short-term moving average, marking large absolute deviations as extreme conditions.

Alongside, it computes a standardised score measuring how far the current price is from its mean in units of standard deviation over a recent lookback window.

Both these metrics are used together to quantify the degree of price dislocation relative to recent history, serving as a robust indicator of potential reversion points.

4. Volume confirmation

An important element of the system is the detection of volume spikes, moments when trading volume significantly exceeds its average level. Such spikes often reflect institutional activity or increased market participation, adding validity to the signals.

Volume confirmation reduces the likelihood of false signals generated by thin or unconvincing price moves.

Signal conditions and trade management

- **Buy signals** are generated when the system confirms:
 - The market is in range mode.
 - Momentum oscillator shows oversold conditions.
 - Price has deviated markedly below its recent average.
 - The standardised score signals meaningful negative deviation.
 - A volume spike occurs, indicating strong participation.
- **Sell signals** are the inverse, requiring overbought momentum, marked positive deviation, and volume confirmation, again within the range mode context.

Risk Control and exit

The system uses a hard stop-loss set at a fixed percentage distance from the entry price to protect against adverse moves.

Exits are triggered either by hitting the stop-loss or by the momentum oscillator moving into opposite extreme territory (e.g., exiting longs when momentum turns overbought).

Operational Summary

This system is particularly suited to:

- Markets or periods exhibiting sideways or range-bound price action.
- Traders seeking to exploit short-term overextensions rather than trend-following moves,

Conclusion

By layering multiple technical signals, trend context, momentum extremes, price deviation, and volume spikes, this approach seeks to identify statistically significant reversions within consolidating markets, helping to capture reliable bounce or pullback trades. The integration of weekly trend filtering differentiates it from typical short-term mean reversion systems, focusing on higher-probability environments and potentially reducing whipsaws.