

Reversal System

Purpose and Strategy:

This system is designed to identify early-stage market reversals in downtrends, signalling potential points where price weakness is likely to give way to a recovery. It targets conditions where market momentum and price action show significant deterioration but have not yet reached full capitulation. The goal is to capture profitable long trades by entering before the final, deepest lows.

Core Analytical Components

1. Momentum rate-of-change detector

This component measures the acceleration or deceleration of risk-adjusted momentum over a specified timeframe. Rather than just looking at raw price moves or volatility, it calculates how quickly the quality of the underlying price trend is shifting. A sharp negative change here implies that the market's directional conviction is weakening rapidly, a precursor to potential reversals.

2. Price efficiency metric

This element evaluates how “clean” or efficient the recent price moves have been. It computes the ratio of net directional movement to total absolute price movement over a lookback period. Low or negative readings indicate strong and uninterrupted downward moves, while values closer to zero or positive suggest choppy or less decisive action.

Together, these components provide a nuanced picture of both the speed of momentum decay and the structural integrity of the trend.

Signal logic

The system employs a dual-path trigger mechanism to identify reversal opportunities, acknowledging that markets may present varying profiles of weakness before a rebound:

- Path 1: Strong downward efficiency combined with moderately severe momentum deterioration. This reflects cases where price action is clearly breaking down with relatively smooth, directional selling pressure.
- Path 2: Moderately negative efficiency coupled with extreme momentum deterioration. This scenario highlights instances where the momentum metric signals deep instability despite somewhat less pristine price action — often early signs of exhaustion in complex downtrends.

A reversal signal is generated if either condition is satisfied, broadening the system's sensitivity and enabling it to detect a wider range of oversold environments.

Entry and tracking

Upon signal confirmation:

- The system marks the current price as the entry point.
- It opens a position (long only).

Exit criteria

The system incorporates a time and behaviour-based exit filter to avoid premature trade closure:

- It monitors consecutive periods where the price path efficiency metric returns to neutral or mildly negative values, indicative of stabilisation.
- When certain consecutive such periods occur, the system signals an exit.

This approach ensures that the position is held through initial volatility and only closed once the market shows signs of settling or shifting away from oversold conditions.

Strategic implications

This system is particularly well-suited for traders and investors who:

- Seek to enter early reversals in weakening markets.
- Prefer a rules-based, momentum and structure-driven framework over purely price or volatility-based signals.
- Wish to limit downside by exiting on confirmed signs of recovery rather than arbitrary price targets.
- Need a flexible yet disciplined method that captures both clear capitulations and less obvious structural breakdowns.

Summary

By combining a dynamic momentum velocity measure with a price movement efficiency gauge, the system offers a sophisticated tool to identify probable reversal zones in deteriorating markets. Its dual-path logic and adaptive exit mechanism make it both sensitive and selective, helping avoid false entries while catching meaningful rebounds before broader consensus.