Riding the trend: Momentum as a powerful factor in commodity investing

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Key Takeaways

- **Momentum is a persistent factor in commodities:** Decades of academic research and our own testing confirm that price trends in commodity markets are not random and can be systematically captured and exploited.
- **Multiple signals validate the edge:** Whether using moving averages, trend breadth, or binary momentum, the results consistently show excess returns, particularly when strategies adapt to commodity-specific behaviours.
- **Momentum enables investable strategies:** With robust signal design and careful implementation, momentum can power both long-only and long-short commodity strategies that outperform traditional indices over time.

Momentum is one of the most studied anomalies in finance. While widely applied in equities, its relevance in commodities is equally compelling. At WisdomTree, we have tested how Momentum works in practice across commodities and found that, when implemented thoughtfully, it can be a powerful tool for boosting returns and managing risk.

The academic case for Momentum in commodities

Price momentum in commodities refers to the tendency of assets that have performed well recently to continue outperforming in the near term. This behavioural anomaly is often attributed to investor underreaction, slow-moving fundamental information, and evolving supply-demand dynamics.

The academic evidence is consistent. Miffre and Rallis (2007) showed that cross-sectional momentum, going long on commodities with the highest trailing 12-month returns and short on those with the lowest, generates statistically significant excess returns. Further work by Szakmary et al. (2010) and Menkhoff et al. (2012) reinforced this finding across different time periods and commodity sets. Time-series Momentum,

where commodities' momentum is not compared with each other but only with themselves, has also been shown to work across commodities, even after adjusting for other risk premia.

In short, Momentum is a feature of commodity markets that tends to persist across time, markets, and methodologies.

Momentum in practice: what our tests reveal

While the academic foundation is clear, implementation matters. In our most recent paper Commodity Investing 3.0: The Rise of Factor and Curve-Aware Strategies, we rigorously tested Momentum-based strategies across a diversified set of commodity futures, using both cross-sectional and time-series frameworks.

We began by testing momentum signals using three different signals:

- Moving average crossover (short-term linearly weighted moving average vs long-term simple moving average). The signal turns positive (negative) when the short-term average exceeds (lags) the long-term one, indicating upward (downward) momentum.
- Trend breadth (ratio of positive regression slopes to total regressions across 16 different time windows from shorter term to longer term). These regression slopes capture how trend strength evolves across time scales, with a greater ratio of positive slopes indicating broader, more reliable upward Momentum. Ratio above 0.7 (below 0.3) indicates a positive (negative) signal.
- Binary Momentum (direction-only signal based on return signs). Concretely, each daily return is assigned a value of +1 or –1 depending on its sign, and an exponentially weighted moving average of this series is calculated to produce the binary Momentum signal.

Cross-sectional Momentum: some limitations

We tested the three metrics cross-sectionally by ranking commodities by signal strength and forming portfolios across terciles.

Across all three metrics, the cross-sectional results were underwhelming. The first tercile (winners) and third tercile (losers) portfolios failed to separate meaningfully over time. Binary Momentum showed marginal promise, but not enough to support this approach as a standalone allocation model.

Figure 1: Historical performance of Price Momentum (cross-sectional using Binary Momentum)



From 25/06/2001 to 21/10/2025. Source: WisdomTree, Bloomberg, Factset. Excess returns in USD. **Includes backtested data for illustration purposes. Historical performance is not an indication of future performance, and any investments may go down in value.**

Time-series Momentum: where it shines

The story changes significantly in a time series context. Here, we evaluate each commodity independently and then create long-short portfolios by going long commodities with positive momentum signals and shorting those with negative signals.

All three signals, Moving Average Crossover, Trend Breadth, and Binary Momentum, performed well. All three long-short portfolios exhibited positive returns over the long term with strong statistical relevance.

Figure 2: Historical performance of Price Momentum (time series using moving average crossover)



From 1/2/2002 to 30/9/2025. Source: WisdomTree, Bloomberg, FactSet. Excess returns in USD. Includes backtested data for illustration purposes. **Historical performance is not an indication of future performance, and any investment may go down in value.**

Our analysis shows that, overall, Momentum does deliver significant outperformance in a realistic investment setting and can therefore be used to construct real-life long-only or long-short strategies.

Figure 3: Overall Momentum results and statistical significance

Model type	Model	Submodel	Periods	Annualized return	t-stat	p-value
Cross-sectional	**Price Momentum**	**Binary**	6347	2.18%	*1.26*	20.70%
Cross-sectional	**Price Momentum**	**Combined**	6407	0.86%	*0.5*	61.87%
Cross-sectional	**Price Momentum**	**Moving average**	6407	-0.37%	*-0.18*	85.71%
Cross-sectional	**Price Momentum**	**Trend Breadth**	6407	0.60%	*0.34*	73.24%
Time-series	**Price Momentum**	**Binary**	5961	6.00%	*2.79*	0.53%
Time-series	**Price Momentum**	**Combined**	5835	4.82%	*1.73*	8.34%

Time-series	**Price Momentum**	**Moving average**	5835	4.11%	*1.64*	10.07%
Time-series	**Price Momentum**	**Trend Breadth**	5835	5.05%	*1.83*	6.80%

Source: WisdomTree, Bloomberg, FactSet. The table reports annualised returns, t-statistics, and p-values for each model and sub-model tested across both cross-sectional and time-series frameworks. The t-statistic measures how statistically different the observed returns are from zero and higher values indicate greater confidence that the factor's performance is not due to random chance. The p-value represents the probability that the observed result occurred by chance; lower values imply stronger statistical significance. For comparability, the annualised returns for cross-sectional models are divided by two. Historical performance is not an indication of future performance, and any investments may go down in value.

On a sector level, we also note some differences. Energy and industrial metals exhibit the strongest momentum behaviour, driven by persistent supply-demand imbalances and macro sensitivity. Livestock, on the other hand, show weaker trends, likely due to mean-reverting patterns driven by biological and harvest cycles.

Conclusion: a reliable compass in a noisy market

Momentum is among the most empirically supported factors in commodity investing. The key is how you apply it. Our work shows that time-series Momentum offers differentiated returns with limited downside.

In the world of commodities, where volatility, seasonality and structural shifts are the norm, Momentum offers a disciplined, data-driven way to stay on the right side of trends.

For the full breakdown of our methodology, results and implementation guidelines, read the full paper: Commodity Investing 3.0: The Rise of Factor and Curve-Aware Strategies.

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