The CT CFTC Net-Spec Positioning Z-Score Signal: Speculator-Conviction Overlay for Cotton

Why CFTC non-commercial net positioning in Cotton futures captures speculator conviction and transmits to Cotton forward 60-day returns via the sustained-flow channel.

David Stendahl · Market Lab Analytics · November 5, 2026

The signal with the limits stated upfront

Three things the reader must know before the rest of this brief lands.

First, the full-distribution daily Spearman information coefficient against Cotton forward 60-day returns is plus 0.078 at p-value 1.1e-13 on a sample of 8,953 daily observations spanning 1990 through 2026. Strongly significant on the 36-year window.

Second, Phase +1 (Net Long Crowded) delivers plus 0.73 percentage points above baseline across 3,753 trading days (41.9 percent of sample) and Phase −1 (Net Short Crowded) delivers minus 0.42 percentage points below baseline across 3,791 days (42.3 percent). 1.15 pp directional spread.

Third, the non-overlap independence test at 60-day sampling is not independently significant. Across 150 independent samples the Spearman is plus 0.098 with p-value 0.23. Phase 0 (On Trend) sample share is 15.7 percent with edge minus 0.82 pp; the middle bucket underperforms both extremes making the pattern non-monotone around Phase 0.

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The thesis: CFTC speculator conviction

The CFTC Commitments of Traders report publishes weekly speculator positioning in ICE US Cotton No. 2 futures. Non-commercial speculators are discretionary traders (hedge funds, CTAs, discretionary pools, individual speculators) whose aggregate positioning reflects short-term directional conviction. The non-commercial net position (long minus short) is the standard speculator-sentiment gauge for a futures market.

When speculators are net long with high conviction, the market is in a crowded-bullish regime that empirically supports continued inflow and Cotton prices over 60-day horizons. When speculators are

net short with high conviction, sustained outflow pressures prices. The signal is a direct positioning read on speculator momentum.

The sustained-flow channel operates because speculator capital tends to cluster around prevailing regimes. A bullish-positioned book tends to add to winners through trend-following strategies; a bearish-positioned book similarly adds to shorts in down-trends. Extreme positioning self-reinforces until it breaks.

The signal takes the CFTC COT non-commercial net position (long minus short) in Cotton, z-scores on a rolling window, and tanh-bounds. State thresholds plus or minus 0.2 (moderate) and plus or minus 0.5 (extreme). Phase +1 at composite above +0.3, phase −1 below −0.3. Target: ICE US Cotton No. 2 first-nearby back-adjusted close.

Historical window: CFTC COT weekly reporting from 1986; engine runs from 1990 onward with 504-bar warmup.

What the firings have actually done

Computed over 8,953 daily observations post-warmup from 1990 onward. The baseline Cotton forward 60-day return is mean plus 0.97 percent and median plus 0.15 percent across the live-window sample.

> **Baseline Cotton forward 60-day return:** mean plus 0.97 percent / median plus 0.15 percent across the live-window sample.
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> **Daily Spearman IC (fwd 60d):** plus 0.078, p-value 1.1e-13, N equals 8,953. Strongly significant.
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> **Non-overlap IC (60-day step):** plus 0.098, p-value 0.23, N equals 150. Sign-consistent but not independently significant.
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> **Phase-conditional forward 60-day Cotton returns:** Phase +1 (Net Long Crowded, 3,753 days / 41.9 pct): plus 1.70 percent, edge plus 0.73 pp. Phase 0 (On Trend, 1,409 days / 15.7 pct): plus 0.15 percent, edge minus 0.82 pp. Phase −1 (Net Short Crowded, 3,791 days / 42.3 pct): plus 0.55 percent, edge minus 0.42 pp.
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> 1.15 pp directional spread between Phase +1 and Phase −1. Non-monotone around Phase 0.

Three findings. The daily IC is strongly significant on the 36-year window. Phase +1 (Net Long Crowded) carries the directional signal with plus 0.73 pp edge; Phase −1 is more modest at minus 0.42 pp. Phase 0 (On Trend) is a surprisingly weak bucket with minus 0.82 pp edge; readers should treat On Trend not as neutral but as the quiet mid-positioning regime where directional conviction is absent.

Three cases that frame how to read the signal

The canonical anchors are the 2021-2022 Cotton rally positioning, the 2016-2017 supply-tightness rally, and the 2018-2019 cycle-low positioning.

Case 1: The 2021-2022 Cotton rally positioning

Net Long Crowded firing anchored the 2021-2022 Cotton rally as CFTC non-commercial net positioning ran deeply above the rolling z-score mean through the Texas megadrought and global supply

tightening. Composite held in Phase +1 territory through the rally. Cotton delivered material forward returns through the regime consistent with the Phase +1 edge; speculator long conviction reinforced the supply-shock-driven rally and extended the move.

Case 2: The 2016-2017 supply-tightness rally

Net Long Crowded firing through late 2016 and 2017 as speculators built net long positioning into the global cotton supply tightness following Indian drought and reduced US acreage. Composite held in Phase +1 territory through the rally. Cotton rallied materially through 2017 consistent with the Phase +1 edge; positioning conviction compounded with the underlying supply regime.

Case 3: The 2018-2019 cycle-low positioning

Net Short Crowded firing through 2018-2019 as speculators ran net short positioning into the cycle-low Cotton pricing regime. Composite held in Phase −1 territory through the extended trough. Cotton underperformed through the period consistent with the Phase −1 edge; speculator short conviction sustained the bearish price regime.

How to use this signal today

Composite is currently reading plus 0.880 in the Net Long Crowded band. The HEALTHY phase began May 2026, 162 trading days ago. CFTC non-commercial net positioning in Cotton has run deeply above the rolling z-score mean through 2026 with raw z at plus 1.38.

Pair with the following for stacked conviction: US Cotton Belt DSCI (US supply via Z100008), India Vidarbha GRACE aquifer (India supply via Z32312), USDA WASDE stocks-to-use (systemic balance), apparel-demand signals, and macro overlays. This positioning signal provides the speculator-conviction context; pair with fundamental supply and macro signals for the full read.

Reader rule: Net Long Crowded firings flag bullish regimes with Cotton strength historically following at 60-day horizon via sustained-flow channel. Net Short Crowded firings flag bearish regimes.

Methodology

Data source: CFTC Commitments of Traders weekly report, non-commercial category net position (long minus short) in ICE US Cotton No. 2 futures. Computation: z-score on a rolling window, tanh-bounded. State thresholds plus or minus 0.2 (moderate) and plus or minus 0.5 (extreme). Phase +1 at composite above +0.3, phase −1 below −0.3. Target: ICE US Cotton No. 2 first-nearby back-adjusted close.

Historical window: CFTC COT weekly reporting from 1986; engine runs from 1990 onward with a 504-bar warmup for the rolling z-score.

Validation computed on 8,953 post-warmup daily observations. Daily Spearman IC plus 0.078 at p-value 1.1e-13 across 8,953 observations, strongly significant on 36-year sample. Phase +1 per-day forward return plus 1.70 percent (plus 0.73 pp above plus 0.97 percent baseline). Phase −1 per-day forward return plus 0.55 percent (minus 0.42 pp below baseline). 1.15 pp directional spread. Non-overlap IC at 60-day sampling plus 0.098 at p-value 0.23 across 150 samples, sign-consistent but not independently significant.

What this signal does not cover

The signal does not cover disaggregated DCOT categories (dealer-intermediary, asset-manager split). It does not cover ICE US Cotton options positioning. It does not capture the specific speculator type driving positioning (algo vs discretionary). It does not capture fundamental Cotton supply or demand. Speculator positioning can persist in crowded extremes for months before unwinding; abrupt sentiment reversals are a notable tail risk at extreme readings.

Disclaimer

This brief and the signal it describes are for informational purposes only and do not constitute investment, legal, tax, or trading advice. Hypothetical or simulated performance results have certain inherent limitations. Unlike an actual performance record, simulated results do not represent actual trading. Also, since the trades have not been executed, the results may have under- or over-compensated for the impact, if any, of certain market factors, such as lack of liquidity. Simulated trading programs in general are also subject to the fact that they are designed with the benefit of hindsight. No representation is being made that any account will or is likely to achieve profits or losses similar to those shown. The phase-conditional forward-return stats reported above are a full-sample unconditional measurement. Readers should consult a licensed financial professional before taking any trading action.

References

US Commodity Futures Trading Commission, Commitments of Traders weekly report, ICE US Cotton No. 2, cftc.gov.

ICE Futures US, Cotton No. 2 first-nearby back-adjusted continuous contract (ticker CT), end-of-day settlement.