The HO HO VIX Overlay Signal: Overlay for Heating Oil

Why HO VIX Overlay delivers a 2.70 pp spread on Heating Oil forward 60-day returns via the VIX macro-vol overlay channel.

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What this signal is

Low VIX reflects risk-on macro environment with commodity-complex demand supported by growth expectations and loose financial conditions transmitting bullish Heating Oil; elevated VIX reflects risk-off stress with commodity complex pressured by demand concerns transmitting bearish HO.

The composite is bounded between minus one and plus one through tanh. Positive readings reflect the bullish channel state; negative readings reflect the bearish channel state.

Today the composite reads −0.995 in the Moderate NEG band after 2 trading days in the current phase. See the state-conditional returns panel below for the empirical phase-conditional edges.

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How the inputs compose

Low VIX reflects risk-on macro environment with commodity-complex demand supported by growth expectations and loose financial conditions transmitting bullish Heating Oil; elevated VIX reflects risk-off stress with commodity complex pressured by demand concerns transmitting bearish HO. The signal takes CBOE VIX close z-scored against 252-day window, sign-flipped so low vol maps to positive composite, 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: NYMEX Heating Oil front-month continuous.

What the state-conditional returns have actually done

Computed over 9,191 daily observations from the live-window sample. The baseline Heating Oil forward 60-day return is mean plus 3.03 percent and median plus 1.75 percent across the live-window sample.

> **Baseline Heating Oil forward 60-day return:** mean plus 3.03 percent / median plus 1.75 percent across the live-window sample.
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> **Phase-conditional pattern on Heating Oil forward 60-day returns:** Phase +1 (Vol low (risk-on), 5,004 days / 54 percent): plus 4.18 percent fwd60d, edge +1.14 pp above baseline. Phase 0 (Normal, 1,110 days / 12 percent): plus 2.22 percent fwd60d, edge −0.81 pp. Phase −1 (Vol high (risk-off), 3,077 days / 34 percent): plus 1.48 percent fwd60d, edge −1.56 pp.
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> 2.70 pp Phase +1 minus Phase −1 spread via the VIX macro-vol overlay channel.

Three cases that frame how to read the signal

Case 1: Vol low, 2017 extended calm

VIX ran historic lows through 2017 as low-vol risk-on regime supported commodity complex. Signal held Phase +1 territory.

Case 2: Vol high, 2020 COVID vol spike

VIX spiked above 80 through March 2020 as COVID shutdowns triggered risk-off crisis. Signal held deep Phase −1 territory.

Case 3: Vol high, 2022 Russia-invasion stress

VIX spiked through Q1 2022 as Russia invasion triggered risk-off flows. Signal held Phase −1 territory even as HO rallied on supply shock (channel-divergent episode).

How to use the signal today

Composite is currently reading −0.995 in the Moderate NEG band. Phase Stress firing for 2 trading days.

Pair with companion HO signals listed in the Related section for stacked conviction.

Reader rule: Phase +1 firings reflect vol low (risk-on) regime via the VIX macro-vol overlay channel. Phase −1 firings reflect vol high (risk-off) regime. The 2.70 pp spread demonstrates the signal has directional edge via the stated channel.

Methodology notes

The signal takes CBOE VIX close z-scored against 252-day window, sign-flipped so low vol maps to positive composite, 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: NYMEX Heating Oil front-month continuous.

Validation computed on 9,191 post-warmup daily observations. Phase +1 (Vol low (risk-on)) Heating Oil fwd60d plus 4.18 percent, edge +1.14 pp on 54 percent sample. Phase 0 (Normal) Heating Oil fwd60d plus 2.22 percent, edge −0.81 pp on 12 percent sample. Phase −1 (Vol high (risk-off)) Heating Oil fwd60d plus 1.48 percent, edge −1.56 pp on 34 percent sample. 2.70 pp spread via VIX macro-vol overlay channel. Daily IC not individually significant on all sampling windows.

What this signal does not cover

Three limitations. Macro-vol signal can decouple from commodity-specific supply shocks. Signal reflects broad risk regime not distillate-specific. Russia-invasion 2022 was channel-divergent episode.

The signal does not capture mechanisms outside its stated transmission channel. It does not substitute for broader Heating Oil supply + demand + inventory + crude overlays; pair with companion signals in the Related section for complete context.

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

NYMEX Heating Oil futures daily settlement, CME Group.

CSI Data Corporation, Heating Oil front-month continuous (HO21120RD) series.