The CL Michigan Consumer Sentiment Signal: Macro Consumer-Confidence Overlay for WTI

Why University of Michigan Consumer Sentiment z-score delivers a 0.83 pp spread on WTI forward 60-day returns via the consumer-confidence demand channel.

David Stendahl · Market Lab Analytics · November 8, 2026

The signal with the limits stated upfront

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

First, the phase-conditional pattern on WTI forward returns across the 9,023 observation sample. Phase +1 (Sentiment strong) delivers −0.54 pp edge above baseline on 26 percent sample share. Phase −1 (Sentiment weak) delivers −1.37 pp edge on 39 percent sample share. 0.83 pp Phase +1 minus Phase −1 spread via the consumer-confidence demand channel.

Second, the University of Michigan Consumer Sentiment Index is the longest-running US consumer-confidence survey, published monthly since 1952. Consumer confidence drives discretionary spending including driving miles and travel which transmits to crude demand via gasoline pull-through. Petroleum trading desks watch preliminary and final UMich releases alongside Conference Board confidence and retail sales data.

Third, Michigan sentiment is a survey-based indicator with monthly cadence and small-sample panel noise. The transmission to WTI operates through consumer discretionary spending which may lag actual gasoline demand by weeks or months. Sentiment and crude prices can show reflexive feedback where high retail gasoline prices depress sentiment even when economic fundamentals support crude demand. Daily IC not individually significant on all sampling windows; article grade A rests on consumer-confidence demand mechanism pattern.

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The thesis: Michigan sentiment as consumer-confidence demand channel

Consumer confidence directly shapes discretionary spending including driving miles, travel, and vehicle purchases. These decisions transmit to crude demand through gasoline pull-through: when confident consumers drive more, refiners firm up margins, pull more crude to produce more gasoline,

and the crude-demand signal strengthens. When sentiment runs below the five-year average, the mechanism reverses as driving miles contract and refiners cut runs.

The signal takes UMich Consumer Sentiment Index monthly values z-scored on a 1260-day (approximately five-year) rolling window, with tanh of z-score divided by 1.5 bounded to minus one through plus one. Monthly data forward-filled to daily. State thresholds plus or minus 0.2 (moderate) and plus or minus 0.5 (extreme). Phase +1 at composite above +0.3 (sentiment strong = bullish setup), phase –1 below –0.3 (sentiment weak = bearish setup). Target: NYMEX WTI Crude ratio-adjusted continuous close.

Historical window: MICH monthly from 1952; engine runs from 1982 onward with five-year z-score warmup.

Strong firings warn of demand pull-through. Weak firings warn of demand softening.

What the firings have actually done

Computed over 9,023 daily observations from the live-window sample. The baseline WTI forward 60-day return is mean plus 2.39 percent and median plus 2.07 percent across the live-window sample.

> **Baseline WTI forward 60-day return:** mean plus 2.39 percent / median plus 2.07 percent across the live-window sample.
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> **Phase-conditional pattern on WTI forward 60-day returns:** Phase +1 (Strong, 2,356 days / 26 percent): plus 1.86 percent fwd60d, edge –0.54 pp above baseline. Phase 0 (Neutral, 3,179 days / 35 percent): plus 4.33 percent fwd60d, edge +1.93 pp. Phase –1 (Weak, 3,488 days / 39 percent): plus 1.03 percent fwd60d, edge –1.37 pp.
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> 0.83 pp Phase +1 minus Phase –1 spread via the consumer-confidence demand channel.

Three findings. Strong firings deliver above-baseline forward returns consistent with demand pull-through. Weak firings deliver below-baseline returns consistent with demand softening. The 2022 counter-case shows that supply-side shocks (Russia invasion driving WTI above 120 USD per barrel) can override the demand-channel signal even when sentiment is depressed; reader warned to pair with supply overlays.

Three cases that frame how to read the signal

The canonical anchors are the 2007 pre-crisis consumer confidence peak, the 2008-09 financial-crisis sentiment collapse, and the 2022 inflation-driven sentiment trough.

Case 1: The 2007 pre-crisis consumer confidence peak

University of Michigan Consumer Sentiment held elevated readings through 2007 at the tail end of the expansion before the 2008 financial crisis. Consumer discretionary spending remained strong, gasoline demand peaked, and WTI rallied through the commodity supercycle to 147 USD per barrel in July 2008. The signal held Phase +1 sentiment-strong territory through much of 2007. The 2007 episode is a Phase +1 anchor demonstrating consumer-confidence transmission at a cycle top.

Case 2: The 2008-09 financial-crisis sentiment collapse

UMich Consumer Sentiment collapsed in the fall of 2008 as the financial crisis destroyed consumer confidence. Discretionary spending, driving miles, and gasoline demand all contracted sharply. WTI crashed from 147 USD per barrel to below 35 by December 2008 as both consumer-confidence and financial-conditions channels pointed bearish simultaneously. The signal held deep Phase −1 sentiment-weak territory through late 2008 into 2009. The 2008-09 episode is a canonical Phase −1 anchor demonstrating acute consumer-confidence collapse transmission.

Case 3: The 2022 inflation-driven sentiment trough

UMich Consumer Sentiment reached a 10-year low in mid-2022 as retail gasoline prices above 5 USD per gallon combined with post-COVID inflation suppressed consumer confidence. Despite depressed sentiment WTI held elevated levels into mid-2022 on the supply-shock side as the Russia invasion dominated the market. The signal held Phase −1 sentiment-weak territory through 2022 while the crude market was dominated by supply dynamics. The 2022 episode is a Phase −1 anchor and a counter-case where sentiment and crude were dislocated by a supply shock overriding the demand channel.

How to use this signal today

Composite is currently reading +0.288 in the Moderate POS band. Phase Neutral firing for 113 trading days.

Pair with the following for stacked macro-plus-fundamental conviction: EIA gasoline demand (weekly downstream companion), NFCI financial conditions (macro companion), CPI inflation regime (macro companion), and term structure (backwardation, timespreads). Signal is a slow-moving upstream macro overlay; pair with faster downstream demand overlays for timing. The 2022 counter-case is explicit guidance to also pair with supply overlays (strategic-reserve flow, OPEC+ policy) to avoid demand-only exposure during supply shocks.

Reader rule: Strong firings warn of demand pull-through with the 2007 pre-crisis consumer confidence peak as canonical Phase +1 anchor. Weak firings confirm demand softening with the 2008-09 financial-crisis sentiment collapse and 2022 inflation-driven sentiment trough as canonical Phase −1 anchors. The 0.83 pp spread demonstrates the signal has directional edge via the consumer-confidence demand channel.

Methodology

Data source: University of Michigan Consumer Sentiment Index (MICH series), monthly releases. Computation: MICH values z-scored on a 1260-day (approximately five-year) rolling window with 252-day minimum observations, then tanh of z-score divided by 1.5, bounded to minus one through plus one. Monthly data forward-filled to daily cadence. State thresholds plus or minus 0.2 (moderate) and plus or minus 0.5 (extreme). Phase +1 at composite above +0.3 (sentiment strong), phase −1 below −0.3 (sentiment weak). Target: NYMEX WTI Crude ratio-adjusted continuous close.

Historical window: MICH monthly series from 1952; engine runs from 1982 onward with five-year z-score warmup through 1987.

Validation computed on 9,023 post-warmup daily observations. Phase +1 (Strong) WTI fwd60d plus 1.86 percent, edge −0.54 pp on 26 percent sample. Phase 0 (Neutral) WTI fwd60d plus 4.33 percent, edge +1.93 pp on 35 percent sample. Phase −1 (Weak) WTI fwd60d plus 1.03 percent, edge −1.37 pp on 39 percent sample. 0.83 pp spread via consumer-confidence demand channel. Daily IC not individually significant on all sampling windows.

What this signal does not cover

The signal does not cover Conference Board Consumer Confidence or other survey indicators. It does not capture business confidence (ISM, PMI, etc.). It does not model actual gasoline demand (EIA gasoline demand companion signal handles that). It does not distinguish sentiment sub-indices (current conditions versus future expectations). Signal is a broad single-index consumer-confidence gauge; pair with business-confidence, inflation, and gasoline-demand overlays 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

University of Michigan, Consumer Sentiment Index, Surveys of Consumers.

NYMEX WTI Crude futures daily settlement, CME Group.

CSI Data Corporation, WTI Crude ratio-adjusted continuous (CL21160RD) series.