Breaking Below the Line, Loudly

MTUM closes below its 65-day moving average on a −2.5% session: forward-return behavior, 2021–present

PUBLISHED JULY 16, 2026 · TICKER: MTUM (iSHARES MSCI USA MOMENTUM FACTOR ETF) · DATA: BATS DAILY CLOSES, FEB 2019 - JUL 16 2026 · METHOD: EVENT STUDY, BLOCK-BOOTSTRAP REPLICATION (B = 10,000)

Summary

We study every session since January 2021 in which MTUM (a) closed below its 65-day simple moving average and (b) fell at least 2.5% that same day. The signal fires 40 times — the 40th being **today, July 16, 2026** (close 302.26, −3.3%, 1.4% below the 65-day). Across the 39 completed events, forward returns beat the unconditional baseline at every horizon from five days out: +1.8% at 10 days (69% positive), +3.5% at 21 days, and +7.6% at 63 days versus a +3.7% baseline quarter.

The conditioning result is the useful part, and it is not the one we expected. *Depth* below the average — the intuitive "how stretched is it" variable — carries no monotonic information (Spearman ρ insignificant at every horizon; the return profile is U-shaped, with the −3% to −8% mid-zone the weakest bucket). *Slope* of the average itself is the honest discriminator: when the 65-day is still rising at the moment of the break, 82% of events resolved positively over the following quarter, with a median of +10.6% (ρ = +0.32 at 63d, p = 0.048). When the average is falling, the same signal is a coin flip — 53% — and the 2022 vintage supplies nine of the study's fourteen negative quarters.

> **Today's print sits in the historically benign cell:** a first, shallow break (−1.4%) beneath a 65-day average that is still rising at a +9.0% pace over the trailing 21 sessions. This is the 2024/2026 profile — the panicked crack below a healthy trend — not the 2022 profile of repeat failures beneath a declining one. Historically the next session is a coin flip with negative skew; the edge, such as it is, accrues from ten days out.

The Event Set

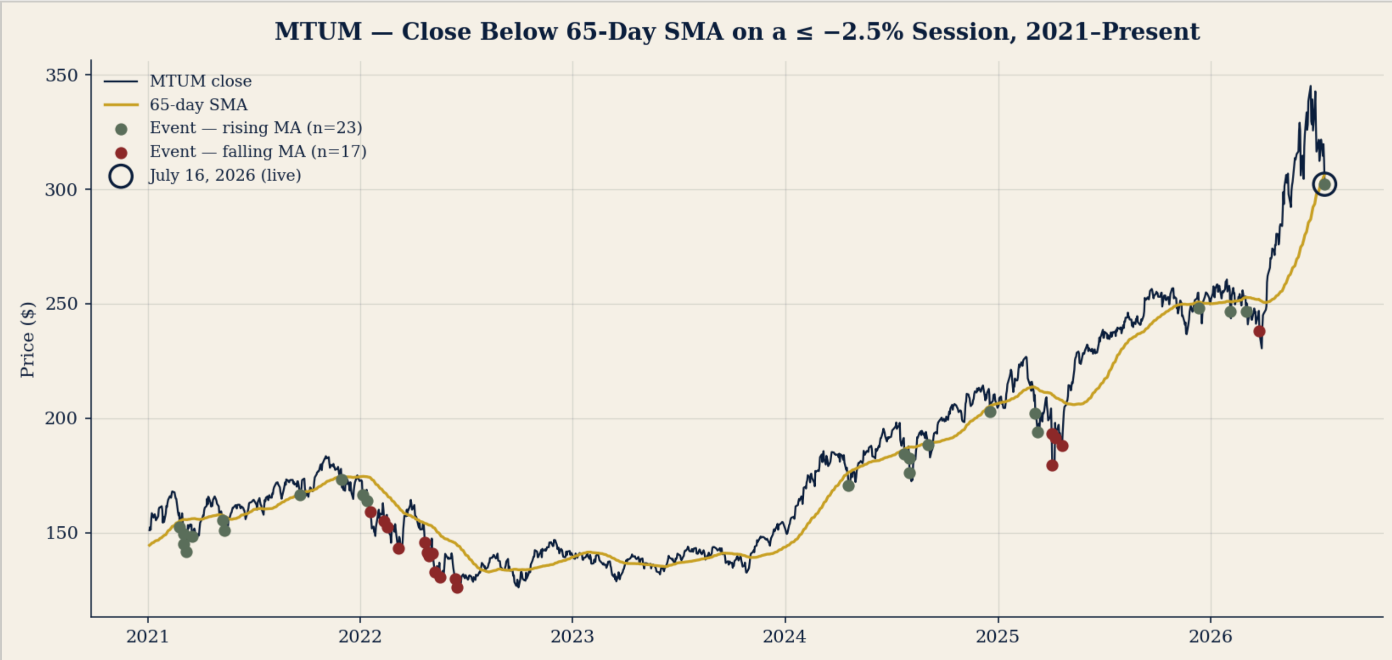

FIG. 1 — MTUM close vs. 65-day SMA, 2021-present. Events marked by MA-slope regime at trigger. Open circle: July 16, 2026 (live, unresolved).

Forward Returns

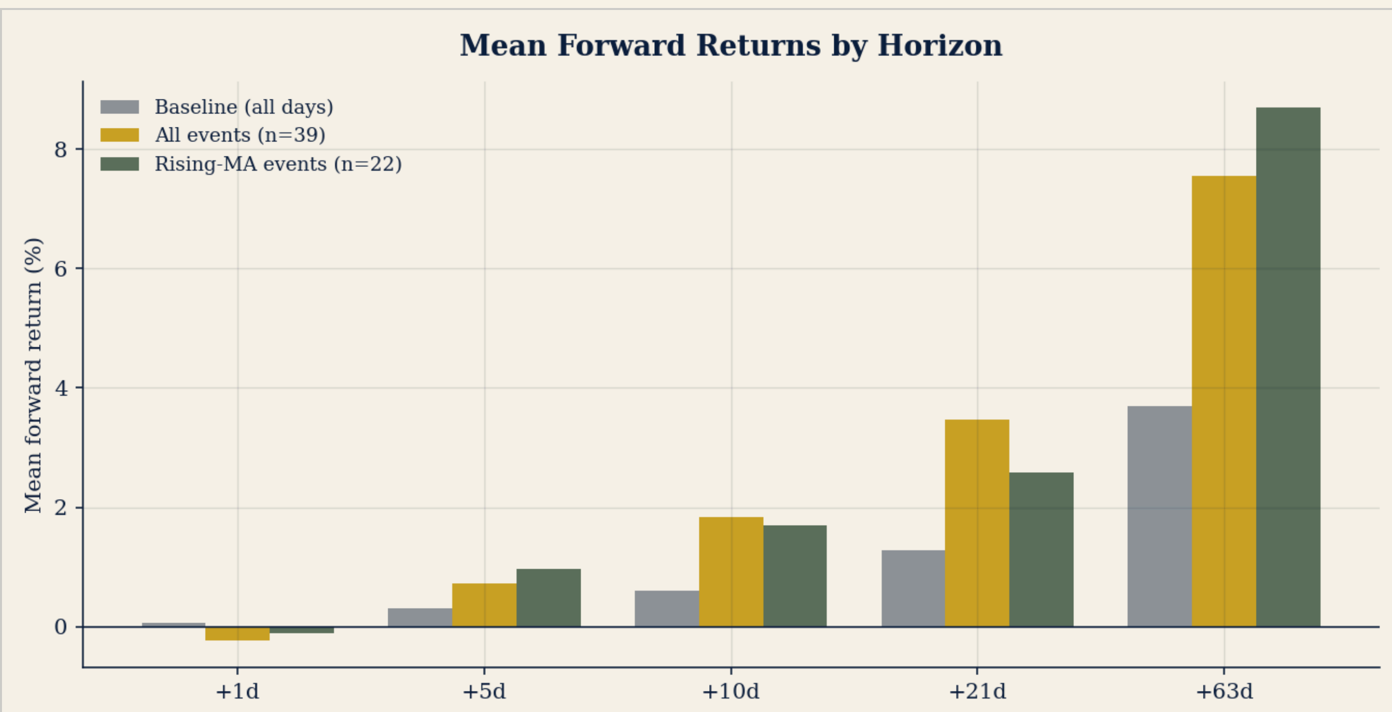

FIG. 2 — Mean forward returns by horizon: unconditional baseline (all 2021+ sessions), all events, and the rising-MA subset.

HORIZON	MEAN	MEDIAN	WIN %	BASELINE MEAN	BASELINE WIN %

+1d	−0.23%	−0.04%	46%	+0.06%	53%
+5d	+0.72%	+0.64%	59%	+0.30%	55%
+10d	+1.83%	+2.11%	69%	+0.60%	57%
+21d	+3.46%	+3.56%	59%	+1.28%	59%
+63d	+7.56%	+7.44%	69%	+3.70%	69%

Conditioning: Depth vs. Slope

Bucketing events by how far below the average price closed produces a U-shape rather than a gradient. Shallow breaks (within 3% of the average) return +8.6% on average over the next quarter with an 82% win rate; deep capitulations (more than 8% below) return +8.4% with a 67% win rate; the middle bucket — far enough below to signal damage, not far enough to signal exhaustion — is the dead zone at +5.7% and 62%. Rank correlation between depth and forward return is statistically indistinguishable from zero at every horizon.

Slope does the work depth cannot. Splitting on whether the 65-day average itself was higher or lower than 21 sessions prior:

REGIME	N	+21D MEAN	+21D WIN %	+63D MEAN	+63D MEDIAN	+63D WIN %
Rising 65d MA	22	+2.59%	64%	+8.69%	+10.61%	82%
Falling 65d MA	17	+4.60%	53%	+6.08%	+2.04%	53%

Note the trap in the falling-MA row: the *mean* looks respectable, but it is manufactured almost entirely by the violent April 2025 recovery cluster. The median (+2.0%) and win rate (53%) tell the truer story — beneath a declining average, this signal carried no edge, and in 2022 it was actively harmful. The distinction matters because it is visible ex ante: the slope of the average is known at the close that triggers the event.

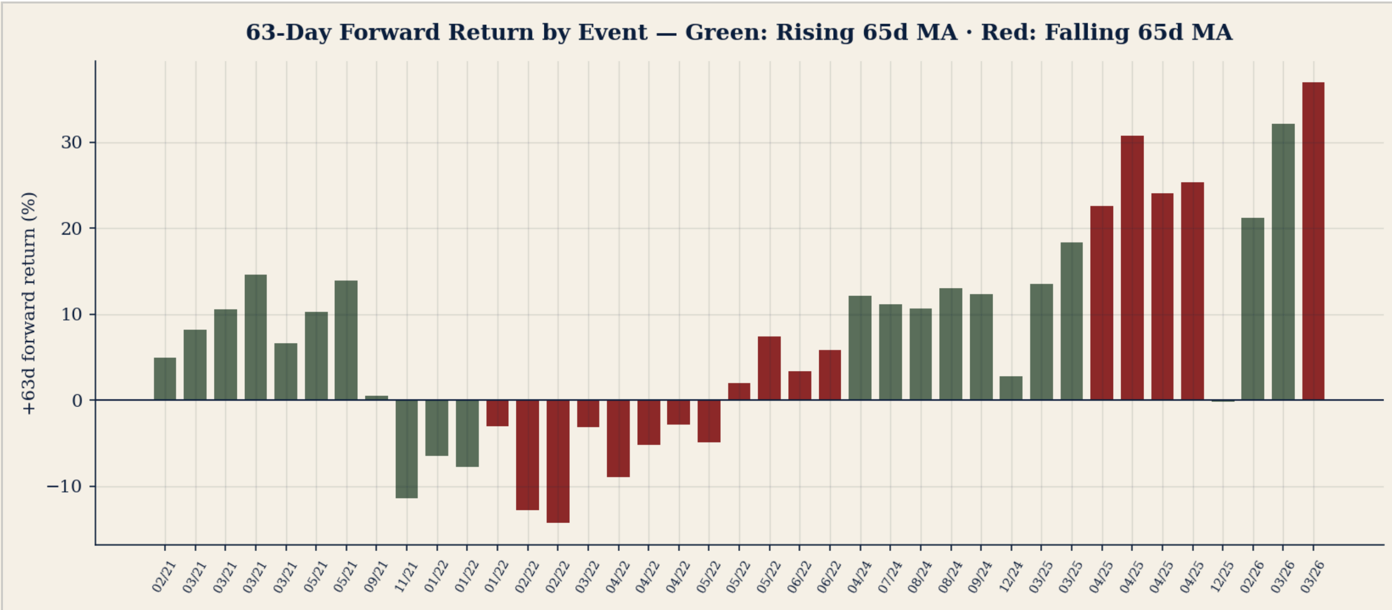

FIG. 3 — +63d forward return per event, chronological. The 2022 bleed (red) and the 2025-26 recoveries (green) are two different signals wearing the same trigger.

Replication: Block Bootstrap

Against a block-bootstrap null (B = 10,000, block length 5, sampling forward returns from all 2021+ sessions), the event means are favorable but not conventionally significant: one-sided p-values of 0.17 (+10d), 0.13 (+21d), and 0.12 (+63d). Two structural caveats compound this. First, clustering: the 40 events collapse to 18 non-overlapping episodes under a 21-session exclusion window, so the effective sample is smaller than the headline count (de-clustered stats retain the same shape: +2.2% at 21d, +6.7% at 63d, 71% quarterly win rate). Second, regime concentration: the favorable subset is dominated by 2021, 2024, and 2025–26 — periods in which buying weakness in U.S. momentum was broadly rewarded.

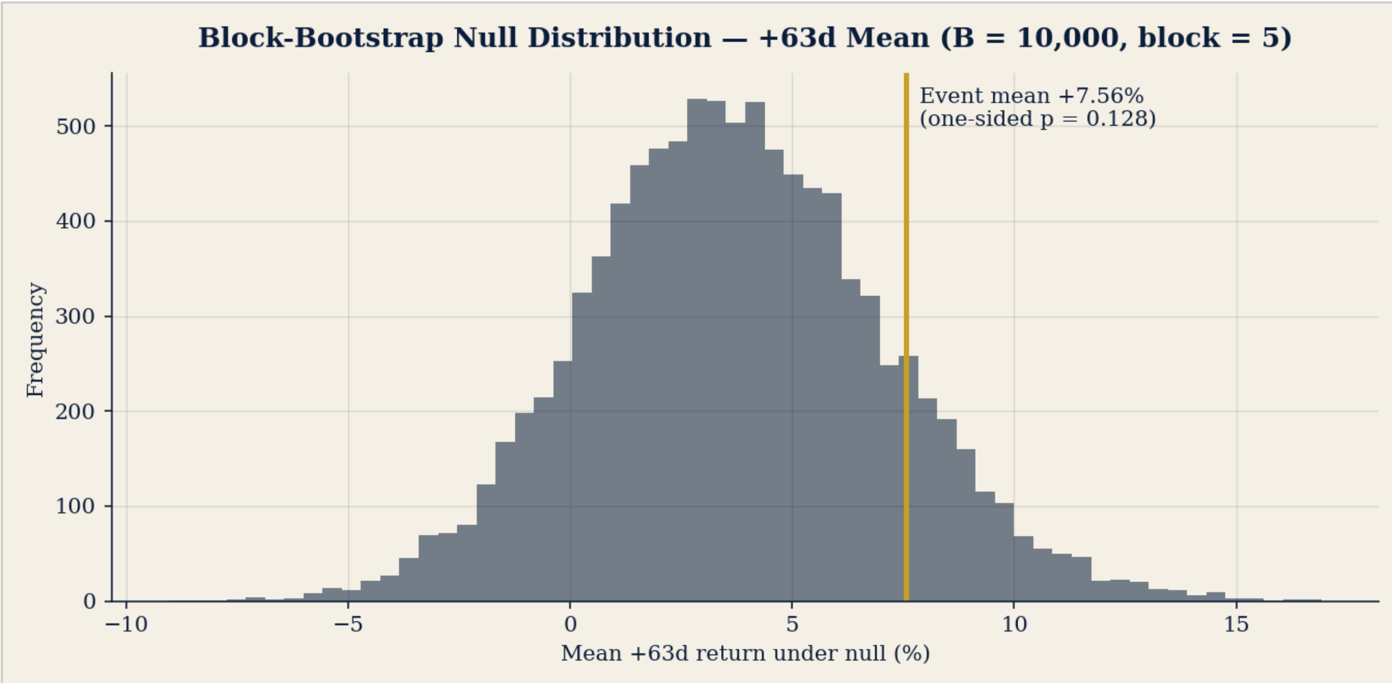

FIG. 4 — Block-bootstrap null distribution of the +63d mean under random entry (n = 39 draws per replication). Gold line: observed event mean.

What We Take From It

The trigger by itself — a loud break below the 65-day — is not a signal; it is a situation. What resolves it is the trend the break interrupts. A −2.5% session that cracks a rising average has historically been the market's way of shaking out the impatient before resuming; the same session beneath a falling average has been a reliable installment in a longer decline. The depth of the break, the variable that feels most informative in the moment, tells you almost nothing. The slope, which nobody feels in the moment, tells you most of what there is to know. Sample-size humility applies throughout: eighteen independent episodes, five years, one factor ETF.

Appendix: Full Event Log

DATE	DAY RET	VS 65D MA	MA SLOPE	+1D	+5D	+10D	+21D	+63D
2021-02-25	-3.8	-1.7	Rising	+0.8	-4.8	+0.5	-1.9	+4.9
2021-03-03	-4.0	-4.1	Rising	-2.8	-0.7	+2.8	+3.3	+8.2
2021-03-04	-2.8	-6.8	Rising	+0.9	+5.6	+2.1	+7.8	+10.6
2021-03-08	-3.4	-9.0	Rising	+5.0	+8.5	+7.2	+11.2	+14.6
2021-03-18	-3.4	-5.0	Rising	+0.9	-0.9	+4.1	+9.9	+6.6

2021-05-10	-2.5	-1.5	Rising	+0.2	-0.9	+2.1	+3.6	+10.3
2021-05-12	-3.1	-4.1	Rising	+0.3	+1.5	+6.1	+7.1	+13.9
2021-09-20	-2.7	-0.2	Rising	+0.0	+4.3	-0.5	+5.9	+0.6
2021-11-30	-2.5	-0.6	Rising	-2.1	+0.3	-2.9	-0.2	-11.4
2022-01-05	-3.4	-4.6	Rising	+0.4	+1.3	-6.6	-4.9	-6.4
2022-01-13	-2.8	-6.0	Rising	-0.4	-7.4	-7.1	-6.1	-7.7
2022-01-18	-2.6	-8.6	Falling	-1.1	-5.6	-0.2	-0.9	-3.0
2022-02-11	-2.9	-7.4	Falling	-0.8	-2.9	-1.6	-5.6	-12.7
2022-02-17	-3.4	-8.3	Falling	-1.2	+0.1	-2.2	+3.1	-14.3
2022-03-07	-4.0	-11.4	Falling	-0.5	-0.2	+9.8	+10.8	-3.1
2022-04-22	-3.1	-5.4	Falling	+0.8	-4.1	-4.3	-8.6	-8.9
2022-04-26	-3.7	-8.0	Falling	-0.0	+0.9	-5.5	-5.9	-5.2
2022-04-29	-3.7	-8.8	Falling	+1.3	-0.2	-3.1	-0.6	-2.8
2022-05-05	-4.3	-7.6	Falling	-1.1	-7.5	-7.4	-1.7	-4.9
2022-05-09	-4.8	-12.6	Falling	+0.6	+0.6	+0.4	+5.1	+2.0
2022-05-18	-4.6	-12.5	Falling	+0.1	+1.9	+6.6	-4.9	+7.4
2022-06-13	-3.4	-10.8	Falling	-0.5	-1.1	+0.8	-1.0	+3.4
2022-06-16	-2.6	-13.0	Falling	-1.4	+3.8	+4.4	+4.5	+5.9
2024-04-19	-2.5	-3.4	Rising	+1.0	+3.5	+3.8	+8.9	+12.1
2024-07-24	-3.6	-1.1	Rising	-1.1	+1.8	-6.2	+4.4	+11.1
2024-08-01	-2.7	-2.5	Rising	-3.4	-1.6	+5.0	+6.3	+10.7
2024-08-02	-3.4	-5.9	Rising	-2.2	+2.9	+8.6	+6.8	+13.1
2024-09-03	-2.9	-0.4	Rising	-0.1	-1.0	+2.9	+5.8	+12.4
2024-12-18	-3.5	-1.1	Rising	-0.1	+3.7	+2.9	+8.1	+2.8
2025-03-06	-3.9	-5.3	Rising	-0.0	-3.7	+0.0	-11.1	+13.5
2025-03-10	-4.0	-9.0	Rising	+0.3	+4.2	+7.6	-7.6	+18.3
2025-04-03	-5.4	-8.2	Falling	-7.1	-0.9	+0.2	+10.8	+22.6
2025-04-04	-7.1	-14.6	Falling	+0.9	+8.2	+4.8	+18.2	+30.8
2025-04-10	-3.3	-8.4	Falling	+1.4	+1.1	+7.0	+15.5	+24.0
2025-04-21	-2.8	-9.4	Falling	+3.1	+9.4	+13.7	+21.3	+25.3

2025-12-12	-2.6	-1.0	Rising	-0.4	+1.0	+1.9	+2.8	-0.1
2026-02-04	-3.7	-1.8	Rising	-1.2	+3.3	+2.5	-2.3	+21.2
2026-03-03	-2.6	-2.5	Rising	+1.5	+0.5	+0.6	-0.6	+32.1
2026-03-26	-3.6	-5.5	Falling	-1.0	+3.2	+10.6	+17.9	+36.9
2026-07-16	**-3.3**	**-1.4**	**Rising**	**—**	**—**	**—**	**—**	**—**

All values in percent. Shaded row: live event, forward windows open. Slope regime measured as 65d SMA vs. its own level 21 sessions prior.

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