

Trigger or Shakeout?

EEM and the 65-Day Moving Average as a Thematic-Shift Signal, 2016–2026

ADJUDICATION

The naive hypothesis — that a close below the 65-day MA, or a run of consecutive closes below it, triggers an unwinding of the crowded EM long — fails on 2016–2026 data. First breaks after long runs above resolve higher 86% of the time at 63 days, and consecutive closes below carry no escalation signal. The refined hypothesis survives: what discriminated the genuine unwinds (2018, 2020) was the violence of the break-day and the subsequent failed reclaim — not the count of closes below. Today's session is a hard break (–3.33%, closing 1.68% below the MA) with only three priors, all of which preceded meaningful intermediate drawdowns. Base rates say buy; conditioning says wait for the reclaim test.

1 • Situation

On July 13, 2026, EEM fell 3.33% to close at \$64.67 — 1.68% below its 65-day moving average of \$65.77 — snapping a run of exactly 65 consecutive closes above the average (April 8 through July 10). The setup that prompted this study is the rarity of such closes during the current advance: since January 1, 2025, only 58 of 381 sessions have closed below the 65-day, and nearly all cluster in two episodes (the January 2025 basing period and the April 2025 tariff air pocket). The visual rhyme with the 2016 EM rally — which eventually unwound in 2018 — motivates the question this report adjudicates: is a break of the 65-day MA a viable trigger for a thematic shift out of the crowded EM long, and do consecutive closes below the average escalate the signal — or is the break historically a buying opportunity?

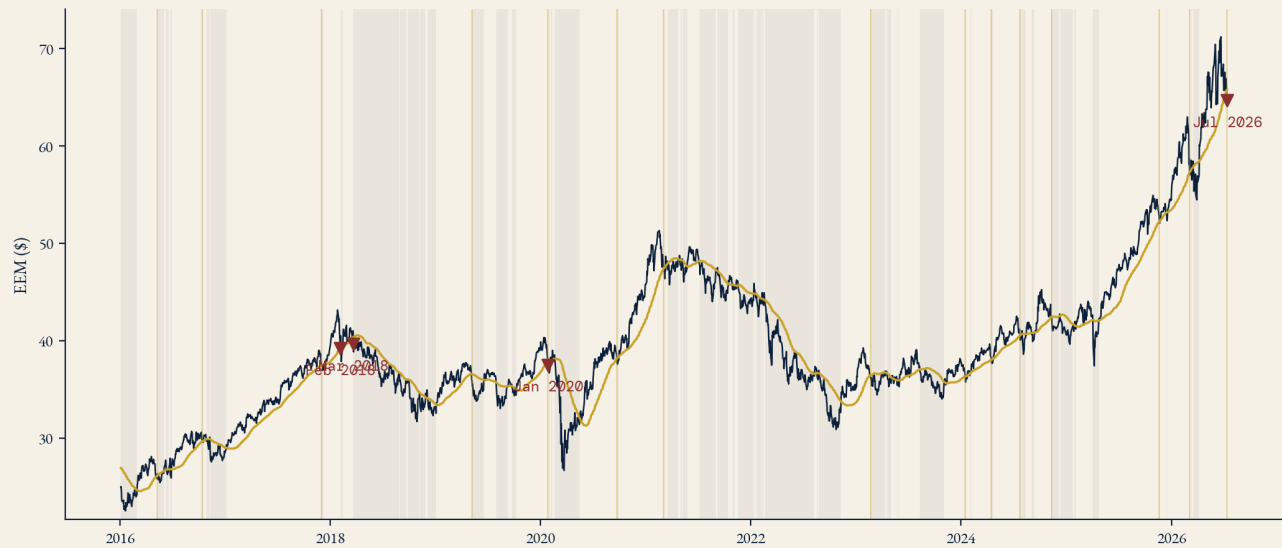


Fig. 1 – EEM vs. 65-day MA, 2016-2026. Shaded bands: below-MA regimes. Gold verticals: first close below after a ≥ 40 -session run above ($n=15$). Red markers: hard breaks – first close below accompanied by a session of -2.5% or worse ($n=4$, including July 13, 2026). Source: BATS daily data, AQI calculations.

2 • Data & Methodology

Daily EEM closes from BATS, 2016-01-04 through 2026-07-13 (2,645 sessions). The 65-day simple moving average supplied in the source file was verified against an independent 65-session rolling mean of closes (mean absolute difference: zero). Three hypotheses are tested. Test 1 establishes the base rate: forward returns following the first close below the 65-day MA after a sustained run above it (thresholds of ≥ 40 and ≥ 65 consecutive sessions). Test 2 tests the escalation hypothesis directly: forward returns measured at the k -th consecutive close below the average, for $k = 1, 2, 3, 5, 8, 13, 21$. If consecutive closes below constitute a trigger for further liquidation, medians should deteriorate monotonically in k . Test 3 conditions the first-break event on how the break occurs: break-day return (“hard” breaks of -2.5% or worse) and break depth (closing $\geq 1\%$ below the average on day one). Forward horizons are 5, 10, 21, 42, 63, and 126 trading days; medians and hit rates are reported against an all-days baseline. All results are in-sample, single-instrument, and uncorrected for multiplicity — treated accordingly in Section 7.

3 • Test 1 — The Base Rate: First Break After a Long Run

There are 15 instances (2016–present, including today) of a first close below the 65-day MA following a run of at least 40 consecutive closes above it, and 9 following runs of at least 65 — today's exact configuration. The prior events resolve higher, not lower: for the ≥ 40 cohort, median forward returns run $+2.0\%$ at 21 days, $+5.6\%$ at 42, $+6.0\%$ at 63 (hit rate 86%), and $+6.2\%$ at 126 days (hit rate 92%). The ≥ 65 cohort is choppier near-term (median -0.4% at 21 days) but still positive 75% of the time at 63 days and 88% at 126. The November 2025 break — after a 146-session streak — was followed by $+19.6\%$ over the next 63 sessions. On unconditional base rates, the first break of the 65-day after a long run has been a shakeout and a buying opportunity, not a top.

DATE	RUN	DAY RET	vs MA	CONSEC BLW	MAXDD 63d	FWD 21d	FWD 63d	FWD 126d
2016-05-09	48	-1.28%	-0.95%	1	-1.6%	+7.4%	+14.7%	+11.7%
2016-10-13	74	-0.89%	-0.33%	3	-6.8%	-6.2%	+0.8%	+8.6%
2017-12-01	229	-0.56%	-0.20%	6	-1.2%	+7.3%	+7.7%	+2.8%
2019-05-07	84	-1.96%	-1.73%	30	-7.3%	-3.8%	-6.0%	+3.6%
2020-01-27	73	-3.45%	-0.82%	2	-28.9%	-3.2%	-15.7%	+2.3%
2020-09-23	89	-1.55%	-1.10%	5	-0.5%	+6.8%	+16.8%	+21.7%
2021-03-04	106	-2.33%	-0.57%	1	-2.9%	+1.5%	+4.2%	+0.1%
2023-02-21	68	-1.26%	-0.68%	36	-4.9%	-2.4%	+0.3%	-1.2%
2024-01-16	43	-2.42%	-0.09%	3	-1.5%	+3.8%	+3.9%	+14.7%
2024-04-16	48	-1.32%	-0.86%	5	-0.1%	+9.5%	+10.4%	+14.5%
2024-07-24	63	-1.45%	-0.82%	5	-4.0%	+2.4%	+8.1%	+3.7%
2024-11-11	41	-0.76%	-0.24%	19	-6.3%	-0.2%	+1.1%	+6.2%
2025-11-20	146	-1.37%	-0.33%	2	-0.0%	+3.2%	+19.6%	+30.6%
2026-03-06	51	-0.54%	-0.61%	1	-4.5%	-0.0%	+12.7%	—
2026-07-13	65	-3.33%	-1.68%	—	—	—	—	—

Table 1 — All first closes below the 65-day MA after ≥ 40 consecutive closes above, 2016–2026. CONSEC BLW: consecutive closes below before reclaiming the average. Final row: the live event.

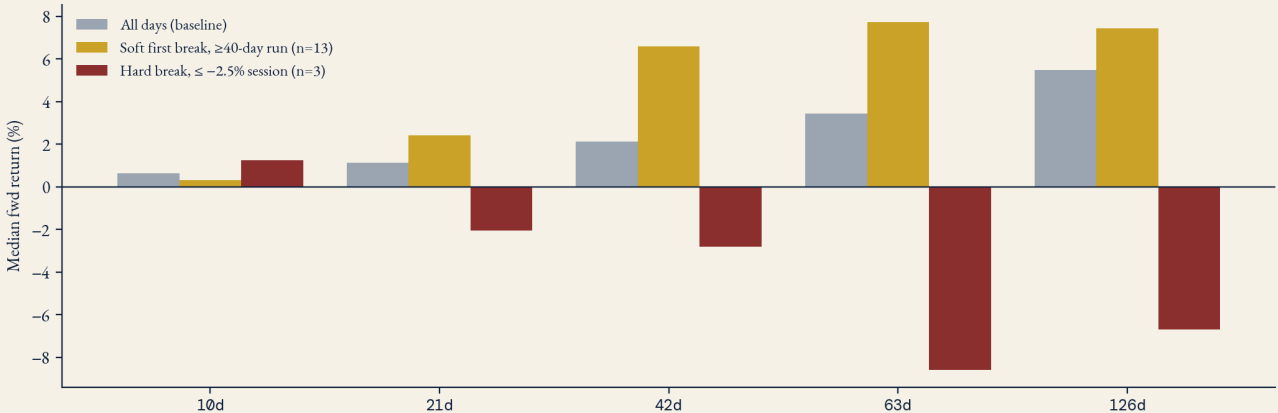


Fig. 2 – Median forward returns from the break day. Soft first breaks track or beat the all-days baseline at 42-126 days; the three prior hard breaks are negative across the intermediate window.

4 · Test 2 — Consecutive Closes Below: The Escalation Hypothesis Fails

If closes below the 65-day were a liquidation cascade trigger, forward returns measured at the k-th consecutive close below should deteriorate as k grows. They do not. The table below shows the opposite lean: the fifth consecutive close below the average has been the best entry in the panel (median +4.9% over the next 63 sessions, 65% hit rate, versus a +3.45% all-days baseline), and even the 13th and 21st consecutive closes carry no negative edge. Across the fourteen completed first-break events, the correlation between the number of consecutive closes below and the 63-day forward return is -0.39 — mildly negative, statistically indistinguishable from noise at this sample size — while quick-reclaim (≤ 3 closes below) and prolonged (≥ 5) cohorts produced nearly identical median outcomes (+4.2% vs. +7.7% at 63 days). Counting closes below the average is not the trigger. EEM’s below-MA episodes have been mean-reverting, not momentum-cascading.

k (consec below)	N	MED 5d	MED 10d	MED 21d	MED 63d	HIT 63d
k=1	74	-0.15%	-0.80%	+1.10%	+2.43%	62%
k=2	59	+0.15%	-0.23%	+0.90%	+2.75%	59%
k=3	49	+0.16%	+0.97%	+0.92%	+2.34%	63%
k=5	37	+0.57%	+1.46%	+1.32%	+4.90%	65%
k=8	30	+0.38%	+0.71%	+0.77%	+3.73%	63%
k=13	24	+0.03%	-0.08%	-1.03%	+2.20%	62%
k=21	16	+1.41%	+2.42%	+2.68%	+0.90%	56%
baseline	2,645	+0.36%	+0.63%	+1.15%	+3.45%	63%

Table 2 – Forward returns measured at the k-th consecutive close below the 65-day MA, all occurrences 2016-2026, versus the all-days baseline (final row).

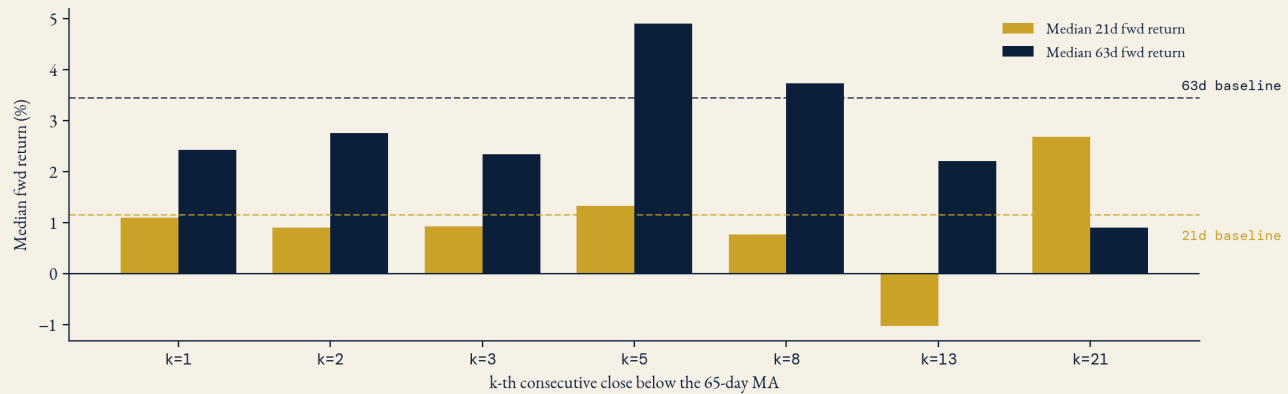


Fig. 3 — No escalation signature: median forward returns by consecutive-close count, with all-days baselines (dashed).

5 • Test 3 — What Actually Discriminated: How the Break Happens

Two conditions separate the benign shakeouts from the events that preceded real damage — and today's session carries both. Break-day violence. Across the first-break events, the correlation between the break-day return and the maximum drawdown over the subsequent 63 sessions is 0.61: the size of the down day, not the duration of the stay below the average, predicted the damage. “Hard breaks” — a first close below the 65-day accompanied by a session of -2.5% or worse — have exactly three priors in the sample, and all three preceded meaningful intermediate-term losses: February 5, 2018 (Volmageddon; -6.7% at 126 days — the event that actually ended the 2016 rally), March 22, 2018 (-9.5% at 126 days), and January 27, 2020 (COVID; -17.9% at 42 days). Today's -3.33% is tied for the most violent break-day in the sample. Break depth. Closing at least 1% below the average on day one (today: -1.68%) has four priors with a median 63-day forward return of -4.3% and a 25% hit rate. The nearest macro rhyme to today is May 7, 2019: an 84-session streak snapped by a -1.96% tariff-headline session closing 1.73% below the average — nearly pixel-identical — which resolved -6.0% over the following 63 sessions before recovering.

DATE	RUN	DAY RET	vs MA	FWD 10d	FWD 21d	FWD 42d	FWD 63d	FWD 126d
2018-02-05	35	-3.51%	-0.01%	+3.2%	+2.9%	-0.5%	-2.5%	-6.7%
2018-03-22	14	-3.33%	-1.85%	-1.6%	-2.0%	-2.8%	-8.6%	-9.5%
2020-01-27	73	-3.45%	-0.82%	+1.3%	-3.2%	-17.9%	-15.7%	+2.3%
2026-07-13	65	-3.33%	-1.68%	—	—	—	—	—

Table 3 — Hard breaks: first close below the 65-day MA on a session of -2.5% or worse (any prior run ≥ 10 sessions). Three-for-three negative in the intermediate window. Final row: the live event.

6 • The 2016 Analog, Re-Read

The chronology of the 2016 rally cuts against the intuitive framing. Its first 65-day breaks — May 9 and October 13, 2016 — were not the unwind. The October break produced a 6.8% drawdown into the U.S. election, after which the trade reasserted itself and ran 229 consecutive sessions above the average through 2017, gaining 28% . The unwind signature, when it finally arrived in early 2018, looked different: a hard break (-3.5% on February 5), followed by three consecutive failed reclaims — recoveries above the average lasting only 11, 14, and 5 sessions, each rolling back over — culminating in the March 22 hard break that never recovered: 111 straight sessions below the average, -7.8% over that regime alone, and the theme was finished. The tell for the thematic shift was not the first break, and it was not consecutive closes below. It was the market's repeated inability to hold a reclaim of the average within roughly three

weeks of recovering it.

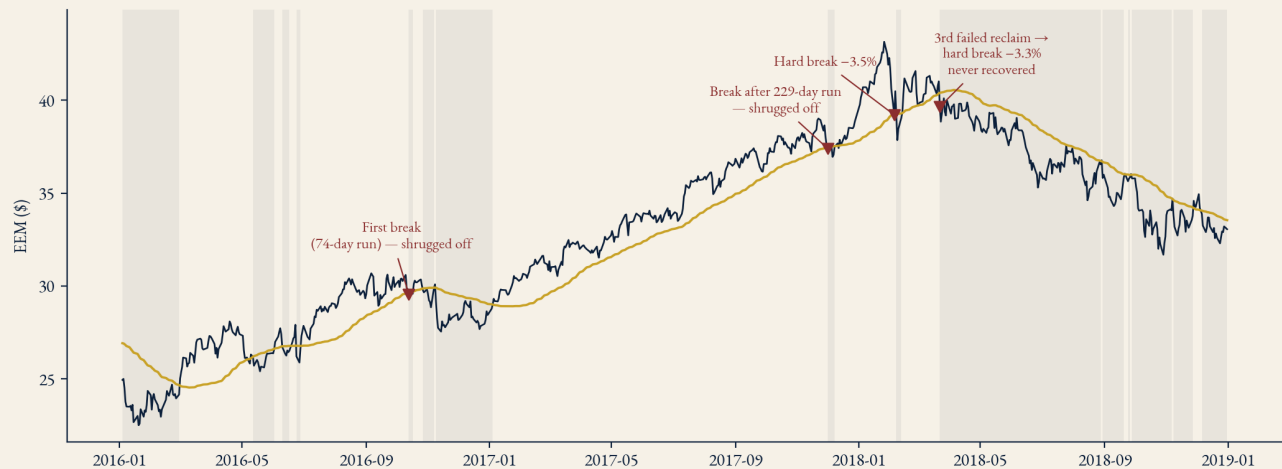


Fig. 4 — The 2016 rally and its 2018 unwind in 65-day-MA regime terms. The first breaks were shakeouts; the failed-reclaim sequence of Feb-Mar 2018 was the genuine trigger.

7 • Decision Framework

Reference level. The reclaim level is the 65-day MA, \$65.77 and now rolling over; a falling average will meet a recovering price, so the reclaim test tightens with time. Base case (modal outcome). If EEM closes back above the average within roughly ten sessions and holds above it for fifteen or more, history classifies this event as a shakeout, and the ≥ 40 -run base rate (86% positive at 63 days, median +6.0%) argues for buying the break. Bearish confirmation. The trigger worth respecting is not a count of closes below but a failed reclaim: a recovery above the average that breaks back below within roughly fifteen sessions — the 2018 fingerprint. A second hard break within three weeks of a reclaim would complete the pattern that preceded the only genuine EM thematic unwind in the sample. Position management now. Because the three prior hard breaks took their worst damage inside the following 42 sessions — including the one (January 2020) that fully round-tripped by 126 days — the asymmetry argues for reducing gross or hedging rather than liquidating the theme, and against adding on day one. The escalation evidence in Test 2 actually favors scaling into weakness around the fifth consecutive close below, conditional on no failed-reclaim signature having formed.

8 • Statistical Caveats & Further Work

The hard-break cohort is $n=3$ — anecdote-adjacent, and each prior (Volmageddon, the 2018 trade war, COVID) was an exogenous macro shock that expressed through this pattern rather than being caused by it. All results are in-sample on a single instrument with no multiplicity correction across the thresholds examined, and the 65-day parameter itself was selected by inspection of the current tape — a forward-looking bias this report cannot fully purge. Recommended extensions: (i) a pre-registered block-bootstrap null on the hard-break conditional returns, using the same machinery as AQI-WP-2026-002, to test whether the -4.3% median at 63 days is distinguishable from resampled noise; (ii) an out-of-sample replication across the EM complex (EWZ, FXI, INDA, EWY, EWT) to test whether the failed-reclaim signature generalizes; and (iii) a flow overlay — the Flow-Anticipation pipeline's positioning data would allow the “crowded long” premise to be measured directly rather than inferred from price.

9 • Trade Construction

The path geometry reframes the execution problem. In all three prior hard breaks the first ten sessions were benign — maximum drawdown of -2.0% to -3.5% — and each rebounded $+1\%$ to $+6\%$ within fifteen sessions as the reclaim attempt formed; the damage, when it came, troughed on day 39–40. The tail is therefore back-loaded while the bounce is front-loaded, which argues against panic liquidation, against day-one adds, and for a defined-risk structure that survives the full 42-session damage window. September expiry (~ 47 trading sessions) matches it; near-dated protection decays before the historical trough arrives. The core expression is a collared long: retain one-half to three-quarters of thematic gross, own the September 62/55 put spread — a band covering -4% to -15% from the break close, bracketing the 2019 analog (-6.0% realized), the 2018 unwind path, and the bulk of the 2020 tail — and finance it with a short September 67 call struck just above the falling 65-day average. The short call is thesis-consistent: it is only tested in the state of the world where the reclaim has succeeded and the hedge was unnecessary. Elevated post-break implied volatility and the historical rebound pattern favor legging into protection on strength within the first fifteen sessions, with the discipline that the bounce being hedged into is the same bounce being graded against the reclaim test.

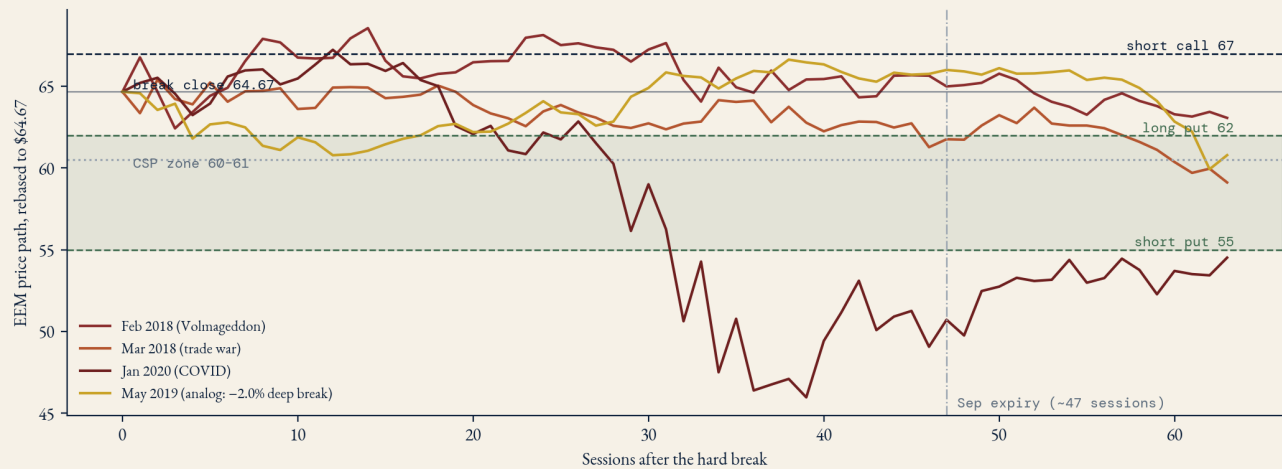


Fig. 5 — The three prior hard-break price paths and the May 2019 deep-break analog, rebased to today's close of \$64.67, against the proposed strike architecture. The Jan 2020 path is the tail the put spread is built for; the Feb 2018 path is the reclaim-failure sequence the kill switch is built for.

LEG	STRIKE / LEVEL	EXPIRY	RATIONALE
Core long (retain)	50–75% of target gross	–	86% base rate positive at 63d; theme not invalidated
Long put	62	Sep	-4% from break close; above 2019-analog trough
Short put	55	Sep	-15% ; caps hedge cost, covers bulk of 2020-path tail
Short call	67	Sep	Above falling 65d MA; tested only if reclaim succeeds
CSP (dip account)	60–61	Sep	Paid to commit near $k=5$ zone (best entry in panel)

Table 4 — Structure summary. Net premium on the collar targets approximately zero; exact strikes to be set against live September vols at execution.

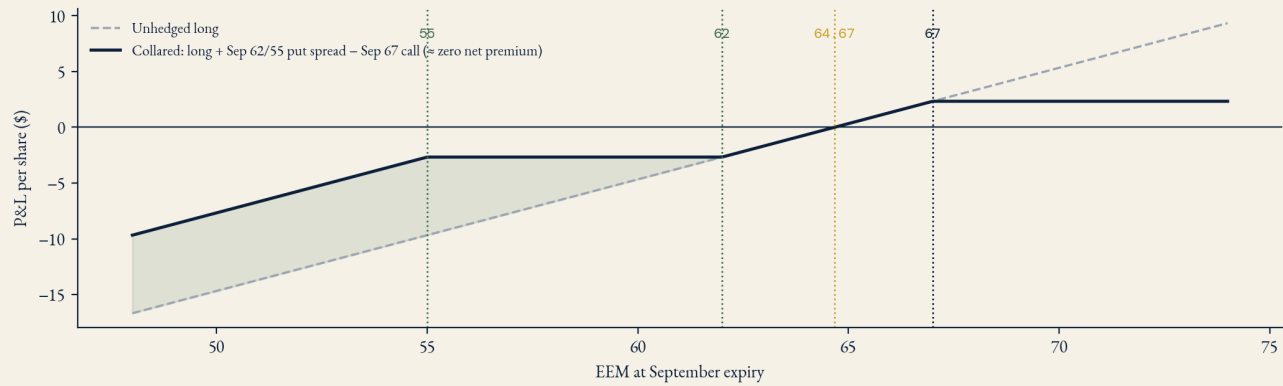


Fig. 6 – Payoff at September expiry, collared position versus unhedged long (per share, net premium ≈ 0). The shaded region is the protection purchased across the historical damage band.

Tranche & hysteresis schedule

Sizing follows fractional Kelly discipline: the conditional edge rests on three historical observations, which caps conviction at quarter-Kelly on any leg. The trigger set uses deliberately separated thresholds so the whipsaw zone around the falling average (65.77 and declining) cannot churn the position. Add tranche 1 at the fifth consecutive close below the average — the strongest entry in the escalation panel (median +4.9% at 63 days, 65% hit rate) — or via assignment on the 60–61 cash-secured puts, whichever arrives first. Add tranche 2 on a reclaim of the 65-day that holds five or more consecutive sessions. De-risk the hedge (roll or close the put spread) after fifteen consecutive sessions back above the average, the threshold at which history reclassifies the event as a shakeout. Kill switch: a failed reclaim — recovery above the average that breaks back below within roughly fifteen sessions — completes the 2018 fingerprint; cut the core to minimum and extend the put spreads. The study does not support flipping outright short even then: the hard breaks were mixed at 126 days (January 2020 finished +2.3%), so post-confirmation downside is better expressed in defined-risk spreads than delta-one short exposure. Nothing in this section constitutes investment advice; it is the structure implied by the conditional distributions in Sections 3–6, for adjudication against live pricing, positioning data, and mandate constraints.

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