

Protective-Stop Exit Assessment

Full-history replay — June 2026

Version 1.11.0

June 2026

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Purpose

This document records an evidence-based assessment of one live-execution behaviour and the action taken as a result. It exists to demonstrate two things an allocator should expect from a systematic manager: a disciplined, data-first approach to any change in exit behaviour, and a zero-drift mandate - the modelled (paper) track record and live execution must be the same thing by construction, not by hope.

Date: 29 June 2026 · Baseline: the safety-hardened baseline (v6, the production strategy at the time of this study). The exit-discipline conclusion carries forward unchanged to the current v7 release, which modified entry gating only.

The question we studied

Live accounts were running a real-time, tick-by-tick trailing protective stop - the stop was ratcheted forward continuously as price moved, on roughly a two-second cadence. This behaviour was never part of the validated, published model. The published model advances its protective stop only on completed hourly closes.

Two questions followed:

1. Does the real-time trailing stop help or hurt risk-adjusted performance?
2. Does it cause live results to diverge from the published track record - i.e. does it break the zero-drift mandate?

Methodology

We ran a full-history replay over 5 February 2024 to 16 June 2026 on the frozen hourly price tape used for the published track record. The protective-stop trailing rule was the only variable changed between runs. Everything else was held identical: entry signals, position sizing, profit-taking, and the always-resting initial protective stop.

We compared four variants:

Variant	Protective-stop trailing rule
A - Real-time trailing (live today)	Stop ratchets forward continuously, intrabar (tick-by-tick), as run on live accounts.
A' - Real-time trailing, best case	Same real-time mechanism, but using the model's gentler stop distance.
B - Hourly-close trailing (published model)	Stop advances only when an hourly candle completes. This equals the published track record.
C - No trailing	The protective stop never advances beyond the initial resting stop.

The baseline for comparison is the safety-hardened baseline (v6), which is performance-identical to the published model (Variant B).

Limitations (stated plainly)

We do not store true tick data, so the real-time variant cannot be replayed against the exact price path live accounts saw. To approximate it honestly:

- We used 1-minute history from the same price source. Its first print matches the frozen hourly tape to the penny.
- The 1-minute path was clipped so the intraday range never exceeds the official hourly tape's high/low for that hour. The simulation can never invent a more extreme price than the published tape contains.
- 1-minute resolution is finer than the published model (hourly) but coarser than the live ~2-second cadence. Therefore, if anything, this simulation understates the real-time stop's whipsaw. The real-world penalty of real-time trailing is at least as large as shown below, not smaller.

This is a single asset (Bitcoin), a single historical window, and a reconstructed intrabar path. We state these constraints because honest limitations are what make the conclusion credible.

Results

All figures below are the actual replay outputs. "Drift vs published model" measures whether the variant reproduces the published track record trade-for-trade.

Variant	Win rate	Median R	Mean R	Compounded growth	Max drawdown	Sharpe	Drift vs published model
B - Hourly-close (published model)	~80%	0.46	4.50	+9,647% (~x97.5)	-8.1% realised / -11.4% true	~ 5.1	None - it is the published record
A - Real-time trailing (live today)	79%	0.37	2.72	+3,980% (~x40.8)	-6.8%	-	Diverges on 116 of 197 trades (68 worse, 43 better)
A' - Real-time trailing, best case	-	-	-	~ x58.6	-	-	Still drifts from the published record
C - No trailing	-	-	-	~ x3.4	hits -20% emergency cap	~ 1.6	Drifts; edge collapses

Reading the table:

- The hourly-close trailing (B) is the published model and the best performer. Highest growth, strong Sharpe, drawdown within the published envelope, and - by definition - zero drift.
- The real-time trailing run live (A) keeps only ~42% of the model's compounded growth (x40.8 vs x97.5) in exchange for a marginal drawdown saving (-6.8% vs -8.1% realised). It also breaks zero-drift: 116 of 197 trades diverge from the published model, and it is worse on 68 of them versus better on 43. It trades away most of the edge for very little protection.
- Even the best-case real-time variant (A') lags the published model and still drifts.
- Removing trailing entirely (C) destroys the edge - growth collapses to ~ x3.4 and the run hits the -20% emergency drawdown cap (Sharpe ~ 1.6). This proves the hourly trailing is essential to the strategy's risk-adjusted return; the debate is only how the stop should trail, not whether it should.

Out-of-sample confirmation (after the test window)

An independent, real-world confirmation arrived after the 16 June 2026 cut-off, so it could not have informed the study.

On 28 June 2026, both the live system and the published model generated the same Bitcoin short signal. Their only difference was the protective-stop behaviour:

Track	Exit	Result
Live (real-time trailing)	17:52	+0.13%
Published model (hourly-close trailing)	23:00	+1.30%

The real-time stop was whipsawed out almost immediately, while the published model held the position to a result roughly ten times larger. A live trade, on a date outside the test window, behaving exactly as the replay predicted.

Conclusion and action taken

The real-time tick-by-tick protective-stop trailing is being retired. Live execution will advance its protective stop only on completed hourly closes - identical to the published model.

A reduce-only protective stop continues to rest at the exchange at all times for crash and gap protection, so the account is never unhedged against a fast adverse move. What changes is only the ratcheting cadence: forward on hourly closes, not on every tick.

This single change delivers both objectives at once:

- Best risk-adjusted performance - it adopts the highest-growth, strongest-Sharpe variant in the study.
- Zero paper-vs-live drift by construction - live and the published track record now run the identical exit rule, so they cannot diverge.

Governance note

This assessment reflects a standing mandate, not a one-off review:

- No change reaches live trading unless it has first been proven against historical data and compared head-to-head with the safety-hardened baseline (v6).
- The modelled track record must replicate live execution exactly. Where the two ever differ, the difference is treated as a defect to be closed - here, by aligning live to the model rather than the reverse.

The real-time trailing stop was a live-only behaviour that violated this mandate. Finding it, measuring it honestly, and removing it is the discipline working as intended.

Disclaimer

Not financial advice. Figures are historical simulation on a single asset and a single window, with a reconstructed intrabar path that, if anything, understates the real-time stop's whipsaw. Past simulated performance does not guarantee future results.