BTC 15-minute shadow research: v1 close (2026-10-14)

Martial Systems LLC. Decision sample: public board generated 2026-10-14 05:51 UTC. Unique settled windows: 6,441. Last calibration: 2026-09-18 11:39 UTC, n = 4,661.

Revisions

> 2026-10-14: First issue. The paper watcher was stopped. Figures use the public export of 2026-10-14 05:51 UTC and the host totals written the same morning.

The paper watcher for KXBTC15M-style contracts stopped on 2026-10-14. It had run from 2026-07-27, 79 days, and logged 6,441 of 7,584 possible 15-minute windows (84.9%). It placed no orders. The run asked whether the entry signal made money after costs, and which exit kept more of that money. The sample does not answer either question. The durable record is the Level-2 tape: 2,086,954 snapshots, last tick 2026-10-14 05:47 UTC. v2 is the next measurement. This note stops at the v1 record.

Calibration was left at the 2026-09-18 fit. That fit covers 4,661 mid-window rows out of 4,916 windows on the board that day, 1,780 windows short of the close sample. Rebuilding it on the 4 GB host while the watcher is resident is what the kernel kills. The close does not publish a new slope.

The path (2026-10-14)

Public path profit is the 1-contract cooldown simulation on unique last-write windows. At the win70 gate that path is +$27.85 on 2,138 entries, which is 1.30 cents per contract. Maximum drawdown on the same path is $15.99, 57% of the total. At the 05:29 write the path had 1,479 active windows, so the 2,138 entries are clustered inside windows. A day-block resampling would be wider than an entry-level standard error.

The noise check below treats per-entry sigma as an assumption, not a measured residual. Under those assumptions the t-statistic on +$27.85 runs from 2.01 down to 1.20. Detecting a 1 to 2 cent edge at two sigma takes on the order of 2,000 to 6,000 entries. The freeze rule asked for 20 to 30 tickers.

Assumed sigma per entry	SE of the sum	t for +$27.85	Entries for 2 sigma at 1.3 cents
$0.30	$13.9	2.01	about 2,100
$0.40	$18.5	1.51	about 3,800
$0.50	$23.1	1.20	about 5,900

Sim path dollars rise as the gate tightens, and win70 is the strictest gate that was tested. That shape is what a threshold fitted on the same rows looks like. win75 was not run.

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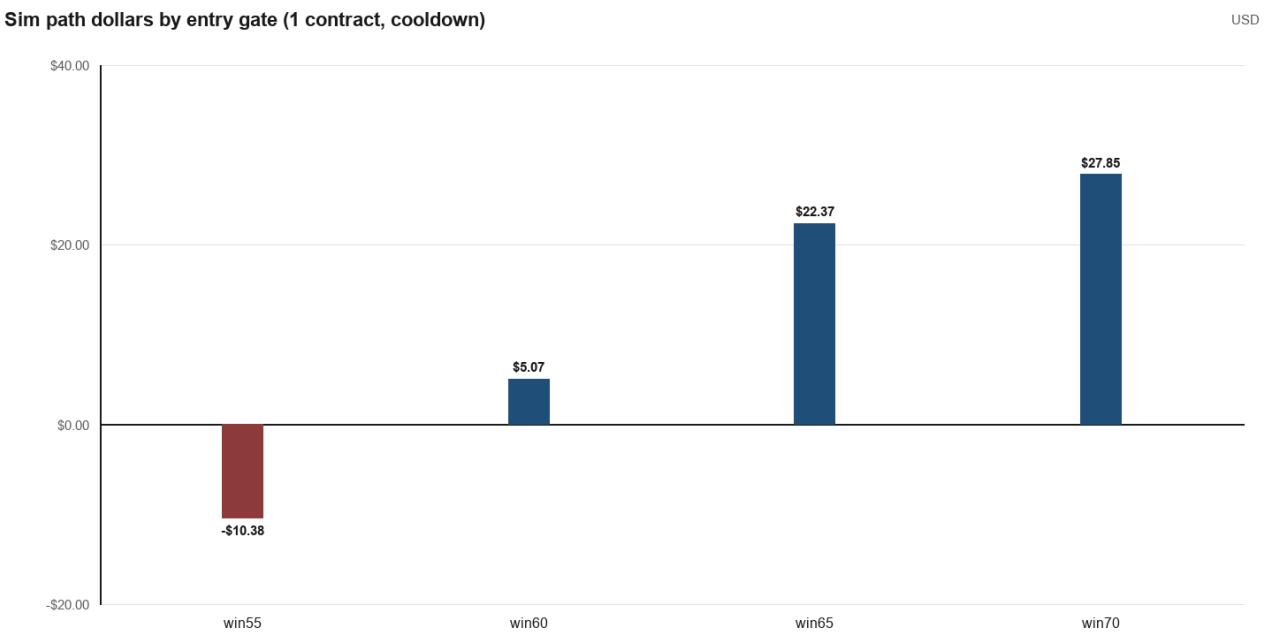


Figure 1. One-contract cooldown sim path by gate, from the 05:29 export. The 05:51 path total was still +$27.85, so the extra window was flat on this path. win55 is negative. Each stricter gate adds dollars, and the last gate is the one the board features.

Settlement accounting ranks the two strict gates the other way. On the host totals at 05:32 UTC (6,440 windows), win65 cooldown settlement is $189.12 and win70 cooldown settlement is $111.41. Sim marks an exit during the window. Settlement holds to the labeled end of the window. The objects differ, and the ranking still reverses, which is enough to refuse a gate chosen after seeing both.

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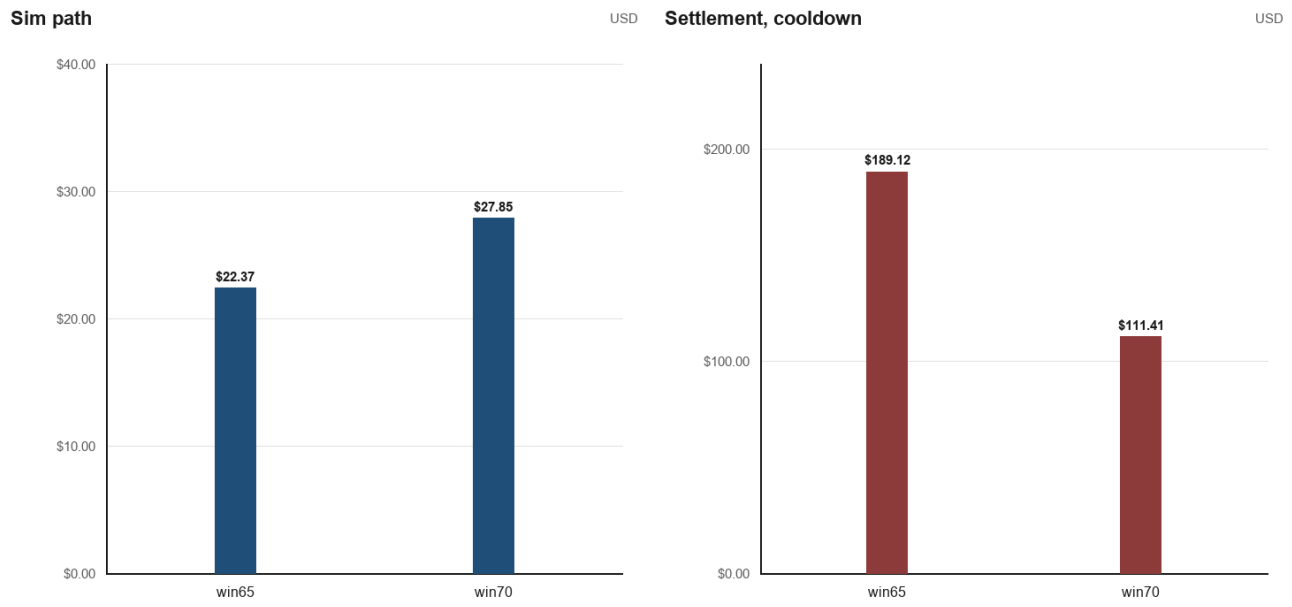


Figure 2. Same two gates, two accounting columns, separate scales. Sim prefers win70 ($27.85 over $22.37). Settlement prefers win65 ($189.12 over $111.41).

The label and the record (2026-10-14)

Windows were graded on the watcher's last Coinbase print against the strike. The exchange settles a 60-second average before the close against the average before the open. Win rates, settlement dollars, and the Brier score inherit that label. The miss is largest when the print sits near the strike. The model reads the same spot feed it is graded on. The market price is for the exchange average. The comparison therefore flatters the model. A re-grade against the exchange result was not run for this close. On that result the model's deficit is likely larger.

The record is also incomplete, and the holes line up with load. Coverage from 2026-07-27 through 2026-10-14 is 6,441 / 7,584 (84.9%). From 2026-09-18 through 2026-10-14 it is 1,780 / 2,496 (71.3%). Exit-audit shards for 2026-10-07 and 2026-10-08 are missing. The mechanism was a restart loop. A full export beside the resident watcher filled the 4 GB box, the kernel killed the watcher, and the supervisor started it again. systemd counted 5,898 restarts over 76 days, about one every 19 minutes. Each restart opened the live market in the middle of a window and stored that window as a complete one. There was no partial-window flag. A late first entry on a nearly decided window is an easy win when the label is the last spot print. Last-write dedupe then keeps that partial row.

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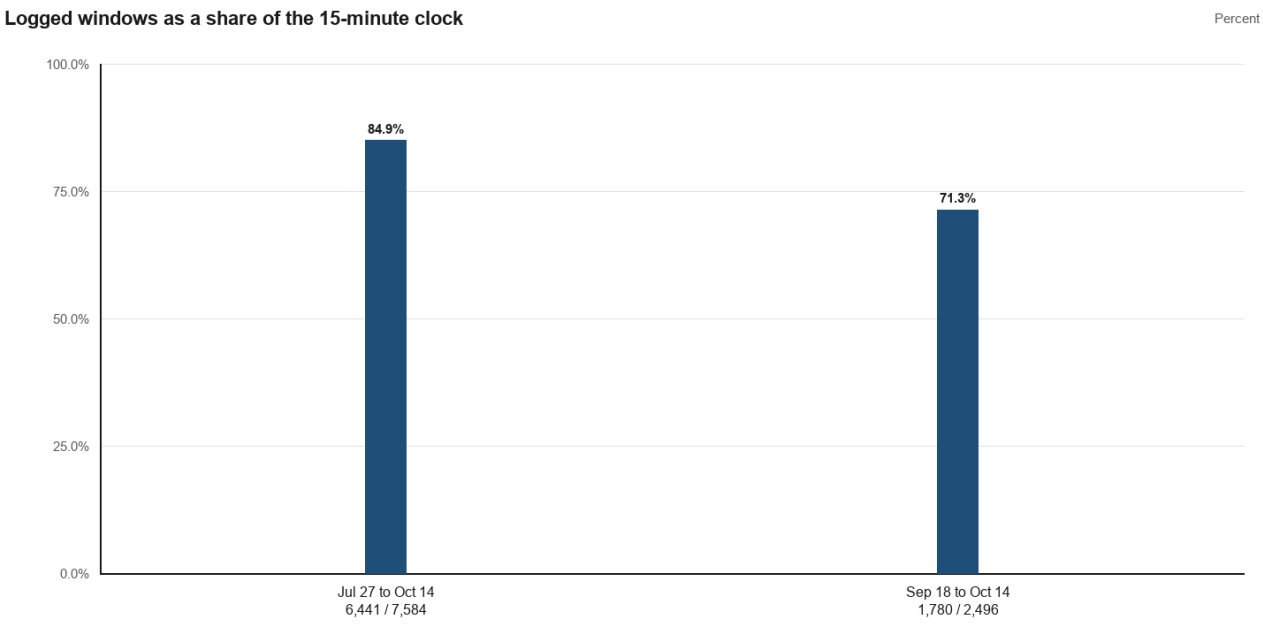


Figure 3. Coverage of the 15-minute clock. 7,584 is 79 days times 96 windows. 2,496 is 26 days times 96. The later stretch is the crash-loop period, including the missing 2026-10-07 and 2026-10-08 exit-audit shards.

Selection (2026-10-14)

Three choices were made on the same rows. The unique shadow board keeps, for each ticker, the strictest gate that ticker ever reached, so the scored entry is chosen with knowledge of later signals. The featured exit was whichever of nine policies led on this sample. At the 05:51 export that leader is delta 12 percent: $730.28 against a current-exit total of $386.86, a difference of $343.42, on 4,272 tickers. The 05:29 table, one ticker shorter, is the grid in Figure 4. The step from delta 10 percent ($722.80) to delta 12 percent ($729.69) is $6.89. Delta 15 percent and delta 20 percent were not run. The curve flattens at the edge of the grid that was searched.

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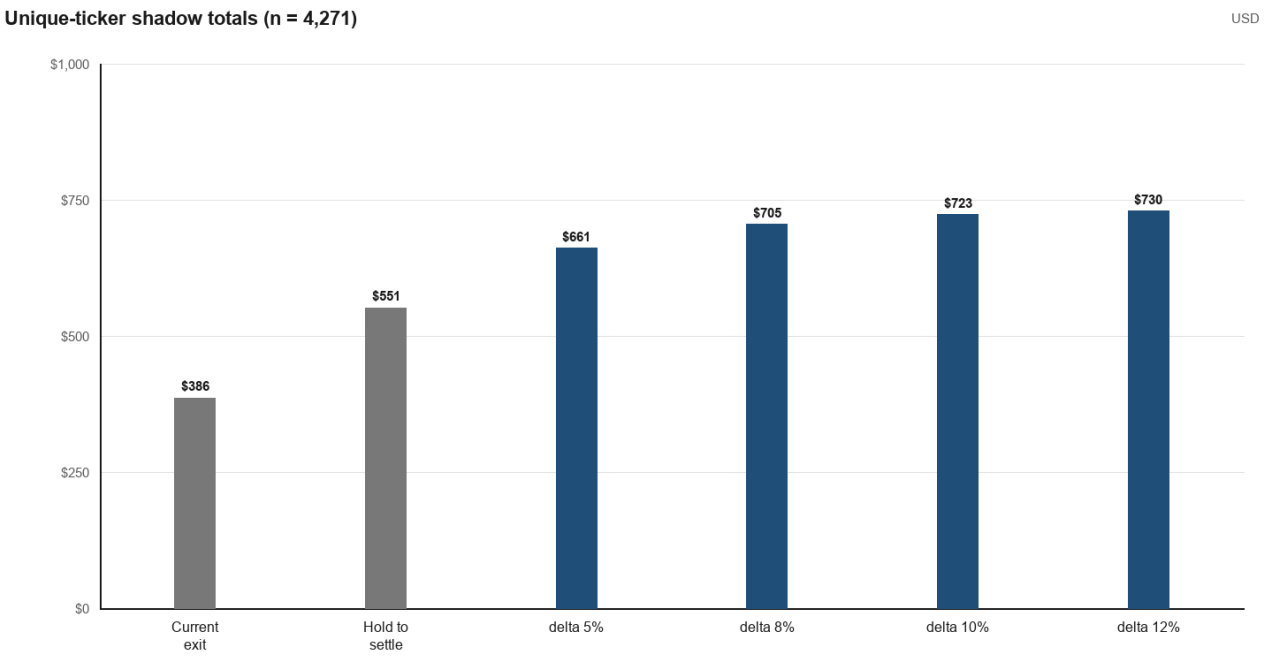


Figure 4. Unique-ticker totals at the 05:29 export, n = 4,271. Gray bars are the current exit (about 48 seconds) and hold-to-settle (about 456 seconds). Blue bars are the delta grid. Dollars still rise, and the last step is the small one.

The September file still on disk is an older rebuild, 2026-09-18 11:41 UTC: 3,357 tickers, current-exit win rate 47.81 percent, total $111.24, delta 12 percent total $366.41. It is not the October board. If that ticker set is a subset of the October set, the implied new rows are 914 tickers, 885 current-exit wins (96.8 percent), and about $0.30 each, against about $0.033 on the old rows. The subset join was not rerun. A 96.8 percent win rate on the increment is not a plausible regime change. It matches partial windows, and it matches crashed rows. When no exit was recorded, or the path was empty, current exit and every delta policy fall back to hold-to-settle profit. Hold-to-settle wins 67.48 percent of the unique shadow rows in the 05:29 table. The fallback pulls the other policies toward that rate.

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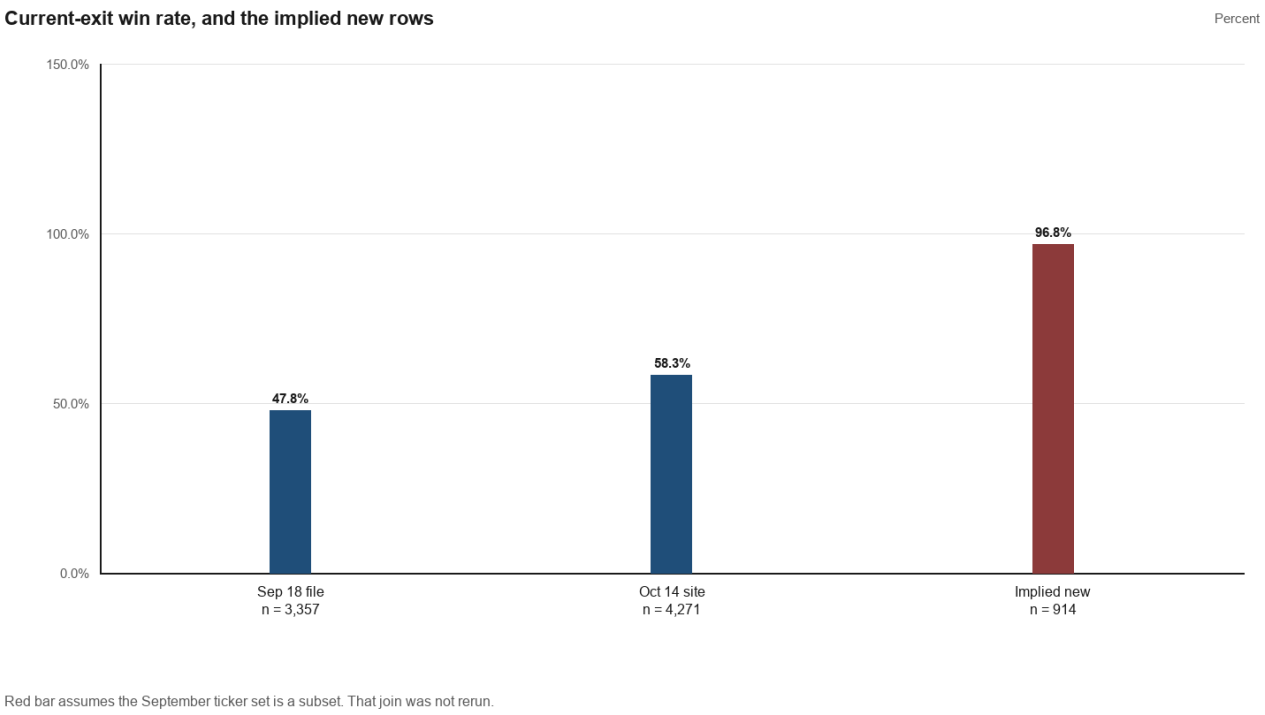


Figure 5. Current-exit win rate on the 2026-09-18 file, on the 2026-10-14 site table (n = 4,271), and on the arithmetic difference. The red bar exists only if no September ticker was dropped.

The freeze count of 513 is the number of windows whose strictest gate was exactly win65. Every win70 window is excluded. The written rule was a floor of 20 to 30. Clearing 513 does not show that the sample can detect a 1 to 2 cent edge, and it is a different set from the win70 path the board features.

One comparison kept the same sign in every cut that was already on disk. Longer holds beat the current exit. That exit averaged about 48 seconds on the unique board and 51 seconds on the multi-entry ladder. On the unique board, hold-to-settle totals $551.38 against current exit $386.35 (n = 4,271). On the multi-entry ladder, 13,915 rows per variant and not unique tickers, hold-to-settle totals $1,551.00 against current exit $1,139.66. On the win65 slice of that ladder (n = 3,101), hold-to-settle is $422.88 against current exit $317.08. Those exits are still marked at the top bid, or at the ask when no bid was logged. The sign is a candidate for a later test on exchange results.

Costs (2026-10-14)

The same windows are scored in more than one cost model, and the models disagree. On the path board at 05:32 UTC (6,440 windows), cooldown settlement is +$111.41 and the sim path is +$27.85. First hot is +$84.13 settlement and +$15.32 sim. Every hot is +$50.50 settlement and -$9.04 sim. The sim haircut on the cooldown path is $83.56 over the 2,138 win70 entries, about 3.9 cents an entry. First hot keeps 18 percent of its settlement total. Every hot finishes negative in the sim. The positive sim result shows up when entries are sparse.

Path (1 contract)	Settlement	Sim
Cooldown (at least 120 seconds)	+$111.41	+$27.85
First hot	+$84.13	+$15.32
Every hot	+$50.50	-$9.04
Missed while waiting	-$33.63	

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The research sim charges 0.07 times p times (1 minus p) on a trade, unrounded. At p = 0.50 that is 1.75 cents. The general exchange schedule rounds 0.07 times C times P times (1 minus P) up to the next cent on each order, and it charges no settlement fee. At one contract the raw fee is at most 1 cent only when the price is below about 17 cents or above about 83 cents, the roots of 0.07 times p times (1 minus p) = 0.01. Between those prices the rounded order fee is 2 cents, so a round trip near the middle is 4 cents before the spread. The sim's note calls the unrounded formula conservative. At one contract the ceiling is the larger number, so that note has the inequality backwards. Some accounts are later rebated the rounding difference. The sim does not book that rebate on its own line. Series-specific schedules exist. The KXBTC15M row of the current schedule was not re-read for this close.

Win rate is the wrong summary even inside one cost model. On the multi-entry ladder a four-cent take-profit rule wins 89.45 percent of rows and ranks sixth by dollars.

The forecast (2026-10-14)

The last calibration, 2026-09-18 11:39 UTC, scores the ensemble probability nearest 450 seconds left, on 4,661 unique mid-window rows. Brier score: model 0.169, market 0.166, climatology 0.249. The market forecast is the YES ask at the same tick, half a spread above the mid. Skill against the market is -0.015. Skill against climatology is 0.323, which the market also clears. Beating a flat base rate is not evidence of an edge over the price. The model slope is 1.124, standard error 0.024, interval 1.077 to 1.170. The market slope is 1.017. On this label the model is underconfident. The label is the Coinbase print.

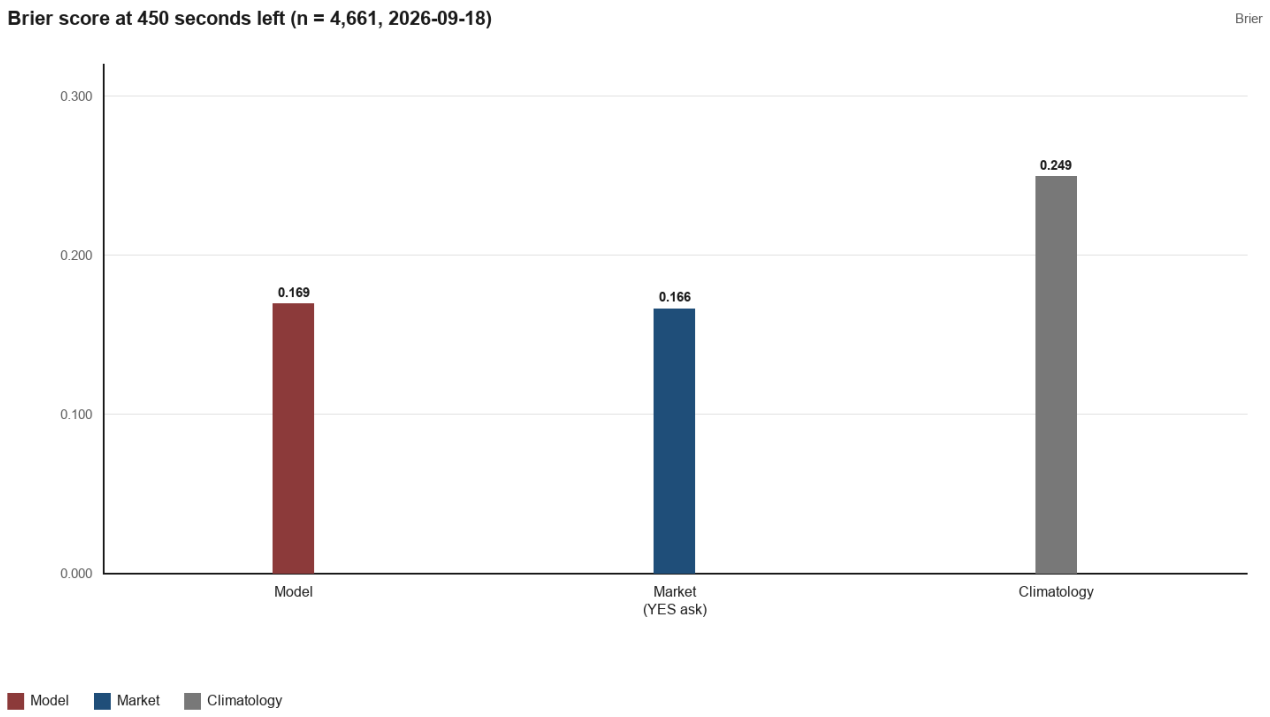


Figure 6. Brier score, lower is better. The model sits 0.003 above the YES ask. Both sit well below climatology. n = 4,661 on 2026-09-18, horizon 450 seconds left.

Research gates still apply an older map: n = 94, slope 1.63, fit on 2026-07-28. Under p_stretched = 0.5 + 1.63 times (p_raw minus 0.5), a displayed 0.70 is a raw probability of 0.623. The brain process, which placed no orders in this run, stays on raw probability. A research gate and a brain gate with the same name are different thresholds. The 4,661-window slope is 1.12. The two slopes were not reconciled before the stop. Skill was reported at one horizon, 450 seconds left, while entries happen across the window.

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Disposition (2026-10-14)

The systemd unit btc15m-research was disabled on 2026-10-14 and left stopped. The September scoreboard and the September calibration file are renamed with that date so a later read does not treat them as the board. Log history in the companion repository was left in place. Rewriting it would be a force-push. The public charts are the historical tape. The figures in this note are the 05:51 UTC decision sample. A later export, if one was written with the watcher already stopped, can add the windows logged between 05:51 UTC and the stop. Those windows do not reopen the decision.

Closed paper fills on the public board: 0. Closed live fills: 0. The outcomes log was last written 2026-08-15. v2 is coming. What this run leaves for it is the Level-2 tape, and a short list of measurements the v1 board did not identify: the exchange settlement label, a partial-window flag, one pre-registered gate, one cost model, and a forecast scored against the market on that label.

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