50-EMA NY-Morning Breakout - Filtered Re-Test

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Instruments : EURUSD, GBPUSD, XAUUSD  (Polygon C: forex tickers)
Timeframe   : 1 Hour        Period: 2010-01-03 -> 2026-07-31

RULES
  Entry   50-EMA cross up, breakout bar CLOSING 10:00/11:00/12:00 New York
          (1H bars close on the hour, so these are the only closes
           inside the requested 09:30-12:30 window)
  Stop    low of the breakout candle
  Target  entry + 2R  (1:2 risk-reward)
  Limit   one open position at a time across the entire book
  Sizing  1% of equity risked per trade, compounded
  Costs   round-trip spread: EURUSD 1.0 pip, GBPUSD 1.4 pip, XAUUSD 30c

NEW IN THIS RUN
  Higher-timeframe trend filter: 4H/1D EMA, shifted one bar so only
  FULLY CLOSED higher-timeframe bars are visible (no lookahead).
  Volume confirmation: breakout volume vs trailing 20-bar average.

  CAVEAT - forex is OTC with no consolidated tape. Polygon's volume
  for C: tickers is a QUOTE-UPDATE TICK COUNT, not traded size. It is
  used only as an activity proxy, relative to each symbol's own mean.

METHODOLOGY
  All 12 filter combinations are reported. Selecting the best cell of
  a 12-cell grid is selection, not evidence - the full grid is shown
  so the spread of outcomes is visible.

BASELINE (v1, unfiltered): gross E[R] +0.0015 (t=0.04) - no edge.
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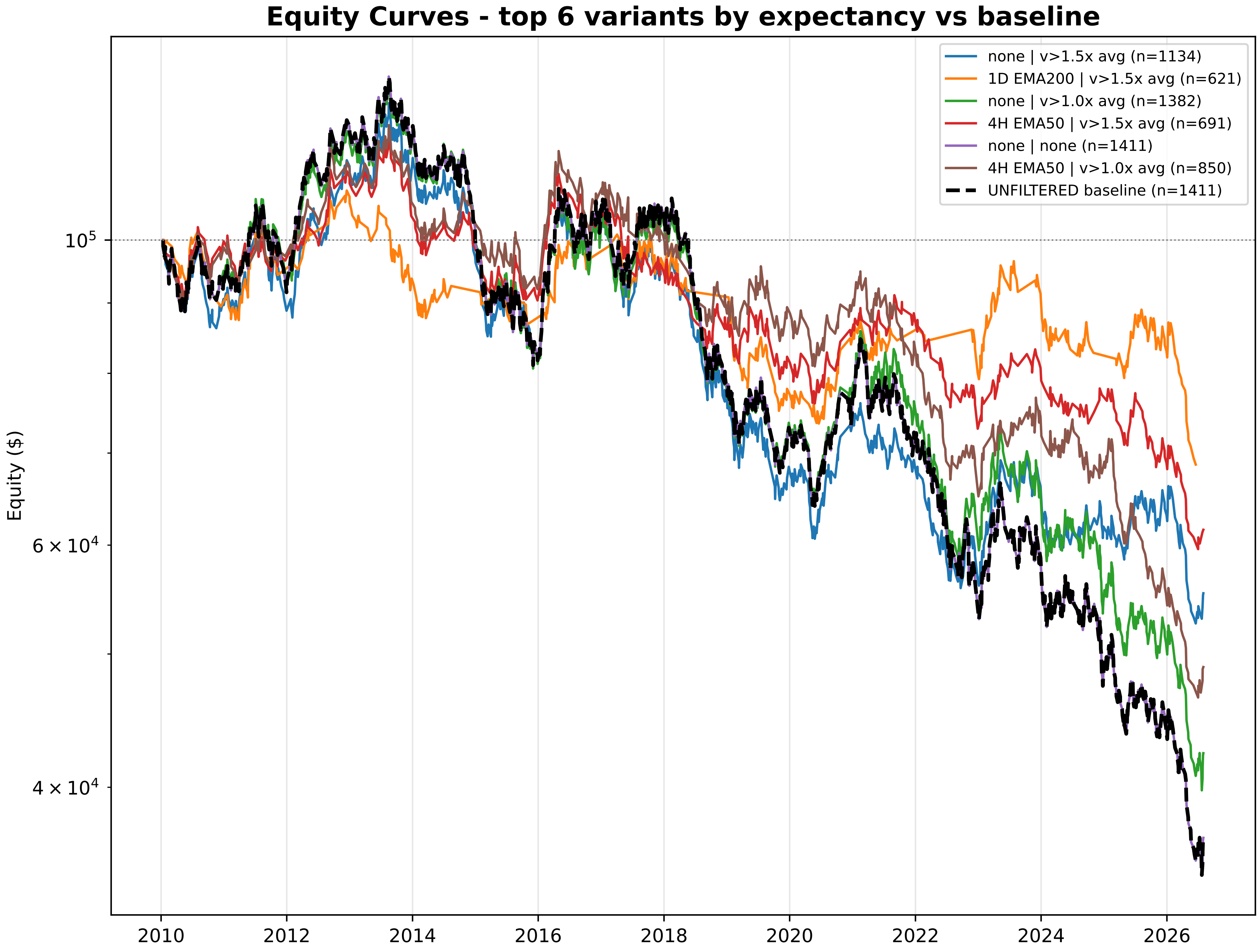
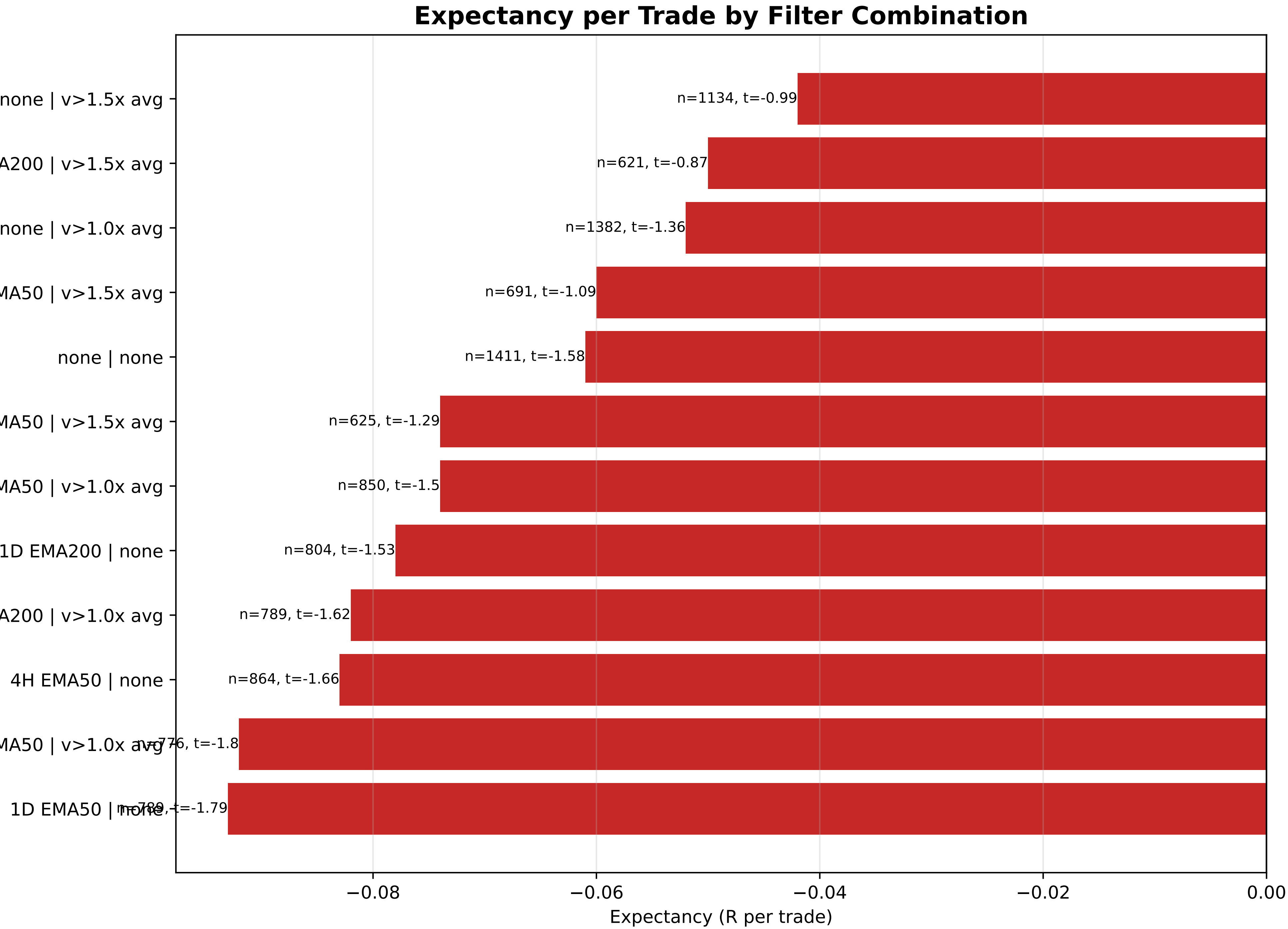
Full Filter Grid - All 12 Combinations

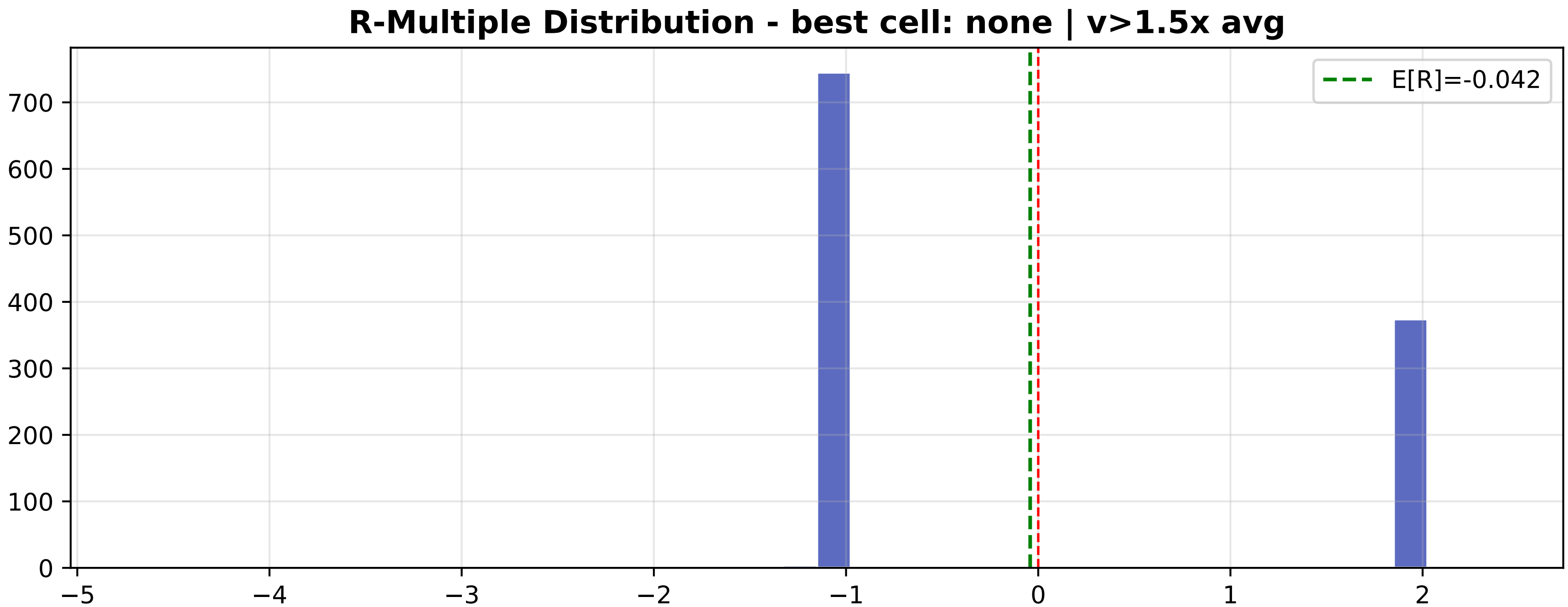
t = t-statistic of mean R-multiple. |t| < 2 means the result is indistinguishable from zero.

HTF	Volume	Trades	Win%	TotRet%	CAGR%	MaxDD%	PF	E[R]	t
none	none	1411	32.9	-63.2	-5.87	-73.7	0.92	-0.061	-1.58
none	v>1.0x avg	1382	32.9	-57.6	-5.06	-69.5	0.93	-0.052	-1.36
none	v>1.5x avg	1134	33.2	-44.6	-3.51	-58.2	0.93	-0.042	-0.99
4H EMA50	none	864	32.3	-55.3	-4.75	-65.0	0.9	-0.083	-1.66
4H EMA50	v>1.0x avg	850	32.2	-51.1	-4.23	-61.7	0.9	-0.074	-1.5
4H EMA50	v>1.5x avg	691	32.7	-38.4	-2.89	-50.1	0.91	-0.06	-1.09
1D EMA50	none	789	32.1	-55.8	-4.81	-64.3	0.88	-0.093	-1.79
1D EMA50	v>1.0x avg	776	31.7	-54.8	-4.69	-63.5	0.88	-0.092	-1.8
1D EMA50	v>1.5x avg	625	32.3	-41.0	-3.14	-49.5	0.89	-0.074	-1.29
1D EMA200	none	804	32.3	-50.6	-4.21	-55.4	0.9	-0.078	-1.53
1D EMA200	v>1.0x avg	789	32.1	-51.8	-4.35	-56.4	0.89	-0.082	-1.62
1D EMA200	v>1.5x avg	621	33.2	-31.3	-2.26	-36.8	0.92	-0.05	-0.87


Equity Curves - top 6 variants by expectancy vs baseline
none | v>1.5x avg (n=1134)
1D EMA200 | v>1.5x avg (n=621)
none | v>1.0x avg (n=1382)
4H EMA50 | v>1.5x avg (n=691)
none | none (n=1411)
4H EMA50 | v>1.0x avg (n=850)
UNFILTERED baseline (n=1411)
Equity ($)
10^5
6×10^4
4×10^4
2010
2012
2014
2016
2018
2020
2022
2024
2026



Expectancy per Trade by Filter Combination
none | v>1.5x avg
A200 | v>1.5x avg
none | v>1.0x avg
MA50 | v>1.5x avg
none | none
MA50 | v>1.5x avg
MA50 | v>1.0x avg
1D EMA200 | none
A200 | v>1.0x avg
4H EMA50 | none
MA50 | v>1.0x avg
1D EMA50 | none
n=1134, t=-0.99
n=621, t=-0.87
n=1382, t=-1.36
n=691, t=-1.09
n=1411, t=-1.58
n=625, t=-1.29
n=850, t=-1.5
n=804, t=-1.53
n=789, t=-1.62
n=864, t=-1.66
n=776, t=-1.8
n=789, t=-1.79
−0.08
−0.06
−0.04
−0.02
0.00
Expectancy (R per trade)



Per-symbol breakdown (best cell)

Symbol	Trades	Win%	NetPnL	E[R]
C:EURUSD	544	32.353	-31027.987	-0.059
C:GBPUSD	382	35.34	2390.716	0.017
C:XAUUSD	208	31.731	-16009.494	-0.106

Verdict

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GRID SUMMARY

  cells tested          : 12
  cells with E[R] > 0   : 0
  cells with |t| >= 2   : 0
  best  E[R]            : -0.042
  worst E[R]            : -0.093
  median E[R]           : -0.074

Breakeven win rate at 1:2 risk-reward is 33.33%.
A filter only adds value if it lifts the win rate durably
above that AND survives the ~6% of R lost to spread each trade.
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