

REPLAY

Real cascades, *run through the live engine*

A venue can claim its risk engine would have behaved differently. The only way to settle that is to take real minutes from real venues, feed them to the same code that runs the alpha, and publish the data, the code and the result together so anyone can disagree with the arithmetic rather than the story.

The engine here is not a model of the engine. Confidence, regime and leverage come from `api/riskcore.mjs`, the same function the live venue calls on every tick. What differs is the source set, and it matters enough to say plainly: the live venue reads up to eight books per market, this replay reads the books that publish minute history far enough back, which is five on recent events and three on the older ones. The diversity term in the confidence formula is the share of expected sources that are live, so a smaller set is a stricter test on that term and a looser one on divergence, which has fewer venues to disagree. Each run's file lists exactly which books it used.

What is being compared

Hybrid

The engine's leverage at entry with the baseline's flat maintenance. It exists to separate the two things the Openfield policy mixes: leverage that follows the data, and a stricter maintenance rule. Where hybrid beats the baseline, the leverage did it; where Openfield trails hybrid, maintenance did.

Openfield

Leverage at entry is whatever the engine allowed that minute, given how much its three independent sources agreed. The position is then margined at the leverage it was opened under. A later fall in the ceiling restricts new risk and does not re-margin what you already hold.

Baseline

A conventional venue. One price feed, a leverage tier fixed in advance at 20x, maintenance at a flat 0.5% of notional. Nothing it knows changes while the event happens.

Both sides get the same trader with the same intent: deposit \$10,000, take the position at the maximum leverage the venue allows at that moment, then do nothing. The test is run from **every single minute** of every window, not from a chosen entry.