EXECUTION-QUALITY REVIEW

Instrument: Crude parity / calendar-spread arbitrage

Session: 17-Jul-2026 (full) n = 163 / 105 fills

Slippage & fill-tracking comparison of two execution engines — AQ vs Piyush

Basis of assessment

Both engines worked identical target parities. Slippage = fill parity − target parity. Its signed value tracks market direction over the session (favourable / adverse) and is largely outside engine control, so the primary judgement is direction-neutral: the ABSOLUTE tracking error |slippage| — how tightly and repeatably each engine's fills sit on the target. Lower is better.

Exhibit 1 — Distribution of absolute slippage

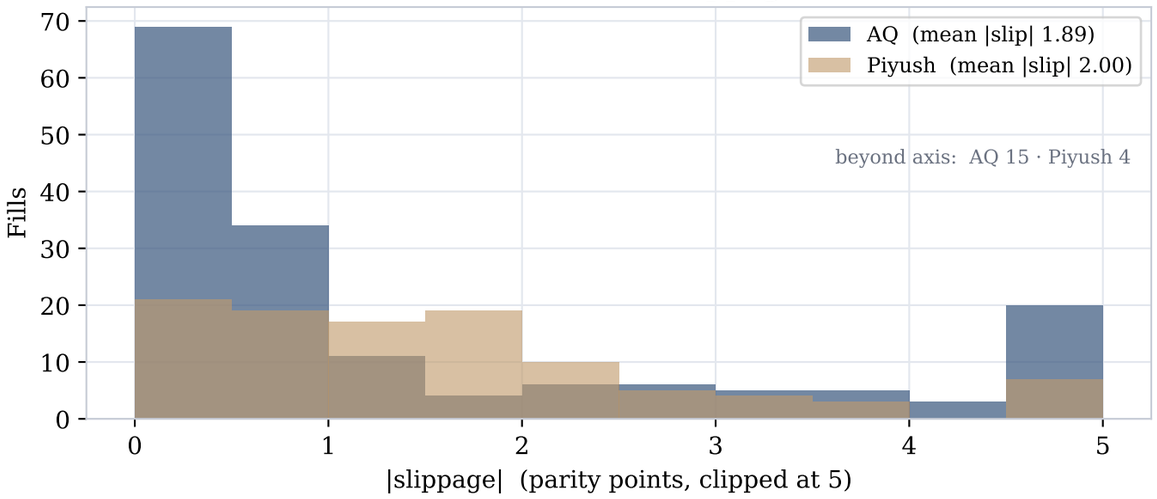

Exhibit 2 — Slippage dispersion

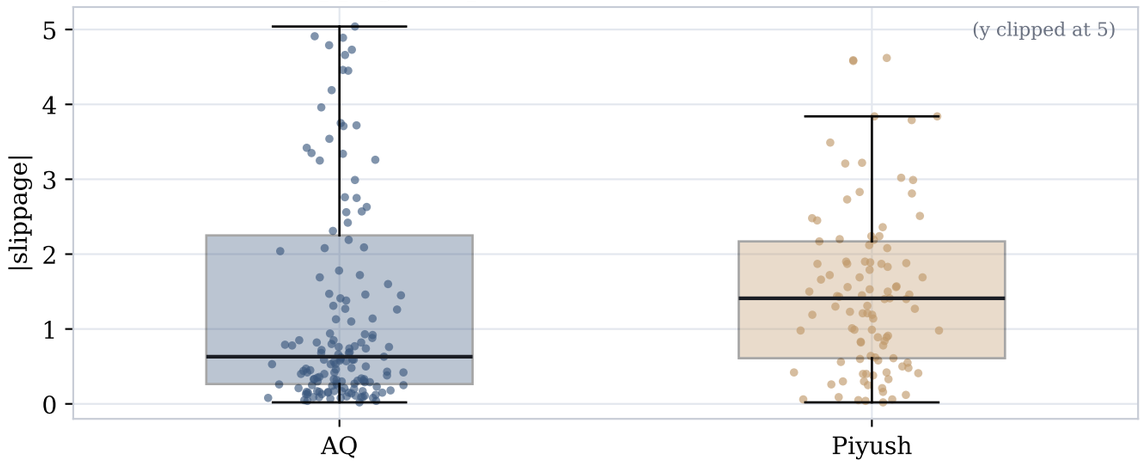

Exhibit 3 — Fills within tolerance band

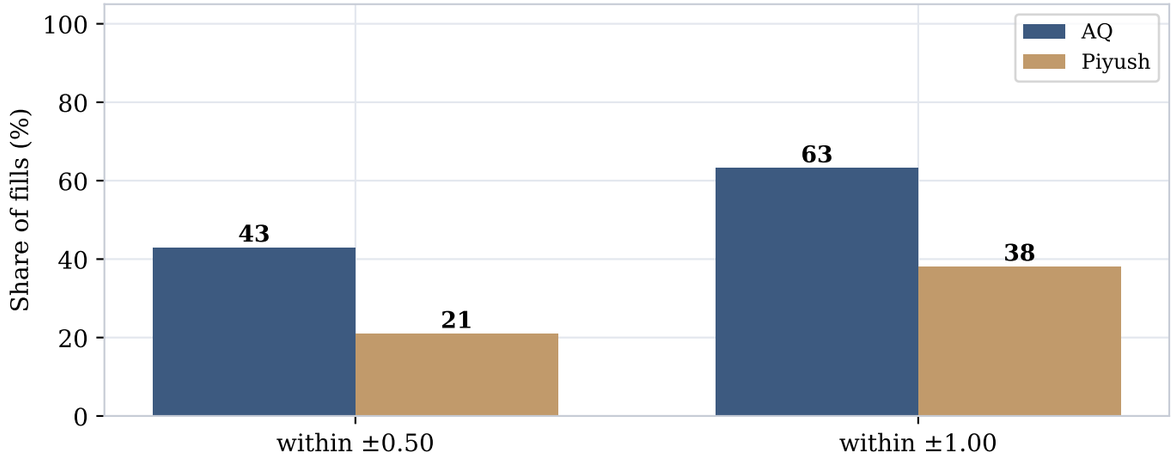

Exhibit 4 — Piyush dispersion by contract leg

Exhibit 5 — Signed slippage (market-direction driven)

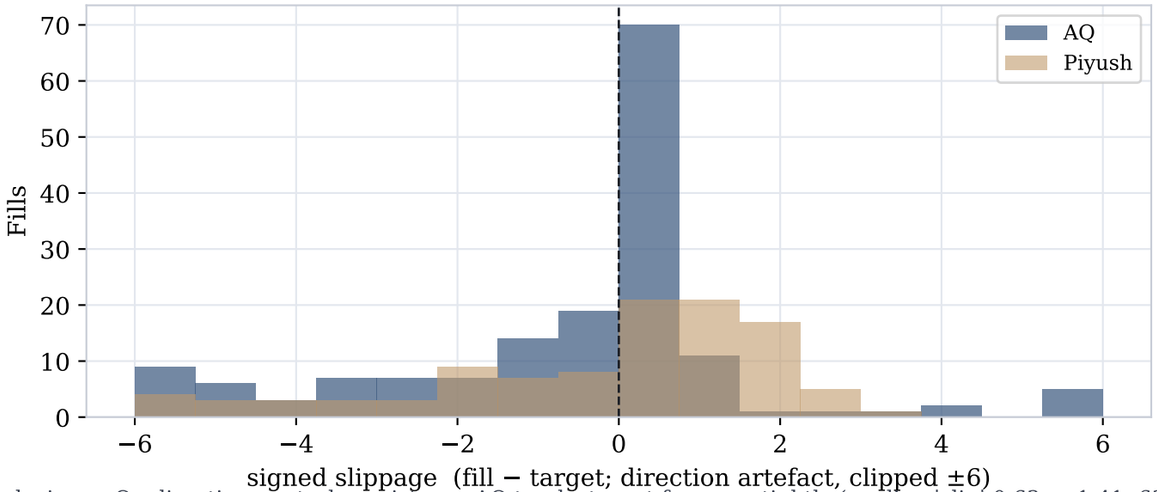

Exhibit 6 — Summary metrics

Metric	AQ	Piyush	Favours
Fills	163	105	
Mean |slippage|	1.891	1.998	**AQ**
Std dev (signed)	3.55	3.83	**AQ**
Median |slippage|	0.63	1.41	**AQ**
Within ±0.50	43%	21%	**AQ**
Within ±1.00	63%	38%	**AQ**
Worst single |slip|	16.94	24.87	**AQ**
Signed mean (dir.)	-0.399	-0.534	—

Conclusion — On direction-neutral consistency AQ tracks target far more tightly (median |slip| 0.63 vs 1.41; 63% vs 38% within ±1.00). Piyush's wider dispersion is concentrated in the illiquid crude-mini leg; both engines' signed means are session-direction artefacts, not skill.

Preference: AQ. Caveat: single session; AQ trades liquid crude-aug, Piyush mostly illiquid crude-mini — liquidity, not only engine, drives part of the gap.