CALYPSO COMMODITIES

X-LNG CASE STUDY · JUL 2025

Market-Driven Changes in Flex Value

+45%

same book, same clause: four weeks of curve movement lifted the option from $8.6M to $12.5M

Portfolio fixed · only the forward curves move **21 May vs 23 June 2025** · one month apart **3 × 1,000 paths** · re-run for both months

Change one thing: the date

The May study run again, with the forward curves moved forward four weeks

0
changes to contracts, cargoes or fleet

1
variable moved: the price curve date

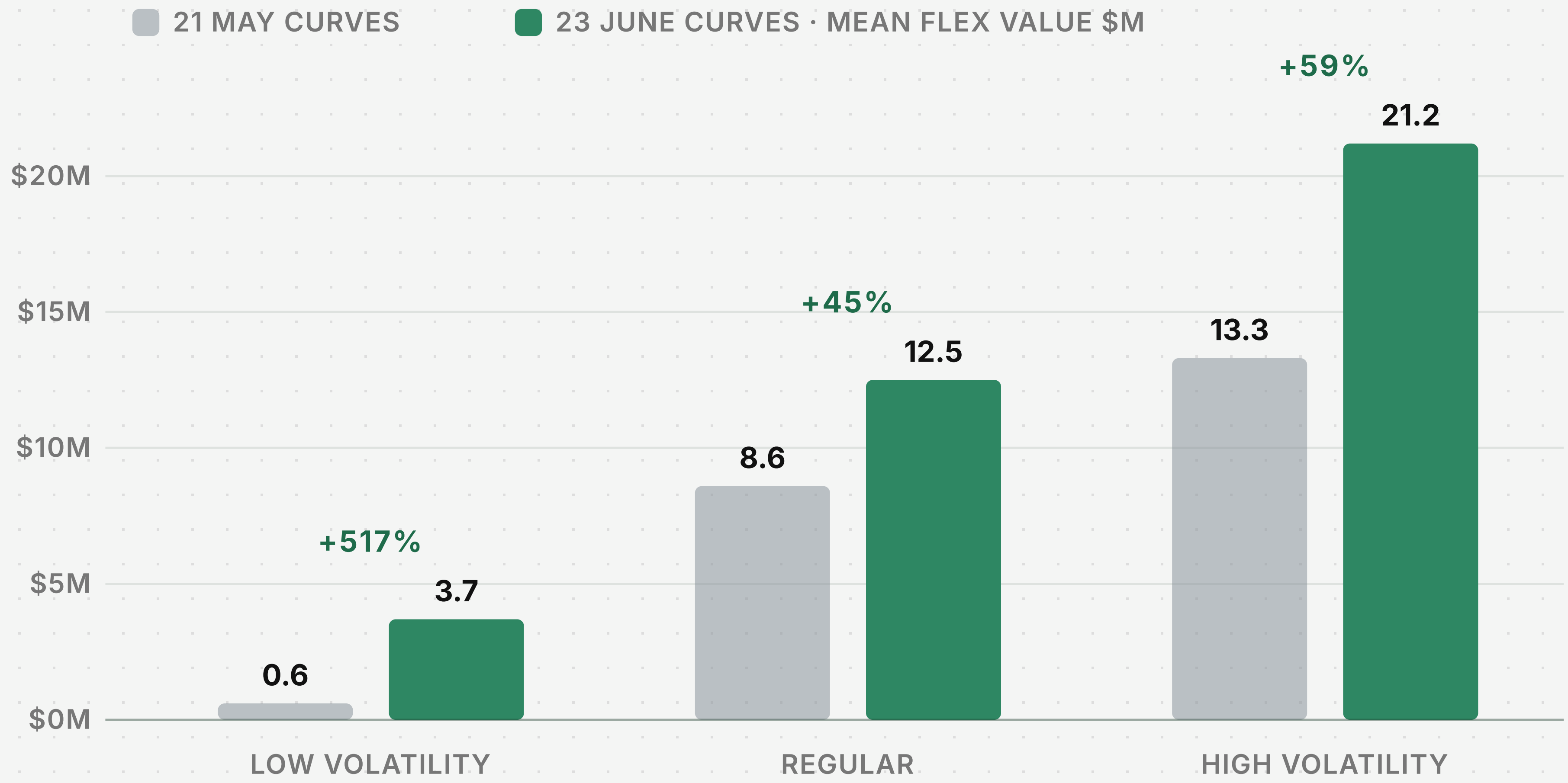
6
optional DES-Long Asia cargoes, as before

3,000
simulated paths, re-optimised per path

By keeping the portfolio structure identical and updating only the forward curves, **the effect of changing market conditions is isolated cleanly**: whatever moves is the market, not the book.

Four weeks, a different valuation

Mean flex value per regime, May curves against June curves



SAME PORTFOLIO, SAME CONTRACTS · ONLY THE FORWARD CURVES CHANGED

EXACT · MAY $0.60M / $8.63M / $13.28M · JUNE $3.66M / $12.46M / $21.18M

The same clause on the same cargoes: +45% in a regular market, +59% under stress, +517% in a calm one where the base is small.

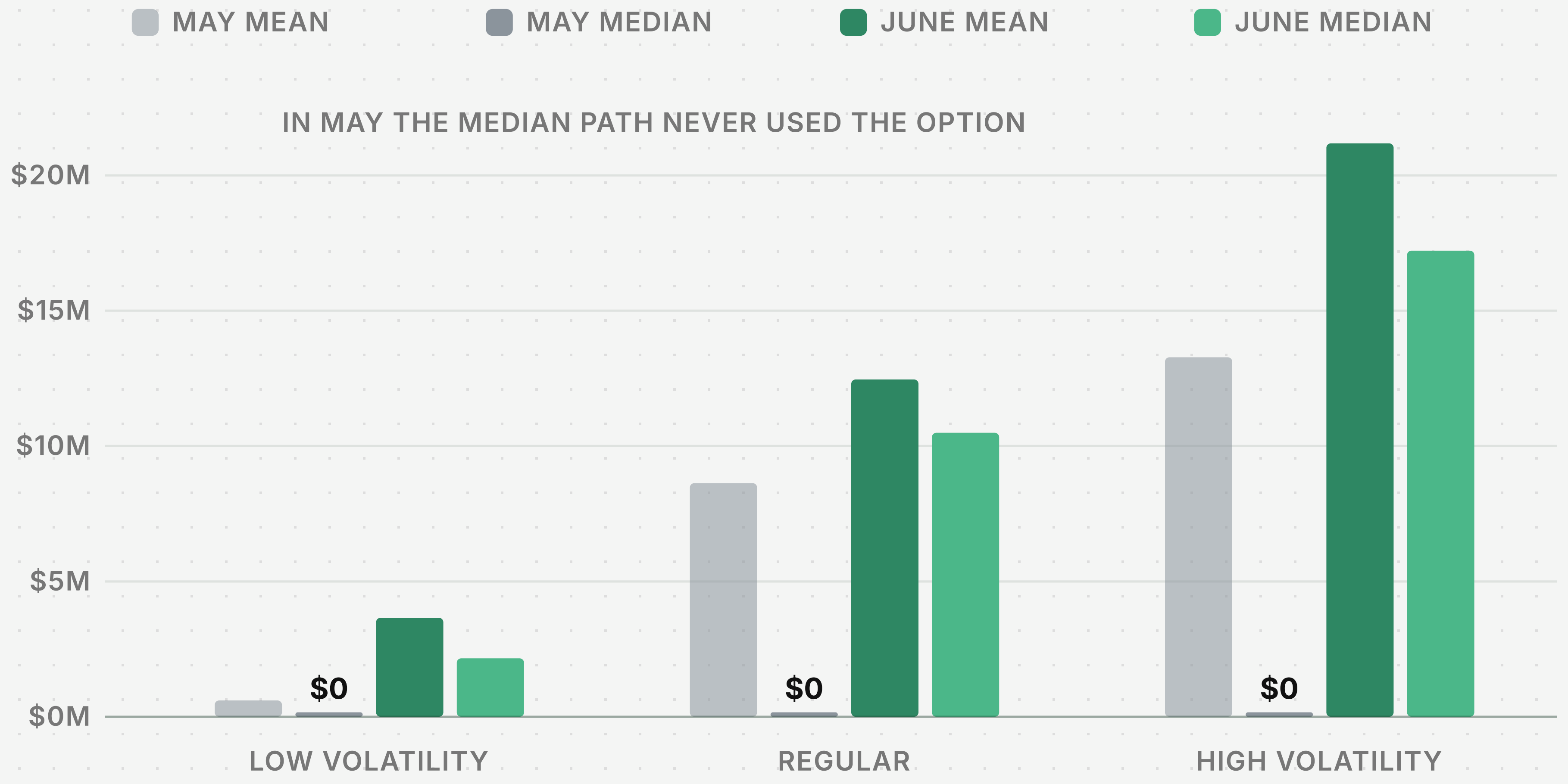
From exception to norm

What the averages hide: the median path changed behaviour

01

The median tells the sharper story

Mean and median flex value per month and regime



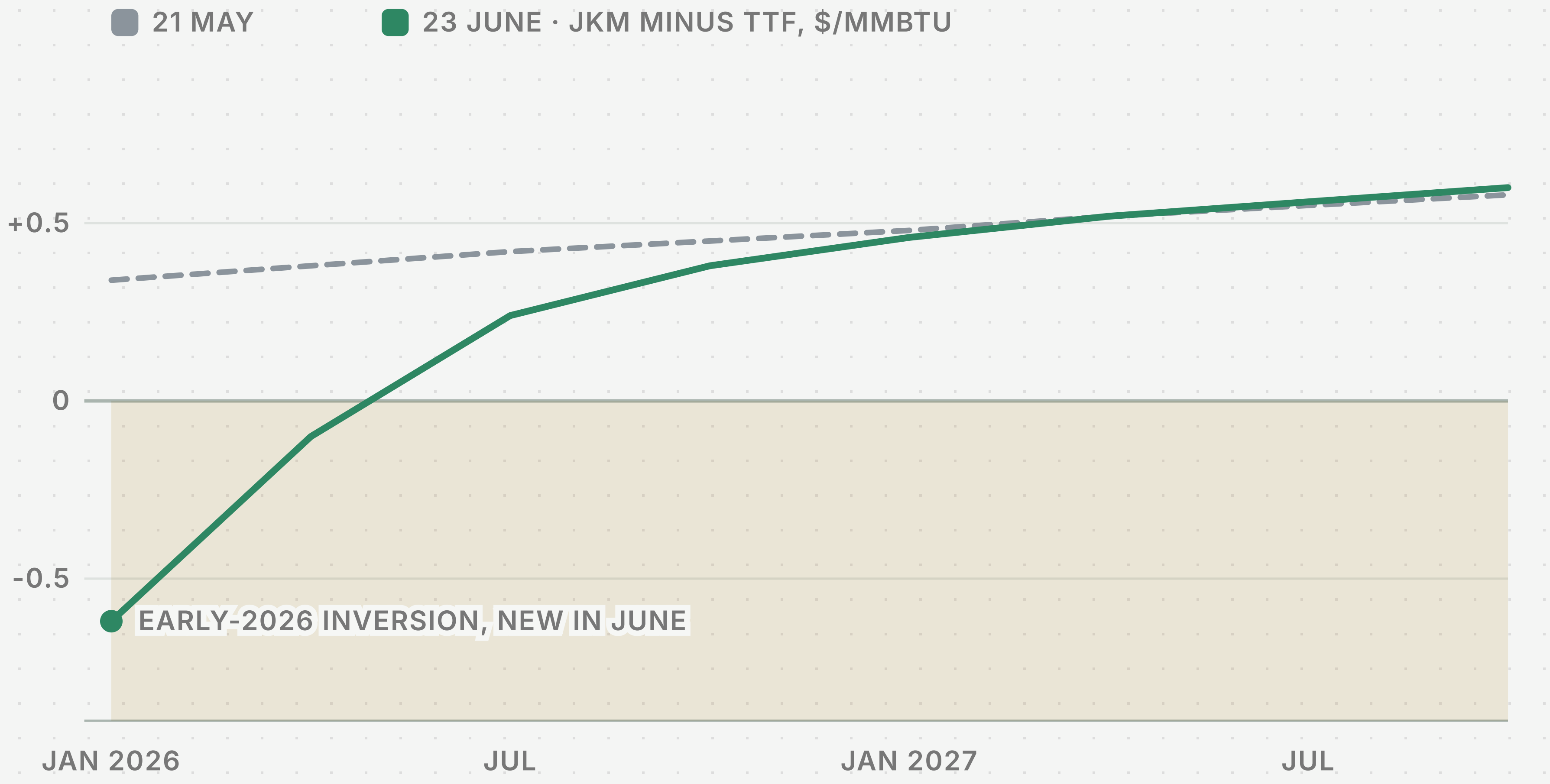
FLEX VALUE PER PATH · $M · 1,000 PATHS PER REGIME AND MONTH

MEDIANS · MAY $0.00M IN ALL THREE REGIMES · JUNE $2.16M / $10.49M / $17.22M

In May fewer than half the simulations ever exercised the option. On June curves the typical path uses it.

What the curves actually did

JKM-TTF spread across the portfolio horizon, May against June



SPREAD SHAPE TRACED FROM THE ENGINE CURVES · DELIVERY MONTHS OF THE PORTFOLIO HORIZON

NO CARGO IS DIVERTED AT THE CURVE, YET A LARGE SHARE OF SIMULATED PATHS MOVES INTO THE MONEY

A general upward shift plus a negative JKM-TTF spread in early 2026 that the May curves did not show.

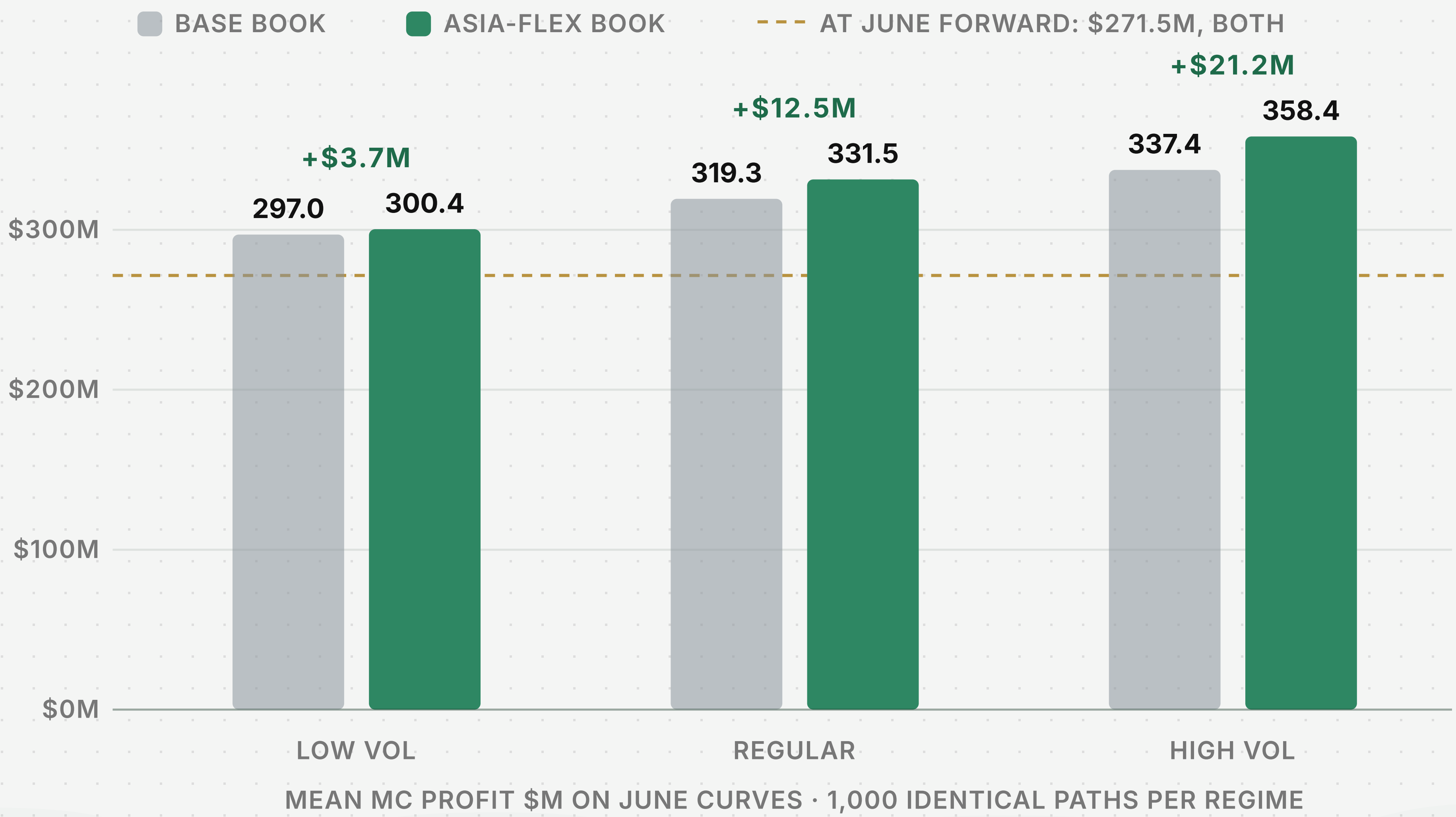
THE VERDICT

The portfolio did not change: the market did, and the same flexibility gained 45% in one month.

An optionality valuation is a snapshot, not a constant. Small shifts in curve structure move it by tens of percent, which is why the number belongs in the monthly cycle rather than in the contract file.

The whole book moved with it

Mean Monte Carlo profit on June curves, base against Asia-Flex



EXACT MEANS: 297.0 / 300.4 (LOW) · 319.3 / 331.5 (REGULAR) · 337.4 / 358.4 (HIGH) $M

At the June curve both books again earn exactly $271,539,493 without matching a single Asia cargo: 44% above the May forward result.

Takeaways

What four weeks of market did

One month repriced the same clause by 45%

$8.6M to $12.5M in a regular market, $13.3M to $21.2M under stress, $0.6M to $3.7M in a calm one.

The median tells the sharper story

May: the median path earned nothing in every regime. June: $10.5M in regular and $17.2M in high volatility.

The option still never fires at the curve

Both books again produce $271,539,493 with no Asia cargo matched. Valuations age; they need refreshing with the curve.

Modelled with X-LNG

CALYPSO COMMODITIES

Whole-portfolio optimisation for LNG books

1

Your world goes in

Contracts, vessels, charter rates, prices, spot assumptions and constraints, the full book, not a slice.

2

One optimal plan comes out

Feasible, P&L-maximising and constraint-compliant, re-solved for every scenario in minutes.

3

Every number checks out

Each result can be recalculated by hand, transparency your risk committee can audit.

Cloud-based, any portfolio size · built and advanced daily by ~25 mathematicians, physicists and computer scientists.

Track what the market does to your options

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