

X-LNG CASE STUDY · DEC 2025

Balancing Risk and Upside

-\$400M

the dual-index book at the worst corner of the stress grid

3 contract mixes · <1% forward spread **Monte Carlo** · 50 / 100 / 150% volatility **Stress grid** · HH and TTF 0.4x to 1.6x

Three contract mixes, one profit

November 2025 to December 2027 · Revithoussa demand, Calcasieu Pass supply, one cargo per month

S1

dual index: HH supply vs TTF demand

S2

S1 plus spot outlets both sides

S3

TTF-only netback supply

0

cancellations allowed

S1 carries the full transatlantic spread: the upside when it widens, the downside when it flips. S2 adds optional spot outlets whose unwind matches are **priced slightly unprofitable by design**. S3 switches supply to TTF, so the spread exposure disappears by construction.

Cargo size 3.4 to 3.8M MMBtu. **They differ only in indexation and spot access.**

Identical at the forward curve

— Indexations tuned so every difference that follows is risk, not expected return

\$63.6m

S1 forward profit · \$0.76/MMBtu

\$63.6m

S2 forward profit · \$0.76/MMBtu

\$63.1m

S3 forward profit · \$0.75/MMBtu

<1%

spread across all three strategies

At the curve the spot outlets stay unused, so S1 and S2 even sail identical voyages. **The three books are indistinguishable until the market moves.**

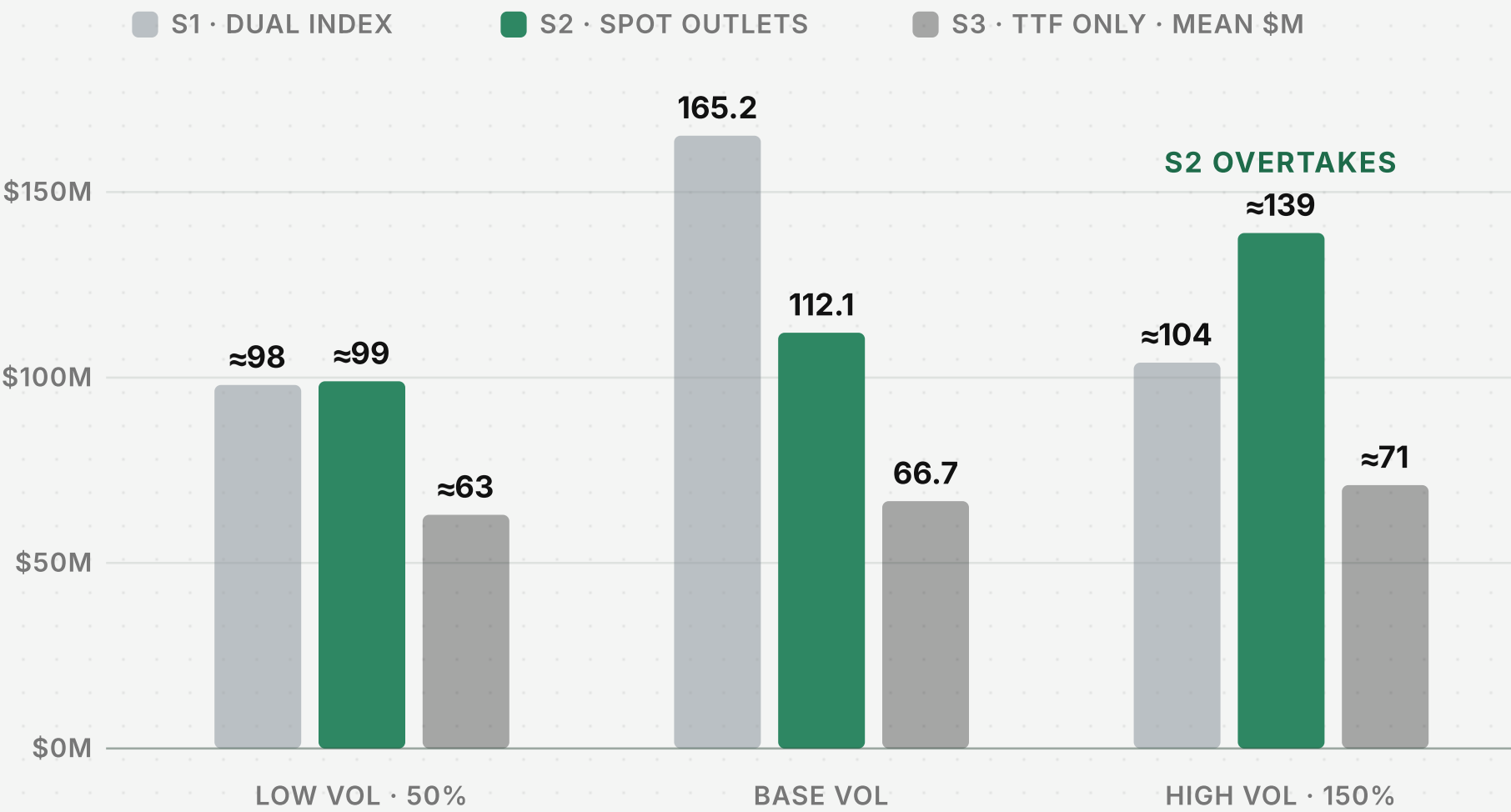
Monte Carlo

1,000 paths per regime at 50, 100 and 150% of standard volatility

01

Volatility pulls the books apart

— Mean profit per volatility regime, both books re-optimised per path

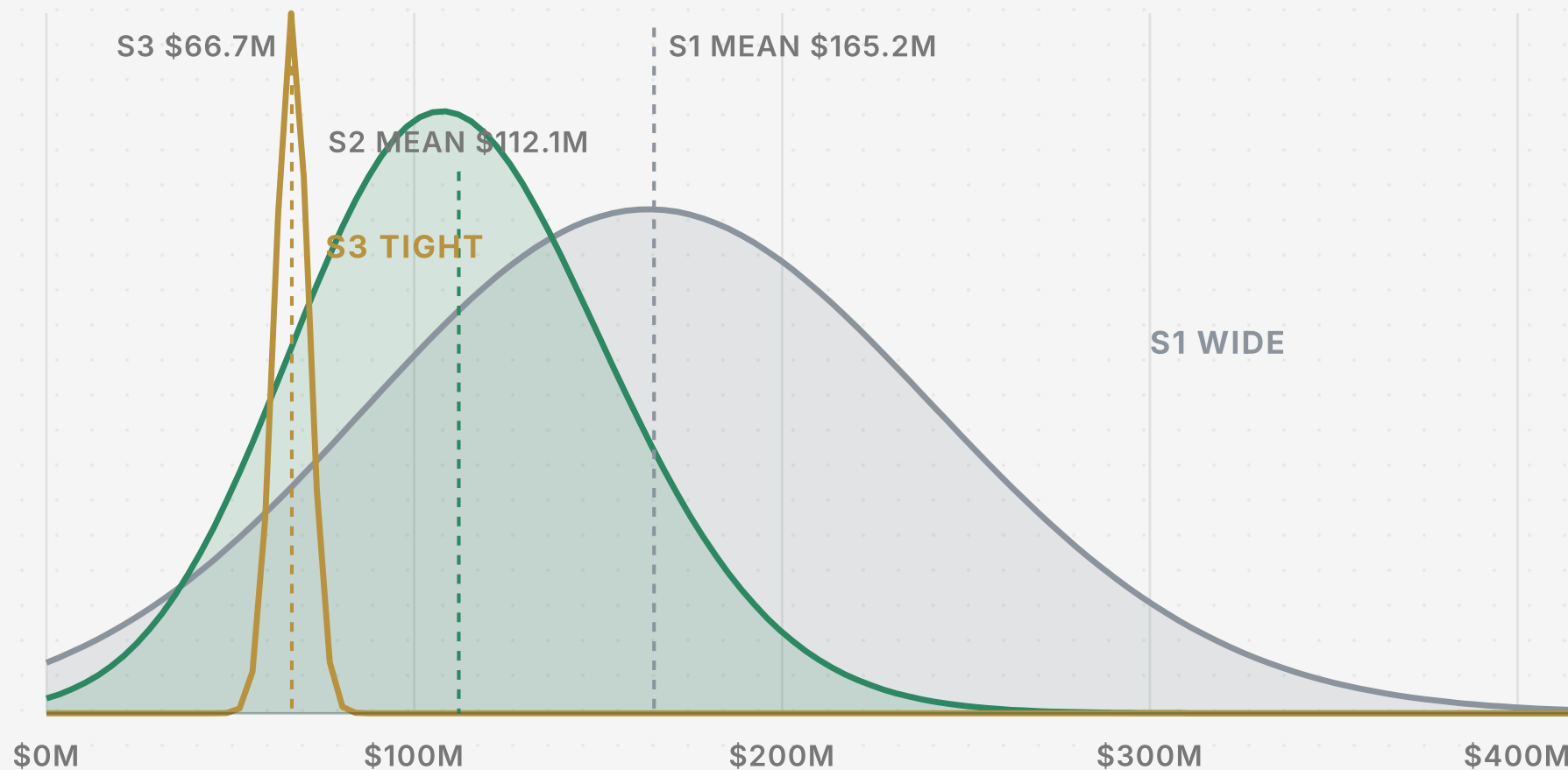


EXACT BASE-VOL MEANS: \$165.2M / \$112.1M / \$66.7M · LOW AND HIGH VOL READ FROM THE ENGINE CHARTS

At base volatility the dual-index book leads. Under high volatility the spot-outlet book overtakes it: capped losses beat a fatter left tail.

Three books, three shapes of risk

— Base-volatility profit distributions: what the means cannot show



PORTFOLIO PROFIT · \$M · BASE VOLATILITY · 3 X 1,000 PATHS

CURVE SHAPES ILLUSTRATIVE, MEANS EXACT · HISTOGRAM RANGES FROM THE ENGINE RUNS

S1 runs from losses to \$400M. S2 has its left tail cut off by the unwind option. S3 is a needle around \$63M to \$75M.

THE VERDICT

The dual-index book buys the largest upside and a \$400M stress-case downside:
spot outlets and single-index supply are implicit hedges.

Three books, one forward profit, three risk appetites. The choice between them is not a P&L question; it is a decision about which tail you can live with.

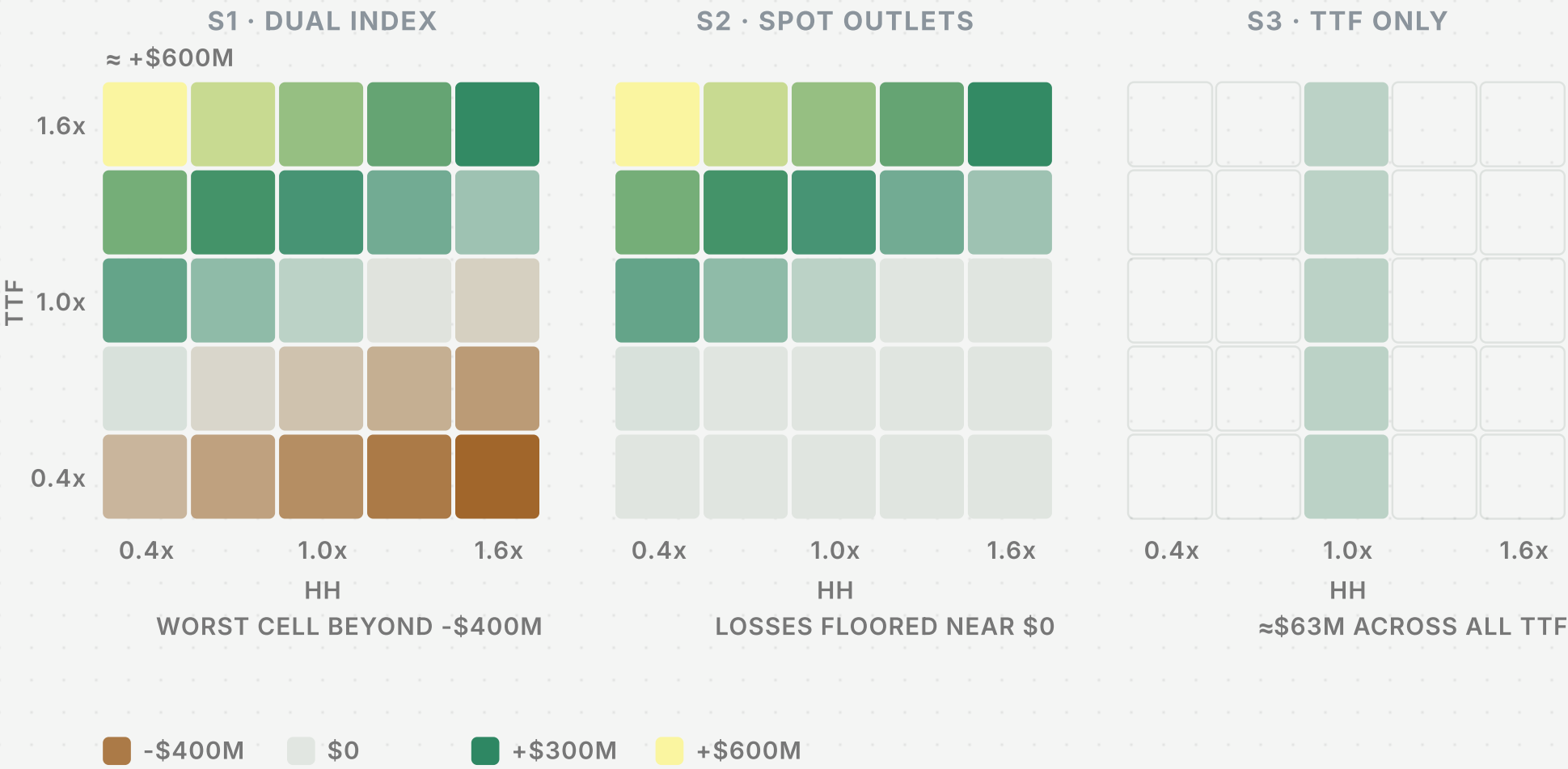
The stress grid

Deterministic price variation: HH and TTF each 0.4x to 1.6x

02

The spread is the risk

— Each book mapped onto a profit surface across the HH x TTF grid



CELL COLOURS QUALITATIVE, LABELLED ANCHORS FROM THE ENGINE RUNS

S1 swings from roughly +\$600M to beyond -\$400M as the spread flips. S2 floors its losses near zero via spot. S3 barely notices either index.

Takeaways

Which mix survives your worst market



Volatility reorders the ranking

Base volatility: S1 leads with \$165.2M. High volatility: S2 overtakes, roughly \$139M against \$104M, because its losses are capped.



Spot outlets are a cheap floor

Each unwind match costs a small loss by design, yet across the stress grid they floor the book near zero where S1 runs beyond -\$400M.



The spread is the risk

All three books earn the same at the curve, within one percent. Everything that separates them afterwards is the HH-TTF spread: pick the mix by risk appetite, not by forward P&L.

Modelled with X-LNG

— 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.

See the risk profile of your contract mix

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