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X-LNG CASE STUDY · JUL 2025

The Panama Canal

-37%

the Futtsu margin under a canal shutdown, $4.89 to $3.08

45 vessels · global book   **867 journeys** · 442 laden   **JKM and TTF** swept -20% to +20%

A global 2024 portfolio

What the canal is really worth, measured on a full book

45	**867**	**442**	**15**
vessels, 174K class	total journeys	laden voyages	USGC to Asia via Panama

The base case runs a full global book through the engine: 45 vessels, 867 journeys, split almost evenly between laden and ballast legs. **All per-MMBtu figures relate to laden voyages.**

The canal question is then asked the only way it can be answered honestly: **re-optimise the whole book**, once with Panama open and once with it shut.

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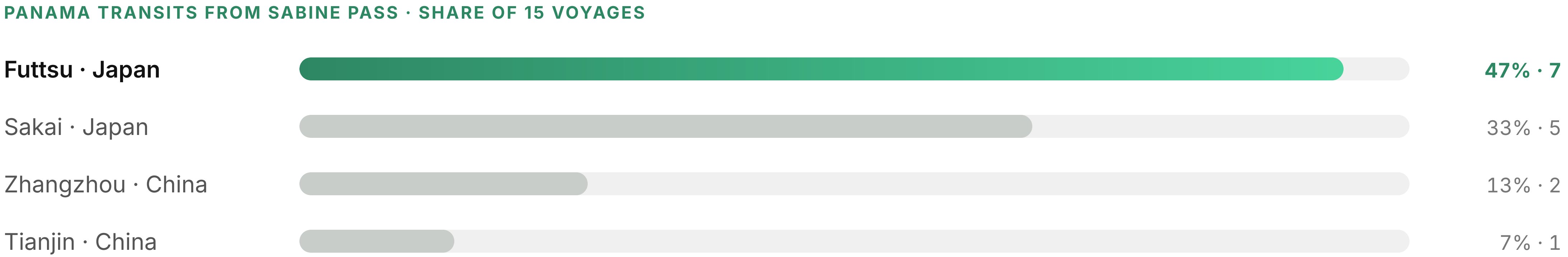
Where the canal cargoes go

Fifteen laden voyages from Sabine Pass, heavily concentrated on Japan



This small route is the portfolio's single most profitable trade at $3.57 per MMBtu.

The shock

Canal shut: Asia repriced, Europe flat

01

Only Futtsu stays economic

US-Asia cargoes detour via Suez with a $100,000 fee, re-optimised

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CANAL OPEN

$4.89

Sabine Pass to Futtsu, margin per MMBtu

Sakai · Tianjin · Zhangzhou	served
Sabine to Europe average	$2.45 / MMBtu
Suez detour fee	none

→ -37%

CANAL SHUT

$3.08

same cargo via Suez, margin per MMBtu

Sakai · Tianjin · Zhangzhou	dropped
Sabine to Europe average	$2.45 / MMBtu · stable
Suez detour fee	$100,000 / transit

Europe is untouched and becomes the default outlet for the rerouted supply.

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THE VERDICT

The canal is the profit engine of the US-Asia trade: Europe is the hedge.

Sabine to Europe holds at $2.45 per MMBtu regardless of the canal. When Panama shuts, the richest Asian arbitrage collapses to a 37% lower margin and Europe quietly absorbs the rerouted supply.

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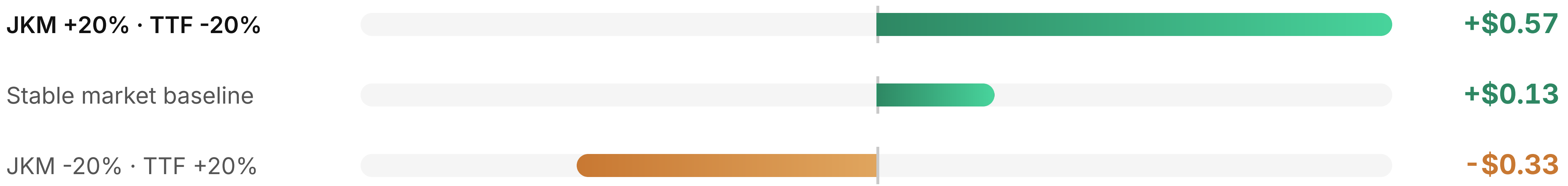
02

Sensitivity

Canal value across 25 price combinations

A pure JKM-TTF arbitrage

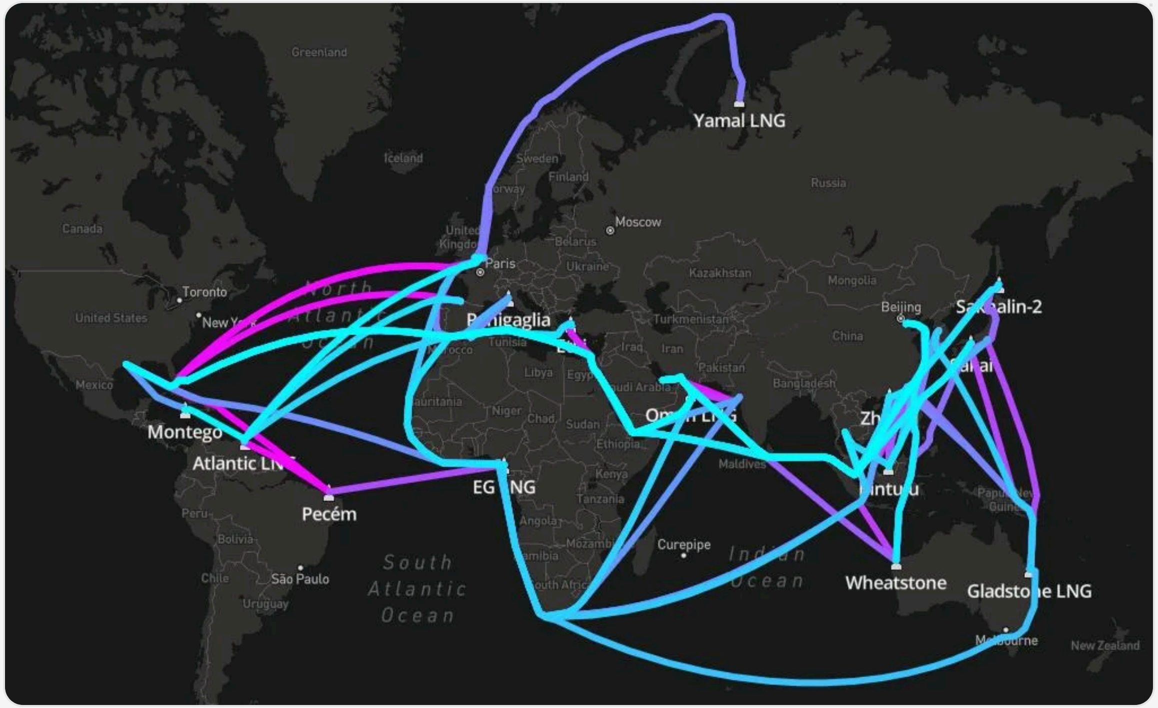
Canal value per MMBtu, re-optimised per scenario



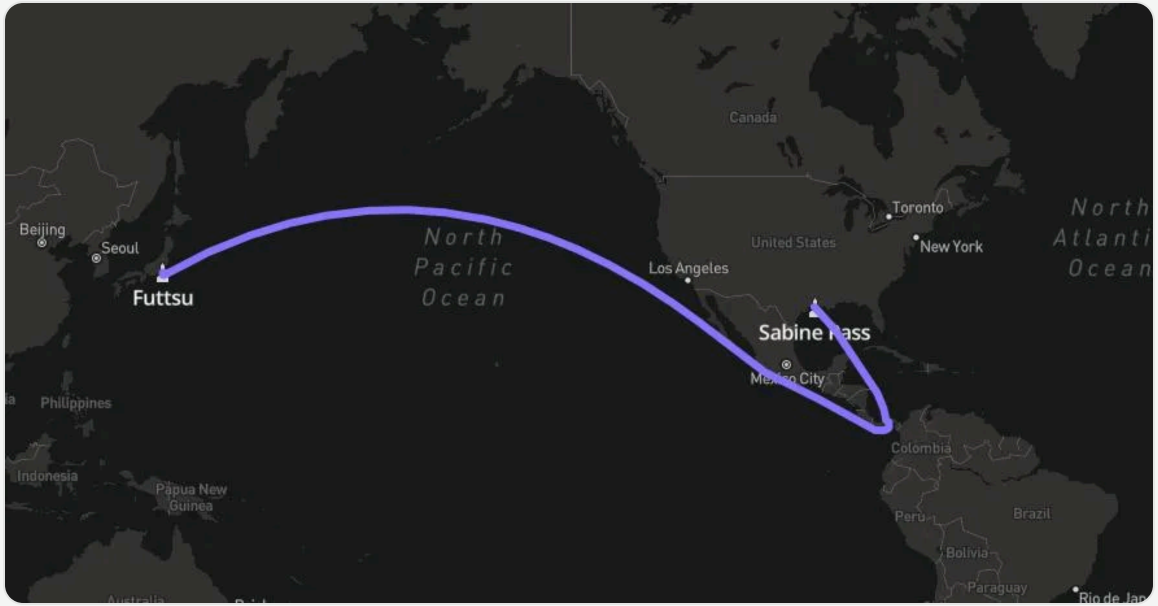
Canal value is a spread trade; for Asian imports the indifference point sits at JKM +10%.

Straight from the engine

The optimised routes from the run: the full global book and the canal trade it prices



THE 45-VESSEL GLOBAL BOOK · 867 JOURNEYS



SABINE PASS TO FUTTSU VIA PANAMA

Takeaways

What the canal is worth, and to whom

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✓ **The canal is the profit engine of the US-Asia trade**
Fifteen Sabine Pass voyages, concentrated on Japan, are the book's single most profitable trade at $3.57 per MMBtu.

✓ **Europe is the hedge**
Sabine to Europe averages $2.45 per MMBtu, holds stable under the shutdown and becomes the default outlet.

! **Canal value is a spread trade**
It peaks when JKM rallies against a falling TTF, turns negative in the mirror case, and crosses zero for Asian imports at JKM +10%.

Modelled with X-LNG

Whole-portfolio optimisation for LNG books

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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.

Stress-test your book against the chokepoints

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