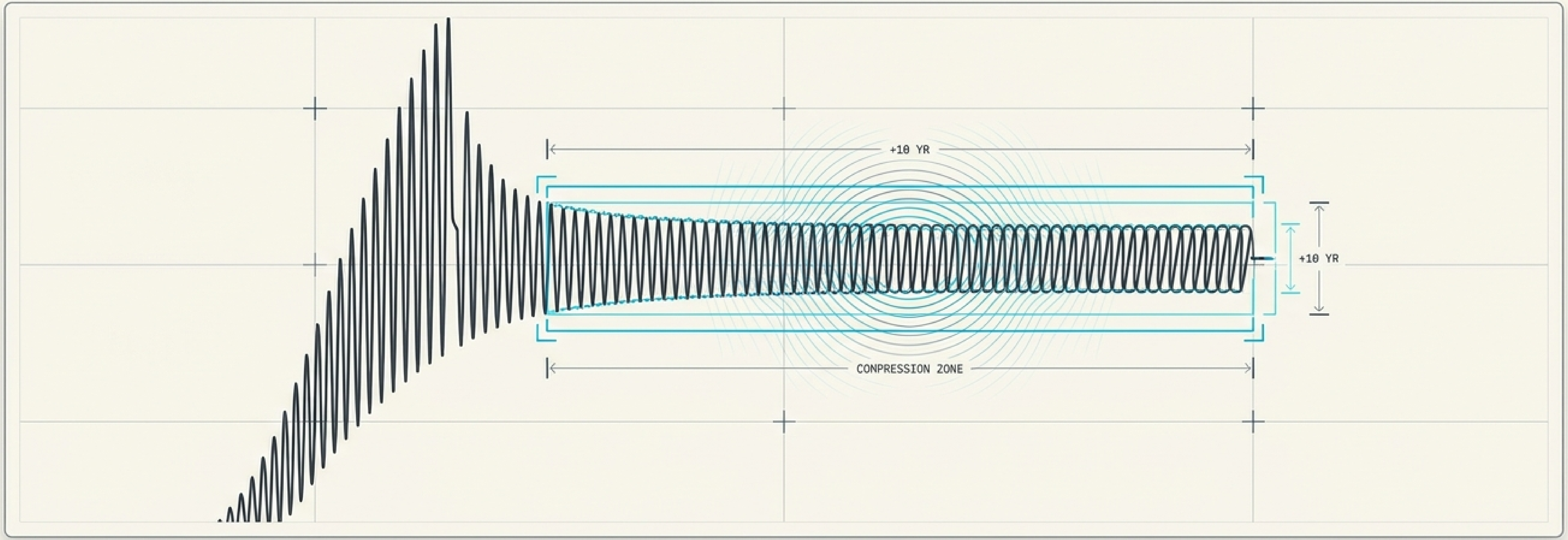


THE COIL: An Unprecedented 10-Year Consolidation

The asymmetric options structure

The asymmetric options structure to trade the resolution of the largest compression anomaly in 114 years.

AQI Research Note | Author: Brad Sullivan, Founder & CIO | July 20, 2026

Executive Summary: Alignment by Mandate

For Chief Investment Officers (Macro & Convexity)

The Setup:

114-year data proves this 3.8-year consolidation is historically unprecedented following a 450bp shock.

The Play:

Own defined-risk tail convexity against an unpriced structural break.

For Wealth Managers (Risk & Reward)

The Setup:

Implied volatility (MOVE at 68.5) is priced for permanent calm.

The Play:

A $620-per-package structure offering up to 14.5x payout ↑ on fiscal shocks, acting as cheap portfolio insurance with a known maximum loss. ↓

For Traders (Structure & Execution)

The Setup:

Consensus trades (strangles, put ratios) carry severe ⚠ structural flaws in this specific regime.

The Play:

A bespoke Dec '26 ZN Put Spread + Tail Wings + Call Spread. Full Greeks, Kelly-Thorp sizing, and path-management playbook included. →

The Situation — Pressing the Upper Boundary

1 3.8 Years. 154bp Range. Zero Direction.

3 Current Spot: 4.59% — Pressing the breach zone.

2 MOVE index sits at 68.5 — cycle lows pricing in permanent compression.

The Context — The Post-1965 Volatility Crush

The Insight:

This is not merely a quiet market; it is a structural extreme.

The Data:

Over six decades, 3-year ranges typically live between 200–900bp.

The current compression rivals only the mid-1960s or mid-1970s plateau.

None of those historical lulls followed a shock remotely the size of the 2020–2023 move.

The Tension — 114 Years of History Says This Is Impossible

Yields have never absorbed a 450bp shock and simply gone quiet.

Prior to the current era, the largest 18-month move into a coil was ~300bp. That record now belongs to today.

400bp+ shocks exist (1979-1982, 1983-1984), but they resolved through violent, V-shaped reversals, not compressions.

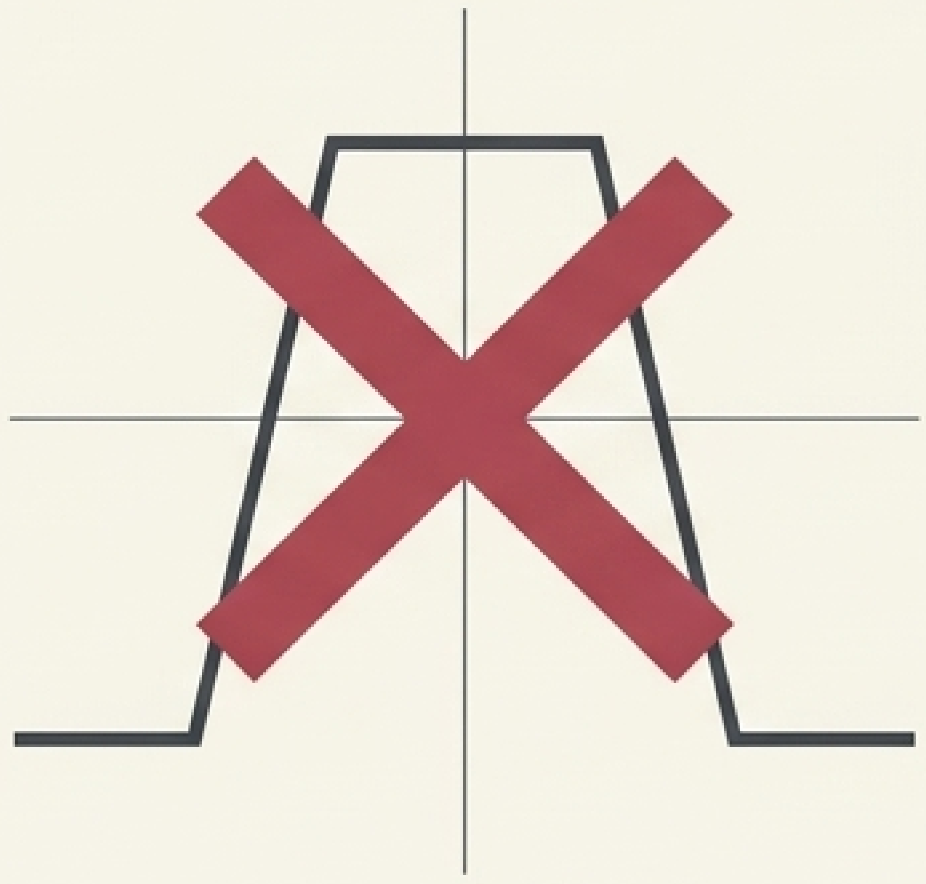
The Base Rate Matrix — Four Modern Analogs

Episode	Consolidation Range (bp)	Prior 18-mo Move	Resolution Path	The Setup Rhyme
1975–1977	167bp	~140bp	Broke HIGHER at ~8%; +795bp to 1981 peak	Long end lagged CPI
1995–1998	153bp	~236bp	Resolved LOWER	Driven by Asia/LTCM
2003–2006	150bp	~224bp	Marginal upside break FAILED	Post-bubble decline
2012–2015	152bp	~226bp	Broke LOWER first	Post-QE3/tantrum

The Honest Conclusion: The base rate is **mixed**. 3 of 4 analogs resolved lower or failed. Only 1977 broke higher (requiring a second inflation impulse). Therefore: **We cannot trade conviction**; we **must trade mispriced optionality.**

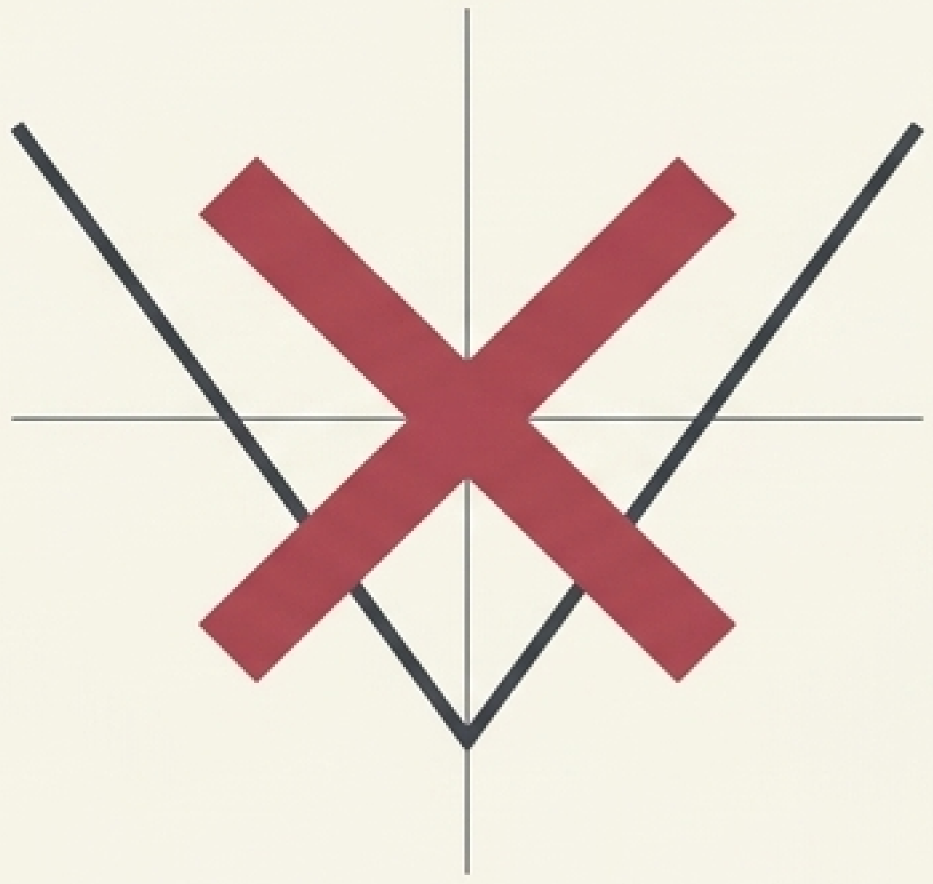
Structure Selection — Why Consensus Expressions Fail Here

Iron Condor (Selling the range)



Flaw: The consensus expression. It shorts the exact volatility that 114 years of history says is severely mispriced.

Long Straddle / Strangle



Flaw: Pure long-vol, but at ~4 months of carry it bleeds theta too fast and requires an immediate, massive move to monetize efficiently.

Put Ratio Backspread

Flaw: The classic "sharp move higher" trade creates a "valley of death" loss exactly at 5.0%–5.3% — the most probable landing zone for a clean breakout.

A structure designed for a breach that is punished by the most likely breach path is a design fa

The Recommendation — The “Coil-Break” Architecture

ZN Options (Dec 2026) | Max Loss: 0.62 pts ($620) | Zero Margin Tail

Leg 1 (The Workhorse)

Buy 1x Put Spread (107.5/104.5)

Debit: -0.52 pts

Pays on the shallow breach, not just the tail.

Leg 2 (Tail Convexity)

Buy 2x Puts (103.5)

Debit: -0.04 pts

The second unit of delta beyond ~5.45%.

Leg 3 (Hard Landing)

Buy 1x Call Spread (112.5/115.5)

Debit: -0.06 pts

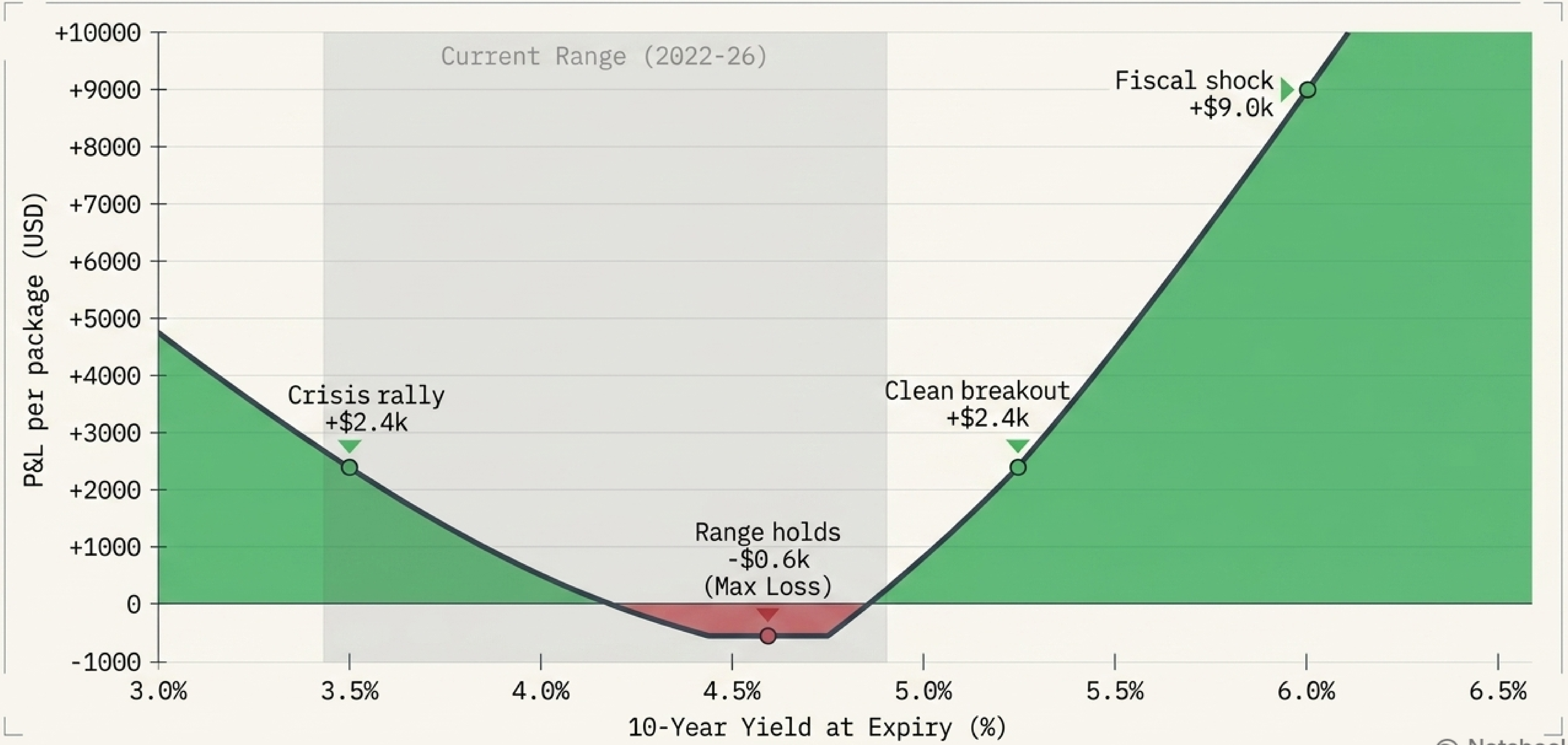
Protection for a breach-and-fail / crisis rally.

The Engine

Net Debit ≈ 0.62 pts (~$620)

All short legs are perfectly covered by long legs. Zero margin tail.

Payoff Topography — Defining the Asymmetry



NotebookLM

Scenario Mapping — Multiples on Risk

Scenario	Est. Yield	P&L per package	Multiple on Risk
Coil Extends a 4th year	4.40–4.75%	-$620	-1.0x (Max risk realized)
Breach-and-Fail	3.90%	~flat at expiry	—
Shallow Breach, Stall	5.00%	+$940	+1.5x
Clean Breakout	5.25%	+$2,380	+3.8x
Crisis Rally / Hard Landing	3.50%	+$2,380	+3.8x
1978-Style Repricing	5.60%	+$4,590	+7.4x
Fiscal / Term-Premium Shock	6.00%	+$9,030	+14.5x

True asymmetry quantified.
Risk ~$600 to make ~$9,000 on a tail event.

Trader's Playbook I — Execution & Sizing

Execution Mechanics

- ZN options offer deep global liquidity. Package executes in 3 tickets or as a broker-negotiated package.
- Quotes are in 64ths (0.62 pts ≈ 40/64).
- Initial margin is effectively the net debit (position cannot lose more than premium paid).
- Alternative: TN (Ultra 10-year) offers identical geometry for ~40% more DV01 per contract.

The Kelly-Thorp Sizing Frame

- "This is a premium-budget trade, not an edge-sizing trade." (n=4 analog sample commands a severe sample-size discount).
- Size by maximum acceptable loss to the "coil extends" scenario.
- Target: Budget 25-50bp of NAV on four months of resolution optionality.

Trader’s Playbook II — Path Management

Market Path Evaluation

Path A: Breach > 4.80% before Sept.

Action: The put spread moves toward intrinsic early. Roll the 107.5 strike down to re-arm convexity, OR harvest half and let the 103.5 tails ride.

Path B: Failed Break (Whipsaw < 4.30%)

Action: Monetize in motion. The call spread and residual put premium mark up on vol repricing. Take the vol markup; do not wait for settlement.

Path C: Coil Extends into Oct.

Action: Theta accelerates in the final 6 weeks. If mid-band in early October, make the salvage decision early: roll to Feb/Mar ‘27 (40-50% more premium for double the window) or let expire.

Tactical Variants for Specific Portfolios

Directional-Only

Tweak: Drop Leg 3 (Call spread).

Impact: Cost falls to ~0.56. Surrenders sub-4.0% hard landing protection.

Fat Tail Maximizer

Tweak: Run 3x on the 103.5 puts (Add ~$20).

Impact: Steepens the fiscal shock (6.00%) scenario payout toward +20x.

Range-Book Overlay (Zero-Cost)

Tweak: Finance the package by selling covered upside calls against existing long-duration inventory.

Impact: Funds the trade without distorting the asymmetric option geometry.

AQI

Methodology

Yield history via TVC US10Y (monthly 1912-1979, weekly 1980-2026, n=3,140). Consolidation screen: 3-year windows with range ≤155bp. Pricing: Black-76, ZNZ6 ref 108.5, 4.0% price vol, r=4%, T=0.34yr. DV01 ≈ $64/bp. Market references as of July 20, 2026.
