



PARA BELLUM ADVISORS

PRACTITIONER PAPER

Turning Convexity into Cash

The Discipline of Active Tail- Hedge Management

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Opening Framing

Most tail-risk programmes are evaluated on the day they are purchased and the day they expire. That is a category error.

A tail hedge is not a trophy position or a philosophical statement about markets. It is a liquidity instrument designed to pay precisely when the rest of the portfolio cannot.

The question that separates experienced practitioners from slideware: when the dislocation arrives and the hedge moves sharply into the money, how do you turn that mark-to-market into cash, and how do you redeploy that cash, so the institution finishes the episode stronger rather than merely less damaged?

This paper lays out an operating doctrine that boards can approve in advance, and investment teams can execute in hours, not weeks.

Tail hedging is not about the P&L of an option sleeve. It is about strengthening the resilience of the total portfolio. Resilience is the capacity to prepare, absorb, recover, and adapt. Ideally, to emerge stronger. That is the real dividend of convexity: the ability to buy time, create liquidity, stabilise the balance sheet, and go on offence when everyone else is forced to de-risk. The hedge is not the goal. The transformation it enables is.

1. First Principles: Success Is Cash, Not Marks

In a shock, mark-to-market gains on options, volatility, CDS indices, or duration are useful only if you can convert them into spendable cash before they decay. Volatility mean-reverts. Basis closes. Policy backstops arrive. The hedge that looked like a life-raft at the trough can leak value with surprising speed while the core portfolio remains impaired.

Success is defined along three practical lines.

The Three Lines of Success

Liquidity bridge: The hedge should fund a pre-specified liquidity runway: salaries, redemptions, margin, collateral, and vendor payments under stressed outflow assumptions. If the annual carry on the programme is 60-120 bps on the sleeve, the realised cash on the bad day needs to be multiple turns of that carry. If not, the programme is not insurance. It is theatre.

Drawdown containment: Realised hedge gains should offset a material portion of contemporaneous losses at pre-agreed drawdown thresholds. If the equity book is down 25% and the hedge contributes 6-8% back in realised terms within the first fortnight, the programme is doing its job.

Option to attack: Proceeds must either stabilise the balance sheet (cash and near-cash) or finance a measured re-risking into assets you would be proud to own for three years. The hedge is not a trade. It is fuel.

These principles are not after-the-fact rationalisations. They belong at the front of the policy so that, in the moment, the team is implementing a plan rather than improvising one.

2. Pre-Commitment Beats Heroics

Shocks do not wait for agendas. The board's role is to set delegated authority and trigger language in advance so the CIO or delegate can move capital on the day without procedural friction.

Three lenses must be monitored simultaneously, and each is allowed to fire action on its own.

The Three-Lens Trigger System

Portfolio lens: Observes net drawdown in real time. Tie staged monetisation to familiar pain thresholds: -8%, -12%, -18% are well-understood waypoints. This ensures that even in a grinding sell-off without dramatic volatility, cash is raised as losses accrue.

Hedge lens: Looks at the hedge complex as a distinct P&L stream. When cumulative hedge gains equal 50% of contemporaneous portfolio loss, a first realisation tranche executes. At 75%, a second. At parity, the balance. This creates a self-correcting mechanism: the more the hedge does its job, the more of it you bank.

Market-structure lens: Acknowledges that convexity collapses quickly when the plumbing shifts. The flip from VIX backwardation to contango, emergency policy actions, exchange halts, and sudden bid-ask improvements are decay clocks. If the term structure normalises intraday, you do not wait for a meeting. You convert.

With these triggers in place, the choreography becomes repeatable: realise, rebalance, reload.

- **Realise:** Sell or unwind winning hedges in tranches according to the ladders.
- **Rebalance:** Allocate proceeds first to cash and short bills, then to defensive sleeves, and only then to pre-authorized opportunity baskets.
- **Reload:** Leave a small, low-carry residual hedge in place in case the shock has a second leg.

This is not bravado avoidance. It is decay management.

3. Instrument Reality: Know What You Own, Know How It Decays

Different tails pay through different Greeks and behave differently after the trough. Understanding the decay profile of each instrument is not optional knowledge. It is the foundation of a workable monetisation plan.

Instrument	How It Pays	Decay Profile	Practical Consideration
Equity index puts and variance swaps	Early and violently. Gamma and vega do the heavy lifting	Short half-life once policy puts re-assert	Must be monetised quickly. Do not wait for a second leg
Credit index CDS	Steadier, more linear P&L as spreads widen	Can hold value longer than equity instruments	Basis to single-name books becomes a practical concern as the event progresses
Payer swaptions and long duration	Gains arrive quickly in rates shocks	Compress swiftly when the front end is backstopped	Policy announcements are the decay trigger. Watch central bank communications
VIX calls and cross-asset overlays	P&L ballast and liquidity when options desks are chaotic	Can whipsaw sharply	Useful for funding the plan while primary instruments are being worked

For governance, the implication is simple: ladder maturities and diversify drivers. A typical construct might hold 1-, 3-, and 6-month equity insurance; a modest 3-6-month payer swaption sleeve; 12-24% notional in 5-year investment-grade index CDS; and a light cross-asset ballast such as VIX calls or long duration.

At least one sleeve should pay early to fund the rest of the plan.

4. The Control Room: What Matters in the Moment

In a crisis, good dashboards are short. The team should see, on one screen:

- Gross and net drawdown
- Hedge P&L by sleeve relative to the underlying loss
- Cash and near-cash today
- Days of obligations covered under stressed outflows
- Term structure of volatility
- Live bid-ask on the instruments you intend to monetise

If it takes a squint and a PhD to interpret the display, it is not a crisis dashboard. It is redundant noise. The purpose of the control room is not to stimulate additional debate. It is to confirm that a pre-committed action has been triggered and to show the team the safest place to execute the tranche quickly.

5. Monetisation Mechanics: Tranches Over Triumph

Few things are as expensive as waiting for the perfect sale. Experienced desks sell in steps because each step reduces regret.

5.1 Equity Example

Consider a \$1.0 billion global equity sleeve hedged continuously with 3-month 10% out-of-the-money index puts covering 40% of notional at an annual carry of roughly 1.2% on the sleeve. A sudden 25% drop in the index, with implied vol moving from 18 to the mid-50s, lifts those puts into deep intrinsic value with meaningful residual vega. Rough marks put the option value around 18% of the hedged notional. On 40% coverage, that is approximately \$72 million of hedge P&L against a \$250 million underlying loss: nearly 30% coverage at the trough.

The monetisation plan does not try to guess the low. It executes three sales.

1. When hedge P&L first touches 50% of contemporaneous loss, a first 30% realisation raises cash.
2. If the slide continues and coverage hits 75%, a second 30% is taken.
3. When policy interventions are announced or the term structure normalises, the balance is sold.

Proceeds are directed first to operating cash and bills, securing 6–9 months of obligations. Only then to measured investments pre-vetted for such moments. The first two tranches do not chase the bounce.

5.2 Credit Example

The same discipline applies to a credit book carrying 20% notional protection in a 5-year investment-grade CDS index. A 100 bp widening in two weeks will deliver around \$18 million of P&L on \$400 million of index notional for a \$2 billion book. If the net drawdown has crossed the -8% threshold, unwind 40% of the hedge, crystallising cash while the index is still rich to single names. If the basis widens further, a second tranche follows. Keep a lean residual until issuance re-opens or policy backstops tighten spreads.

The point is not to be clever. It is to be liquid.

6. Proceeds Discipline: Ballast Before Bravado

Governance failures often happen after a successful monetisation. Cash is psychologically hot. Teams feel clever. The urge to win twice overwhelms prudence. This is precisely why the use of proceeds must be codified before the crisis arrives.

The Proceeds Waterfall

Bucket 1: Liquidity: Operating cash, margin cushions, collateral comfort, and a small increase in near-cash reserves. This bucket is filled before anything else.

Bucket 2: Ballast: Short-duration government paper or de-risking of pro-cyclical exposures that become dangerous in prolonged drawdowns. Both waterlines must be above policy minimums before Bucket 3 is opened.

Bucket 3: Opportunity: Only after the first two buckets are secured. Stage entries across days and weeks rather than hours. There is nothing heroic about catching a falling knife with insurance money.

7. Reloading: Cheap Tails for the Second Leg

Every serious shock tempts fate with a second act. Selling all the insurance and walking away can leave the institution naked if the first bounce is a head fake. The solution is not to keep the entire complex. It is to reload cheaply.

Rolling a small portion of the equity programme into two-month 15% OTM puts, or holding a modest VIX call strip, preserves convexity at a fraction of the original spend. In credit, maintaining a token slice of index protection or expressing second-leg risk through payer swaptions on rates can cover the path where spreads lag policy support.

The residual cost is small. The behavioural benefit is large. Teams that know they still have a tail do not freeze as easily.

8. Operations Under Stress: Remove Self-Inflicted Friction

In dislocations, the problem is rarely the model. It is the plumbing. Operational friction that is invisible in calm markets becomes catastrophic in a crisis.

- **Counterparty lines and CSAs:** Must be pre-cleared with emergency limits. Do not discover your credit line has been reduced when you need to execute.
- **Variation margin dynamics:** On futures and short overlays must be modelled so the hedge does not become the liquidity problem. Know your margin calls before they arrive.
- **Order templates:** For each monetisation step, with instruments, maturities, sizes, and routing pre-filled, save minutes that matter. The template should be drillable in peacetime.
- **Communications tree:** Who calls whom, who approves what, who logs the trade. Must be documented and rehearsed. If your process requires a special meeting, you do not have a process.

Operational readiness is not administrative overhead. It is the difference between executing doctrine and improvising under fire.

9. Behavioural Guardrails: Protect the Plan from the Humans

The market's violence is matched only by committees' capacity for hope. The phrase "*what if it gets worse tomorrow?*" is a classic recipe for missing today's sale.

- **Pre-commit to small first tranches:** Lowers the activation energy. The first sale is the hardest. Make it small enough that hesitation becomes irrational.
- **Rename the hedge in governance documents:** Calling it a liquidity bridge rather than a trade helps directors understand that selling is not giving up upside. It is funding the mission.
- **Ring-fence the first two tranches of proceeds:** From immediate risk deployment. This reduces the dopamine loop that leads to buying too early.

These are soft tools, but they are the difference between an elegant policy and a usable one. The goal is a process that removes the need for courage in the moment because the decisions have already been made.

10. Measurement and Learning: Close the Loop

After the episode, the team should present a two-page after-action review. Not a novella.

Review Element	What to Show	Why It Matters
Timeline	Day-by-day net drawdown, hedge marks, monetisation timestamps	Establishes the factual record and eliminates revisionist memory
Cash realised vs carry paid	If \$12m annual carry produced \$60m of cash within the event window, call it what it is: 5x insurance efficiency	Makes the programme's value undeniable in governance terms
Decay avoided	What would the options have been worth had you sold 24 hours later?	Quantifies the benefit of pre-commitment and the cost of hesitation
Execution slippage	Where bid-ask took a toll, where basis moved, where operations helped or hindered	Identifies operational improvements for the next event
Policy changes	Did the 50-75-100 ladder feel too tight or too loose? Did the maturities line up with the path? Did the cross-asset sleeve earn its keep?	Keeps the doctrine live and improving rather than static

Boards respond to clean numbers and crisp lessons. They do not need a forensic thesis.

11. Two Narratives That Read Like Reality

It helps to see the doctrine in human terms. The following two scenarios are illustrative composites, not historical records.

Scenario A: Equity Air-Pocket (March 2020-Style Liquidity Shock)

A sudden liquidity shock rather than a slow correction. The CIO's screen shows the equity sleeve down 11% week-on-week. The hedge complex is up \$28 million: roughly half of the contemporaneous loss.

The dashboard auto-flags the first threshold. The CIO sells 30% of the deepest-in-the-money puts on the liquid index future, raising \$20 million into T-bills by 10:30 a.m. Singapore time.

Two days later, after another 7% slide and an emergency policy cut in the US, the VIX term structure flattens sharply. The second tranche goes, raising another \$16 million.

The third tranche is executed into the policy headline rally. The team immediately rolls a small residual into cheaper, longer-dated out-of-the-money puts.

Liquidity runway moves from four to eight months. Gross drawdown is still large, but net drawdown is contained and the board sleeps.

Scenario B: Credit Widening with Policy Backstop

The multi-asset portfolio carries 20% notional in iTraxx Main protection against a \$2 billion corporate book. Spreads gap 100 bps in ten trading days. The hedge prints \$18 million. Primary markets are shut; dealers are widening axes.

The team unwinds 40% of the index at rich basis, capturing \$7 million. When the central bank announces targeted credit facilities, the team sells another 30% into improved bids.

The remaining 30% is held until primary re-opens, then closed. A small payer swaption sleeve is added to cover rates volatility on the policy path.

Proceeds first increase cash reserves and reduce leverage in pro-cyclical sleeves. Only then are staged purchases of fallen angels considered.

The portfolio finishes the quarter bruised but liquid. The hedge paid the bills it was meant to pay.

12. What Not to Do

Experience compiles a short list of anti-patterns. Each one has destroyed value that a hedge had already created.

Anti-Pattern	What Happens	The Fix
Letting a winning hedge morph into a macro thesis	Convexity is donated back to the market as the team waits for its view to be vindicated	Pre-commit to tranching sales. The hedge is a liquidity instrument, not a directional trade
All-or-nothing monetisation	One decision point means maximum regret whichever direction the market moves next	Tranches are humility encoded. Sell in steps, always
Ignoring basis richness in credit	Index CDS can become dear to the underlying book. Holding until parity means giving back spread	Sell the rich thing when it is rich. Do not wait for the basis to normalise against you
Operational bottlenecks throttling action	Lines are not pre-cleared, templates do not exist, the communications tree has not been drilled	Approve lines and templates in peacetime. Operational readiness is a governance deliverable
Celebrating marks instead of cash	The board feels protected. The portfolio is still impaired. The hedge value decays	Report realised cash, not MTM. Success is conversion, not observation

13. The Policy Paragraph

If a board wants one paragraph to anchor the mandate, it reads as follows.

When the portfolio is in a material drawdown or the hedge complex prints gains that cover half to all of those losses, the CIO is authorised to sell portions of the hedge immediately in three steps, without convening a meeting.

The cash first extends the institution's liquidity runway and strengthens defensive sleeves. Only after those are secure may a pre-approved opportunity basket be funded gradually.

A small residual hedge is re-established to guard against a second leg. The team reports trades within 24 hours and returns with a short after-action review once the episode stabilises.

There is nothing exotic in that language. And yet most institutions discover they do not have it when they need it.

Conclusion

Tail hedging is not about calling crises.

It is about ensuring that, when crises call you, you have the one thing markets refuse to sell you at a fair price: time.

That time is bought by cash raised from convexity you paid for in quiet months. Turn it into a doctrine. Rehearse it. Execute it with the calm of a team that has already decided what to do.

The market will bring enough uncertainty of its own. Your process should not add any.

"The only true alpha is convexity." – Convex Strategies Risk Update: April 2025

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Further Reading

Para Bellum Advisors publishes practitioner papers and CIO Briefs focused on real-world portfolio construction, risk and capital efficiency:

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The firm works with lean investment and treasury teams managing complex, multi-asset exposures – long-dated assets, illiquid portfolios, and non-standard risk profiles – where structural precision makes a material difference to outcomes.

Its engagements typically involve designing and re-engineering hedges across FX, rates, credit, equity, and volatility; identifying and releasing trapped capital; and providing embedded structuring capability where permanent headcount is neither practical nor warranted.

Para Bellum does not distribute products or earn transaction volume. Its value is in structure: how exposures are designed, how capital is consumed, and how portfolios behave when conditions deteriorate.

The firm is practitioner-led, drawing on three decades of experience across trading, structuring, and portfolio management in banks, asset managers, and institutional balance sheets in Asia-Pacific and global markets.

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