Hedging Program Read-Out: Ten-Year Performance, Drivers and Recommendations

Prepared for the CRO and the Board | Delta-hedged book of one-year index options, issue years 2016-2025 | All figures per 100 of notional sold.

The bottom line

Over ten years the hedging program very nearly broke even, finishing about 1.0 behind a perfect hedge - a cumulative shortfall of roughly one percent of a single year`s notional, or about a tenth of a percent per year. For a hedging program that is the right ballpark: the job of the hedge is to neutralize the options we sold, not to generate profit, so a result this close to zero means the hedge largely did its job. The concern is not the size of the result but its SHAPE - the small shortfall is the net of steady gains in calm years and a few sharp losses in turbulent ones.

Put plainly: we priced and hedged these options at a 6.5% volatility assumption, and realized market volatility over the decade averaged just under that. So on average we charged about the right price. But we lost noticeably more in the bad years than we gained in the good ones - the program`s profits are positively skewed in calm markets and its losses are concentrated in crises.

How the decade adds up (per 100 notional, live)

Premium collected on the options sold	34.94
Hedge trading gains (incl. equity dividends)	36.17
of which: equity dividends earned	3.56
Option payouts at expiry	-72.16
NET result over ten years	**-1.05**

Premium plus the hedge`s own trading gains, less what we paid out at expiry, lands within about 1.0 of zero. The "of which" dividend line is already inside the hedge gains - the four lines are a bridge to the net, not a column to be added up.

Is that a good or a bad outcome?

It is an acceptable outcome with one real weakness. A delta hedge run at a fixed volatility assumption will, in theory, break even if realized volatility matches that assumption. Ours came in a touch lower on average, which should have produced a small gain - and in six of the ten years it did. The decade finished slightly negative only because two crisis years and one rate-shock year more than wiped out the cumulative gains of the six calm ones. The machinery works; what it is missing is a buffer for the bad years.

Why each year landed where it did

Net result by issue year, with the primary driver in business terms. Net figures are live from the Summary tab.

Year	Net result	What drove it
2016	0.12	Calm market (realized vol below the 6.5% we charged). A small, healthy gain - the program working as intended.
2017	0.18	Very calm, strongly rising market. Equity dividends we earned on the hedge were unusually large and carried the year to a gain.
2018	-1.17	WORST YEAR. The February volatility shock and the fourth-quarter sell-off pushed realized volatility well above 6.5%. Being short volatility, the hedge bled through every large daily move. The single biggest loss of the decade.
2019	0.58	Calm, rising market plus falling interest rates, which helped the option valuation. The best year of the decade.
2020	-0.22	COVID crash. Realized volatility spiked again and the short-volatility position lost - though the collapse in interest rates cushioned roughly half of the damage, so the loss was far milder than 2018.
2021	0.06	Volatility close to target; a quiet, roughly break-even year.
2022	-0.30	Bear market with sharply rising rates. A modest loss from slightly elevated volatility plus the rate move; the option itself expired worthless, so we kept the premium but the
2023	-0.71	A loss for a DIFFERENT reason: volatility was normal, but rapidly rising short-term rates moved the option`s value against us. This is a rate effect, not a volatility effect - the only year rates were the main story.
2024	0.23	Calm market and easing rates; a clean gain.
2025	0.17	Calm market and easing rates; another clean gain.
TOTAL	**-1.05**	Six calm years of small gains, outweighed by 2018 and 2020 (volatility) and 2023 (rates).

The core risk the program is running

The program is, in substance, SHORT VOLATILITY - it behaves like selling insurance against market turbulence. In calm markets it collects a small, steady return. When markets become volatile, it pays out. The losses therefore arrive precisely in the years risk managers care about most - 2018 and 2020 - and the worst single year cost us several times what a typical good year earns. That is a negatively-skewed, "pick up small change, occasionally take a big hit" profile.

A second, smaller risk emerged more recently: because we now value the options at current interest rates, the program took on sensitivity to the DIRECTION of rates. That is what drove the 2023 loss even though volatility was normal, and it is a risk we are not currently being paid to take.

What we recommend to stabilize future performance

1. Charge a volatility cushion.

Price and hedge at a volatility modestly above what the market actually realizes (e.g. 7-7.5% rather than 6.5%). We are currently selling volatility at roughly fair value; charging a small premium builds a buffer that turns the slight decade-long loss into a margin and pays us for the crisis risk we carry.

2. Cap the crisis losses.

Buy inexpensive out-of-the-money protection so that in a volatility spike the bleed is capped at a known, budgeted cost rather than left open-ended. This directly addresses 2018 and 2020 - converting an unpredictable large loss into a small fixed insurance cost.

3. Neutralize the rate exposure.

Hedge the interest-rate sensitivity introduced by current-rate valuation (or value at a smoother rate). This removes the rate-direction risk that caused the 2023 loss - a risk that contributes nothing in expectation.

4. Hedge more often in turbulent markets.

Tighten rebalancing - intraday rather than once daily - when volatility breaches a threshold. This shrinks the slippage and curvature losses that grow fastest in violent markets such as 2018.

5. Keep capturing the equity dividends.

The dividends earned on the equity held in the hedge added a steady positive contribution that offsets funding costs. Ensure the equity is genuinely held and the dividends are operationally captured every year.

Figures are per 100 of notional and are live formulas drawn from the Attribution and Summary tabs; the risk decomposition behind every statement here is on the Attribution tab. Positive = gain to the carrier.