

Product update

# Stocks Hit New Highs, CAOS Keeps Cruising

July 3, 2025

## Summary

- Market timing can be difficult; CAOS can simplify that decision
- Due to its construction, CAOS can serve as a bond replacement, with a bit of a zing to it
- We remain committed to our disciplined approach to navigate markets

[Please visit the CAOS fund page](#) for current holdings, standardized returns, and prospectus.

## Recap

The Alpha Architect Tail Risk ETF (CAOS) returned -0.04% (NAV)/0.09% (MKT) through June 30, 2025. Our performance benchmark, US Aggregate Bonds<sup>1</sup> (“Bonds”), returned 1.56% at NAV.

**Hedging can be costly**, especially over longer horizons.

If at the start of June someone told you the U.S. would become involved in a foreign war with an oil-rich nation, your gut reaction might have been to dump equities and short the market with impunity. Sure, you might have earned bragging rights on Twitter for anticipating a geopolitical shock, but your portfolio would’ve told a different story. Not only did the trade flop, but **the market hit all-time highs** shortly after the U.S. strike on Fordow, leaving you bleeding on the sidelines while the market rallied.

Of course, hindsight is 20/20. But in some corner of the multiverse, that move could have triggered a catastrophe that catapulted your short position into the atmosphere. More importantly, **it might have spared you from a full-blown portfolio collapse.**

So what do you do? Short or no short – you live with the risk.

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<sup>1</sup> US Aggregate Bonds (“Bonds”) represented by the average returns at NAV of the 50 biggest open-ended funds (ETFs and mutual funds) in the Intermediate Core Bond category, based on assets under management. Intermediate-term core bond funds invest primarily in investment-grade US fixed-income issues, including government, corporate, and securitized debt, and hold less than 5% in below-investment-grade exposures. Categories determined by YCharts.

While there are no perfect answers to this conundrum, there are thoughtful alternatives worth considering. In our view, CAOS offers a suitable approach for navigating environments where market direction feels like a coin toss. In fact, we designed CAOS to seek to address many of the common challenges associated with tail-hedging and inverse equity strategies<sup>2</sup>, including:

- **The performance drag** that often accompanies short equity positions.
- The challenge of knowing when **to monetize gains** versus letting winners run.
- **The trading experience** required to use derivatives effectively without consistently overpaying for options.

While most inverse products are built for short-term trading, CAOS is intended as a strategic, buy-and-hold allocation. In other words, CAOS is not a vicious fight dog seeking to tear anything on sight; instead, CAOS seeks to be well-trained guard dog for your portfolio—it attacks when danger strikes, stays calm when things are normal, and might even fetch you a treat now and then.

## Recap June 2025

While having invested in the inverse category average would have lost you -9.50%, CAOS dipped a meager -0.04% in the month of June. Of course, having invested in US stocks<sup>3</sup> would have trounced either exposure, having returned 4.58% as the U.S. continued its fearless bounce-back from April lows. Bonds inched higher by 1.56%.

(see chart below)

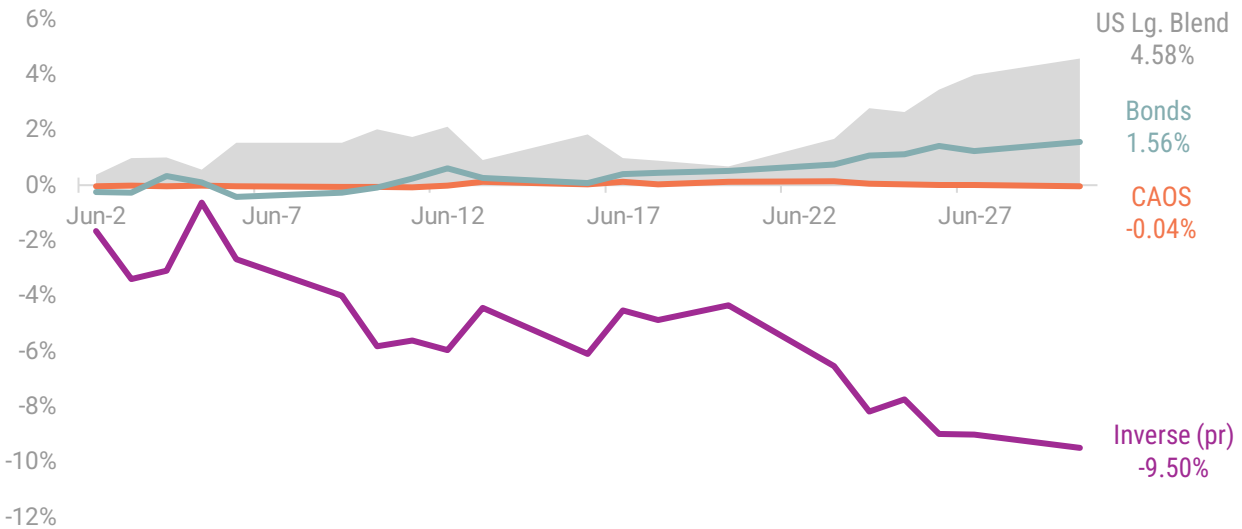
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<sup>2</sup> Inverse represented by the average returns at NAV of the 50 biggest open-ended funds (ETFs and mutual funds) based on assets under management (AUM) in the Trading-Inverse Equity category. These funds seek to generate returns equal to a fixed multiple of the short-term returns of an equity index. Many of these funds seek to generate a multiple of the daily or weekly return of the reference index. Trading funds are not considered suitable for a long-term investor and are designed to be used by active traders. Category determined by YCharts.

<sup>3</sup> US Large Blend ("Stocks") represented by the average return at NAV of the 50 largest ETFs in the Large Blend category based on assets under management (AUM). These portfolios tend to invest across the spectrum of US industries. Large is assigned to stocks in the top 70% of the capitalization stack. Blend is assigned to portfolios where neither growth nor value characteristics predominate. Categories determined by YCharts.

## Returns | June 2025

CAOS | Inverse (pr) | US stocks | Bonds



Source: YCharts, Alpha Architect. 6/1/2025 – 6/30/2025. Daily returns. CAOS, Bonds, US Stock Market returns at NAV; Inverse funds returns at market. **PAST PERFORMANCE DOES NOT GUARANTEE FUTURE RESULTS.** Investing involves risk, including the potential loss of principal. Returns are derived from sources believed to be accurate but are not guaranteed.

No doubt, CAOS could comfortably be placed within the “tail-hedging” universe. So why do its returns diverge so sharply from typical inverse equity strategies? The key lies in how it combines exposures that can perform across a range of market environments:

- **Deep out-of-the-money puts** tend to provide asymmetric returns during fast crashes,
- **Box spreads** provide steady returns regardless of market conditions, and
- **Short put spreads** seek to capture the carry associate with steady bull runs.

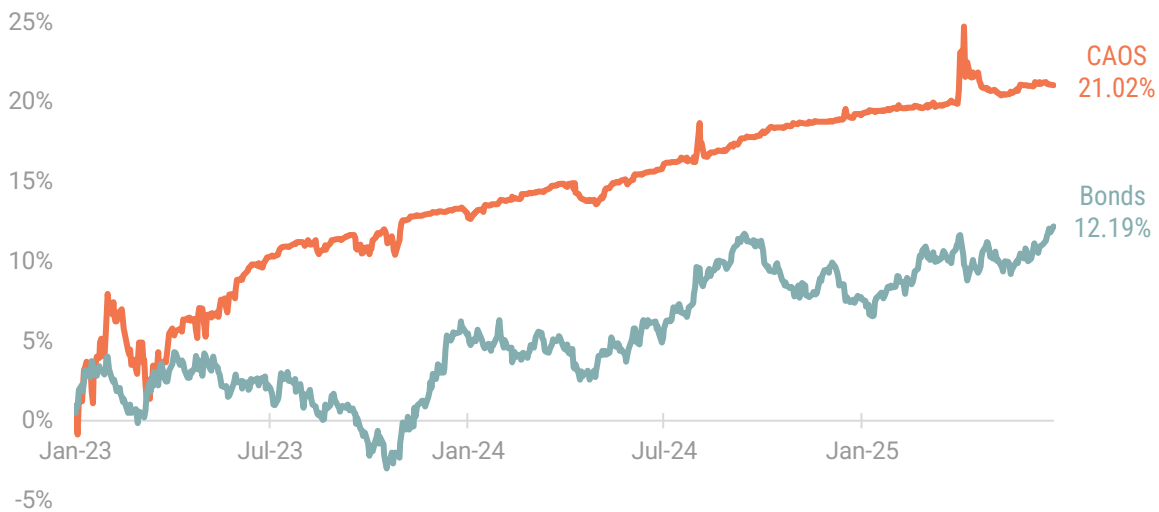
In short, CAOS’s design has the potential to deliver returns that adapt to the market’s whims—so you don’t have to.

## So why even bother with bonds?

Look, there’s no sugarcoating it: Bonds are a pretty boring exposure. Since the 2022 bear crash, they have mostly trudged along, waiting for some heaven-sent catalyst to kickstart the next bull run. And while bonds beat CAOS over this past month (albeit with higher volatility), CAOS may sound like a more exciting proposition. “Hey, look ma’. I’m using options!” Exciting stuff.

## Post 2022 bond bear market returns

CAOS vs. Bonds



Source: YCharts, Alpha Architect. 1/1/2023 – 6/30/2025. Daily returns. US Stock Market returns at NAV; Inverse funds returns at market. **PAST PERFORMANCE DOES NOT GUARANTEE FUTURE RESULTS.** Investing involves risk, including the potential loss of principal. Returns are derived from sources believed to be accurate but are not guaranteed.

However, at its core, **CAOS is not that different from bonds**. In fact, in our own [model portfolios](#) we use CAOS as a part-replacement for bonds. To expand upon our reasoning, here's why the three main components in CAOS can mirror (and maybe even improve upon) fixed income exposures:

- **Deep out-of-the-money puts** tend to mimic treasuries' flight-to-safety behavior,
- **Box spreads** have historically exhibited the low volatility returns associated with short term lending assets, and
- **Short put spreads** often resemble the equity-light returns associated with credit exposures.

Of course, each diversifier has its own job to do. CAOS is there to provide returns that are directly sourced from deep out-of-the-money puts, i.e. **this thing is actually shorting the market!** It's just that it also implements strategies that hopefully earn investors net positive returns over the long term (as it has thus far).

## Last word

While we've officially weathered the Day of Liberation crash and markets now appear to be soaring toward brighter days, the next volatility spike is always on the horizon. Whether it hits a month from now or a year from now, make no mistake: the market will behave as the market does. For investors seeking to mitigate potential losses lurking around the corner, we believe adding CAOS can potentially enhance stock and bond portfolio outcomes during periods of panic—without the need to forecast government moves or make bold macroeconomic calls.

What sets CAOS apart isn't just how it has historically responded to stress; it's how little it relied on the same levers that drive traditional strategies. **Its return profile is structurally uncorrelated to core stocks, bonds, and even managed futures.** That independence makes it more than just a volatility tool; it's a diversifying exposure that can complement a wide range of portfolios without crowding into the same risks. In a world where so much moves together, that kind of differentiation can be rare—and valuable.

## CAOS since inception

Total return at NAV | CAOS | Bonds



Source: YCharts, Alpha Architect. 9/1/2013 – 6/30/2025. Daily returns at NAV. **PAST PERFORMANCE DOES NOT GUARANTEE FUTURE RESULTS.** Investing involves risk, including the potential loss of principal. Returns are derived from sources believed to be accurate but are not guaranteed.

	CAOS	U.S. Large Blend	Bonds	Mgd. Futures
CAOS	1.00			
U.S. Large Blend	0.14	1.00		
Bonds	0.03	-0.03	1.00	
Mgd. Futures	-0.04	0.08	-0.18	1.00

Source: YCharts, Alpha Architect. 9/1/2013 – 6/30/2025. Daily correlations at NAV. **PAST PERFORMANCE DOES NOT GUARANTEE FUTURE RESULTS.** Investing involves risk, including the potential loss of principal. Returns are derived from sources believed to be accurate but are not guaranteed.

**For questions about CAOS**, please contact Jack Vogel, PhD, Alpha Architect's co-CIO, CFO, and portfolio manager. He can be reached at [jack@alphaarchitect.com](mailto:jack@alphaarchitect.com).

## Additional CAOS Resources

**CAOS Return Drivers.** Retail-approved piece that explains what may drive the fund's returns.

**CAOS Investment Case.** Learn more about the Fund's process. Includes options pay-off diagrams, a look under the hood during 2020, and potential portfolio use cases alongside other assets such as bonds, managed futures, and more.

**Model portfolio.** See how CAOS fits into the context of a broader model portfolio.

## IMPORTANT INFORMATION

**Investors should carefully consider the investment objectives, risk, charges, and expenses of the funds. Investment return and principal value of an investment will fluctuate so that an investor's shares, when sold or redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than the performance quoted. Obtain the fund's prospectus and/or performance data current to the most recent end by calling (215) 882-9983 or by visiting [www.AlphaArchitect.com/funds](http://www.AlphaArchitect.com/funds). The prospectus should be read carefully before investing.**

## PRINCIPAL RISKS

**Selling or Writing Options.** Writing option contracts can result in losses that exceed the seller's initial investment and may lead to additional turnover and higher tax liability. The risk involved in writing a call option is that there could be an increase in the market value of the underlying or reference asset. An underlying or reference asset may be an index, equity security, or ETF. If this occurs, the call option could be exercised and the underlying asset would then be sold at a lower price than its current market value. In the case of cash settled call options such as SPX options, the call seller would be required to purchase the call option at a price that is higher than the original sales price for such call option. Similarly, while writing call options can reduce the risk of owning the underlying asset, such a strategy limits the opportunity to profit from an increase in the market value of the underlying asset in exchange for up-front cash at the time of selling the call option. The risk involved in writing a put option is that there could be a decrease in the market value of the underlying asset. If this occurs, the put option could be exercised and the underlying asset would then be sold at a higher price than its current market value. In the case of cash settled put options, the put seller would be required to purchase the put option at a price that is higher than the original sales price for such put option.

**Buying or Purchasing Options Risk.** If a call or put option is not sold when it has remaining value and if the market price of the underlying asset, in the case of a call option, remains less than or equal to the exercise price, or, in the case of a put option, remains equal to or greater than the exercise price, the buyer will lose its entire investment in the call or put option. Since many factors influence the value of an option, including the price of the underlying asset, the

exercise price, the time to expiration, the interest rate, and the dividend rate of the underlying asset, the buyer's success in implementing an option buying strategy may depend on an ability to predict movements in the prices of individual assets, fluctuations in markets, and movements in interest rates. There is no assurance that a liquid market will exist when the buyer seeks to close out any option position. When an option is purchased to hedge against price movements in an underlying asset, the price of the option may move more or less than the price of the underlying asset.

**Box Spread Risk.** A Box Spread is a synthetic bond created by combining different options trades that have offsetting spreads (e.g., purchases and sales on the same underlying instrument, such as an index or an ETF, but with different strike prices). If one or more of these individual option positions are modified or closed separately prior to the option contract's expiration, then the Box Spread may no longer effectively eliminate risk tied to the underlying asset's price movement. Furthermore, the Box Spread's value is derived in the market and is in part, based on the time until the options comprising the Box Spread expire and the prevailing market interest rates. If the Fund (or an underlying ETF) sells a Box Spread prior to its expiration, then the Fund may incur a loss. The Fund's ability to profit from Box Spreads is dependent on the availability and willingness of other market participants to sell Box Spreads to the Fund (or the underlying ETF) at competitive prices.

**FLEX Options Risk.** FLEX Options are exchange-traded options contracts with uniquely customizable terms like exercise price, style, and expiration date. Due to their customization and potentially unique terms, FLEX Options may be less liquid than other securities, such as standard exchange listed options. In less liquid markets for the FLEX Options, the Fund may have difficulty closing out certain FLEX Options positions at desired times and prices. The value of FLEX Options will be affected by, among others, changes in the underlying share or equity index price, changes in actual and implied interest rates, changes in the actual and implied volatility of the underlying shares or equity index and the remaining time to until the FLEX Options expire. The value of the FLEX Options will be determined based upon market quotations or using other recognized pricing methods. During periods of reduced market liquidity or in the absence of readily available market quotations for the holdings of the Fund, the ability of the Fund to value the FLEX Options becomes more difficult and the judgment of Arin Risk Advisors (employing the fair value procedures adopted by the Board of Trustees of the Trust) may play a greater role in the valuation of the Fund's holdings due to reduced availability of reliable objective pricing data.

**Derivatives Risk.** A derivative is any financial instrument whose value is based on, and determined by, another asset, rate or index (i.e., stock options, futures contracts, caps, floors, etc.). When the Fund obtains exposure to derivatives it will be exposed to the risks of those derivatives. The use of derivatives for non-hedging purposes may be considered to carry more risk than other types of investments. Unfavorable changes in the value of the underlying asset, rate or index may cause sudden losses. Changes in the value of a derivative may not correlate perfectly with the underlying asset, rate or index, as the Fund could lose more than the principal amount invested. Derivative instruments are subject to a number of risks including counterparty, liquidity, interest rate, market, credit and management risks, as well as the risk of improper valuation.

**Counterparty Risk.** Counterparty risk is the risk that a counterparty to a financial instrument held by the Fund may become insolvent or otherwise fail to perform its obligations, and the Fund may obtain no or limited recovery of its investment, and any recovery may be significantly delayed. Exchange listed options, including FLEX Options, are issued and guaranteed for settlement by the Options Clearing Corporation ("OCC"). The Fund's investments are at risk that the OCC will be unable or unwilling to perform its obligations under the option contract terms. In the unlikely event that the OCC becomes insolvent or is otherwise unable to meet its settlement obligations, the Fund could suffer significant losses.

#### **Note on category average methodology**

Constituents of a given category are determined by YCharts. As of 4/30/2024, the calculation method used to determine the category average's returns changed to account for potentially different inception dates. Previously, a straight average of constituent funds' total return net asset value (NAV) was used to determine the category's average

total return NAV; the percent change of the category average NAV was then used to calculate returns. As of 4/30/2024, total returns for the category are now found using a straight average of the total NAV return (percent change) for a given frequency (daily, weekly, monthly, etc.). There may be instances where the straight average of the constituent funds' NAV returns may be higher or lower than the straight average of the total NAV return. As of 4/30/2024, all category average returns are calculated using the straight average of the constituent funds' total NAV return for a given frequency.

#### **Category average constituent selection criteria**

Unless otherwise noted, the given category is represented by the 50 biggest funds based on assets under management (AUM). The AUM figure is point-in-time and is not retroactively applied to constituent funds. In the event fewer than 50 funds are available in a given category, all funds are used in to calculate returns. Funds that may have been open for investment over the given period but are no longer active are not included. The number of constituent funds in a given category average may affect represented returns. In the event of multiple share classes, the share class with the highest AUM is referenced. Category returns are a straight average of the total return of the constituent funds over the given period.

Wherever possible, we reference the 50 biggest funds by AUM to provide what we believe to be a reasonable sample of the most popular strategies that includes a mix of passive and active approaches. The highest AUM funds tend to have more established track records, providing what we believe to be a reasonable basis for returns. We reference all funds in the category in the event there are fewer than 50 funds open for investment.

#### **Limited universe**

The information presented regarding peer ETFs may be based on a limited universe of comparable funds that we believe are relevant to the strategy, investment style, and asset class of this ETF. This comparison is not exhaustive and may exclude other funds that also offer similar exposures or strategies. Investors are encouraged to conduct their own research and consider other products in the marketplace that may provide comparable investment objectives or characteristics. Past performance is no guarantee of future results, and differences in fees, structures, or market conditions may lead to different outcomes between peer funds and this ETF. Investors should consider factors such as risk tolerance, fees, liquidity, and investment goals before making any investment decisions based on peer comparisons. This disclosure is not an endorsement of any peer fund, nor should it be interpreted as financial advice.

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