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Do buffer ETFs improve asset allocation outcomes?

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Many investors struggle to stay invested during volatile markets—not because of poor fundamentals, but because the emotional pain of losses often outweighs the regret of missed gains. This well-known behavioral bias can lead to reactive decisions, like selling during downturns and missing recoveries.

Buffer ETFs (exchange-traded funds) aim to address this challenge. By offering partial downside protection in exchange for a capped upside, these ETFs provide a more predictable return range over a defined period. The result: a smoother investment experience that can help clients stay the course during uncertain markets. However, as we will show later, adjusting the stock-cash mix could provide competitive outcomes through extra protection and better upside.

In this article, we explore how buffer ETFs work, how they perform relative to a simple de-risking of the portfolio and if they may be optimal to hold in a diversified portfolio.

How do they work?

Buffer ETFs use a combination of options to shape a defined return profile over a fixed outcome period—typically 12 months. The structure involves three key steps. We outline these to build a replication of a one-year buffer ETF on the S&P 500, which provides protection against the first 15% of losses.

Step 1: Gain Index Exposure

Most Buffer ETFs use a deep-in-the-money call option to replicate the return of a broad index like the S&P 500. Some may instead use futures or direct holdings, though this is less common.

We start the buffer ETF replication with a purchase of 100 shares of SPY (the S&P 500 ETF) at $600 per share, creating a $60,000 portfolio.

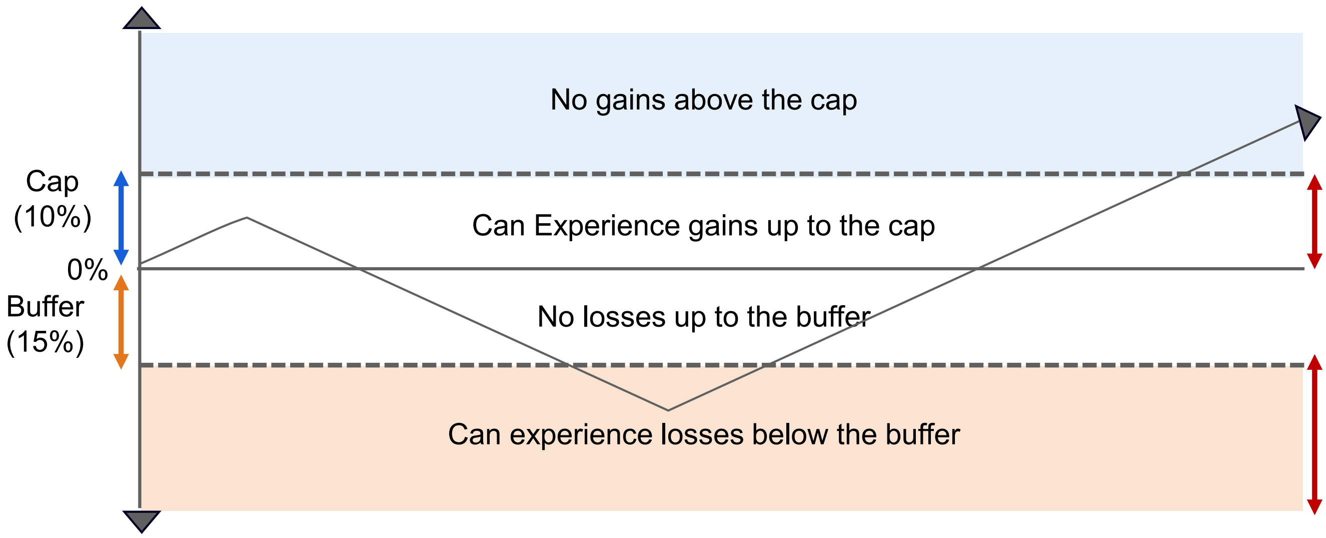
Step 2: Add Downside Protection (at a cost)

To create loss protection, we buy a put option covering 100 shares of SPY for $3,400. This provides the right to sell a share of SPY at a predetermined level if the market falls, limiting losses from that point onward. This protective leg is typically the most expensive part of the strategy and creates the need for additional trades to offset the cost.

Step 3: Define the Buffer and Cap the Upside

To help finance the cost of the protective put, we sell two options. First, we sell a lower strike put option, which limits the protection to a specified buffer zone. Below this level, losses resume. Second, the fund sells a call option, which caps the investor's upside if markets rise above a certain threshold (Exhibit 1). Together, these two options reduce or eliminate the initial option cost.

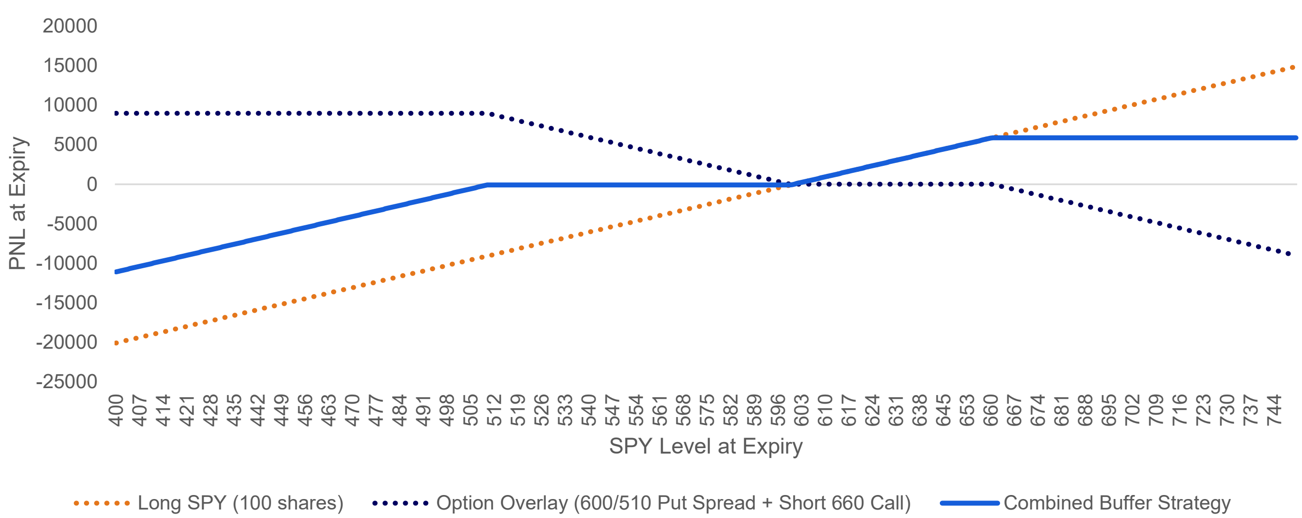
Exhibit 1: Buffer ETF return window



In our example, a 15% downside protection would imply selling a put option with a strike that is 15% lower than the current SPY price of 600—i.e., at $510 for $14 per share. This generates $1,400 in premium. When SPY falls below $510, the purchased put in step 1 and the sold call in step 2 offset one another, leaving just exposure to SPY. Finally, to eliminate the remaining cost of $2,000 (step 1 put cost – step 2 put proceeds), we sell a $660-strike call option for $20 per share, receiving $2,000 in premium. This caps any gains if SPY rises more than 10% above the initial level.

The combination of Steps 2 and 3 results in a **zero-cost buffer overlay** that shields the portfolio from the first 15% of losses (Exhibit 2). However, once SPY falls below $510, the buffer overlay no longer provides protection. On the upside, the overlay remains neutral as SPY rises, allowing the portfolio to participate fully in the first 10% of gains. Beyond that level, the overlay begins to generate offsetting losses due to the sold call option. As a result, the combined portfolio's gains are capped beyond a 10% increase in SPY (Exhibit 2).

Exhibit 2: Payoff at expiry of buffer ETF



At the end of the outcome period (one year in our example), a buffer ETF will roll into a new set of options contracts with the same percentage buffer level and term length—but with a new upside cap, depending on the market price of the options.

Types of buffer ETFs

The example above used a one-year outcome period, 15% downside protection, and a 10% upside cap. In practice, these parameters can vary significantly across buffer ETF offerings. The length of the outcome period, the size of the buffer, and the level of the upside cap all depend on the product design.

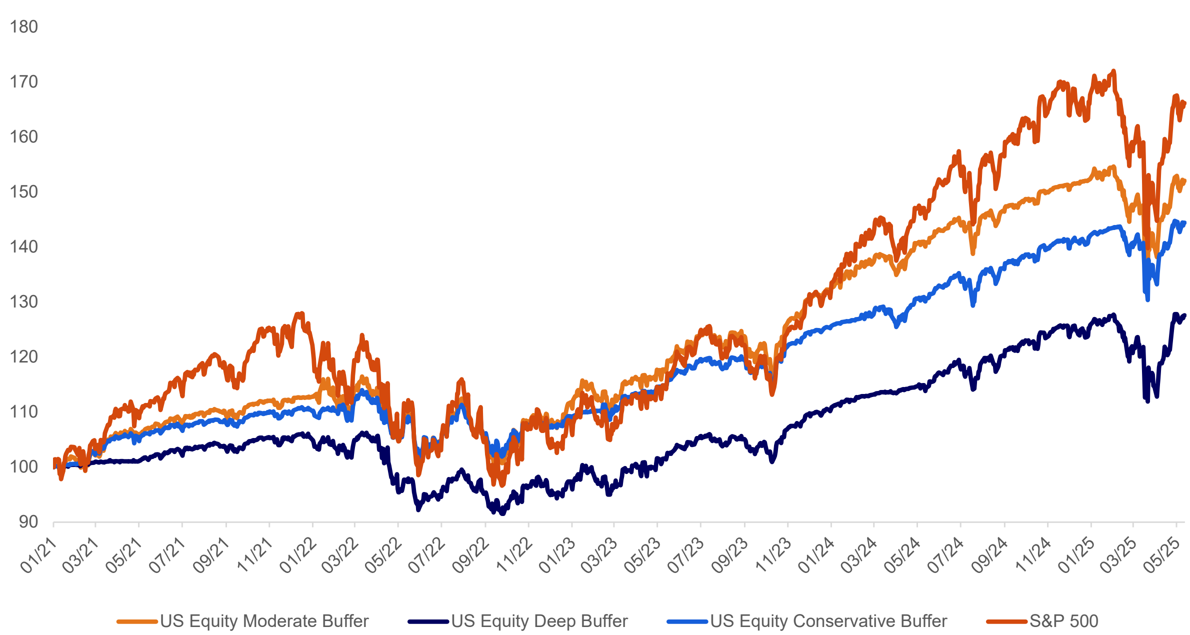
Fund providers design buffer ETFs by adjusting three main variables:

- **Frequency of reset:**
  Most Buffer ETFs reset annually, but some offer monthly or quarterly reset schedules to provide more frequent re-entry points and flexibility for investors.
- **Amount of downside protection:**
  Common buffer levels range from 5% to 30%, depending on the fund. Higher levels of protection typically require a lower cap on gains, as more premium must be allocated to buying downside insurance.
- **Fund structure:**
  Some funds use defined outcome periods—where the structure resets on a specific date—while others offer continuous exposure, allowing investors to enter and exit at any time with a rolling options structure.

While buffer ETFs offer a more controlled risk-return experience, it's important to understand their pros and cons. During the outcome period, investors remain exposed to market fluctuations and may experience negative returns—albeit typically with lower beta than the index. At maturity, losses can still occur if the index declines beyond the buffer floor. On the upside, gains are capped.

These structural features can lead to a performance lag relative to the underlying index. Historically, on average, buffer ETFs tend to underperform by about 4% annually, reflecting the cost of downside protection and the loss of upside participation[1]. There is also a strong relationship between the size of the downside buffer and the extent of underperformance—the more protection offered, the greater the trade-off in foregone returns[2] (Exhibit 3).

Exhibit 3: Return comparison between buffer ETFs and S&P 500



[1] Comparing S&P 500 performance versus three annual buffer ETFs from Jan'21 – Apr'25, we see average underperformance of 4.15%.

[2] – S&P 500 performance versus three annual buffer ETFs from Jan'21 – Apr'25. US Moderate Buffer: 10% buffer, Conservative Buffer: 15% Buffer, US Deep Buffer: 5% to 30% Buffer. We observe direct relationship between the size of downside buffer and extent of underperformance.

How do buffer ETFs compare to simple portfolio de-risking?

Next, we discuss competing strategies that accomplish buffer ETFs' defined outcomes but with less complexity and cost. We start by comparing the payoff profile of the option strategy embedded in the buffer ETF to a simple derisking strategy. This comparison gives insight into whether the added complexity of the buffer overlay meaningfully improves investor outcomes relative to a more straightforward approach.

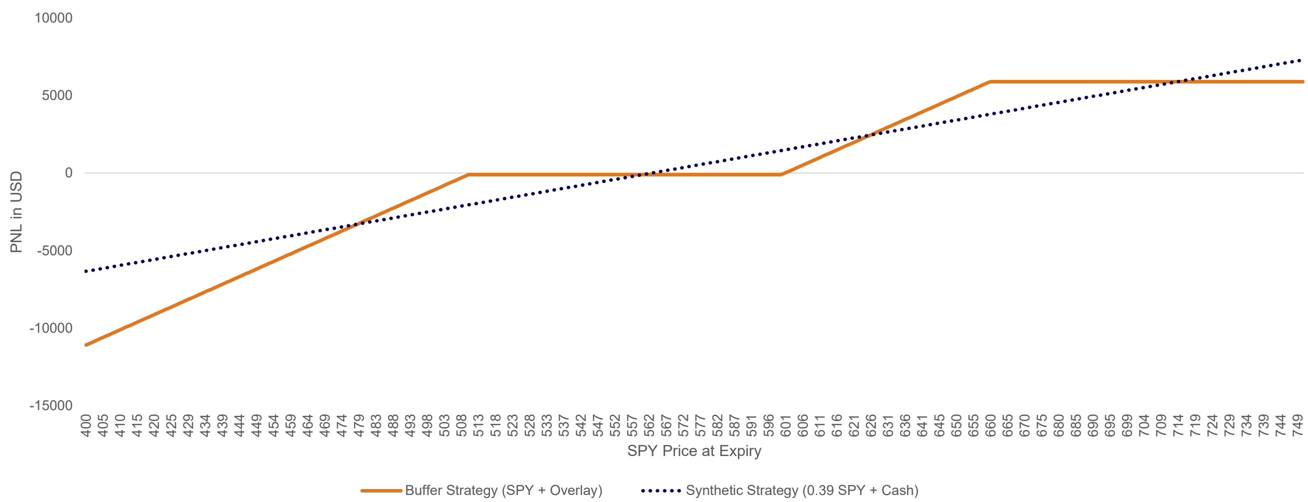
We build on the earlier example, where we created a one-year buffer overlay on 100 shares of SPY. At inception, that structure has partial sensitivity to equity markets. In options terms, this sensitivity is called delta, which measures how much a position's value changes in response to movements in the underlying asset (SPY).

Above, the combined buffer strategy had a delta of approximately 0.39. This means for every 1% move in the SPY, the portfolio of options plus the SPY is expected to move by about 0.39%. For reference, a fully invested SPY position has a delta of 1.0, meaning it moves one-for-one with the market.

Consider the alterative approach to buying options of simply creating a portfolio that has 39% of the portfolio in SPY and the remaining 61% in cash. This portfolio has a delta of 39% as well. To construct this portfolio, we buy 39 shares of SPY for $44,339 and $36,661 in cash.

Exhibit 4 shows the payoff after one year under different SPY outcomes for the buffer strategy and the simple strategy of 39% SPY and 61% cash[3].

Exhibit 4: Total payoff at expiry: Buffer vs. delta-matched strategy



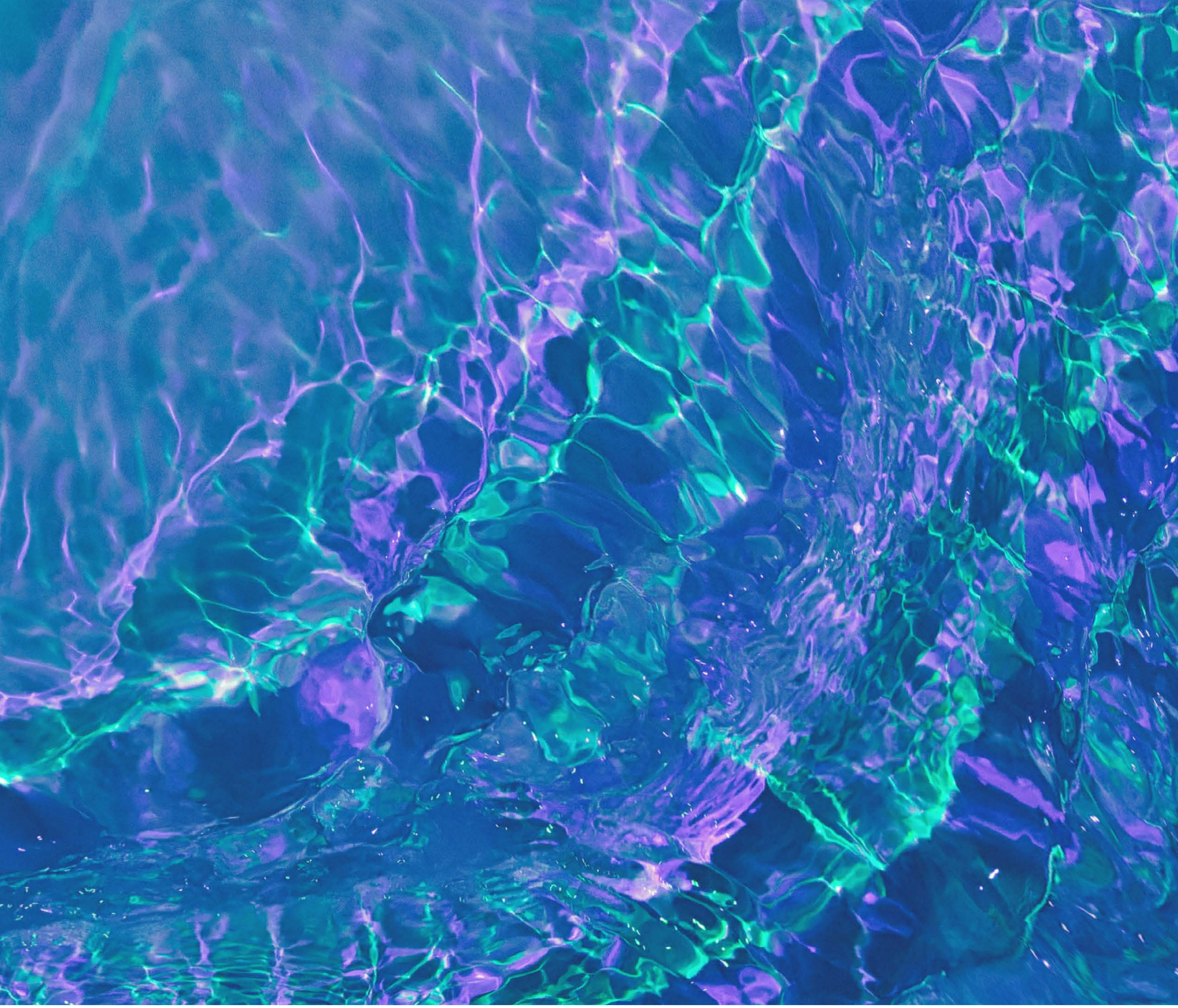
The comparison reveals that the buffer strategy outperforms in specific market conditions at expiry:

- If the market moves above the upside cap or below the 15% buffer floor, the delta matched strategy generally performs better than the buffer strategy.
- If SPY ends the year flat at $600, the buffer strategy lags because the cash portion of the delta matched strategy delivers positive carry.
- If the price of SPY at expiry is in the -15% to +10% range, the buffer ETF can outperform the de-risking strategy.

This comparison highlights a key insight: the buffer strategy performs better in the buffer zone. Consider that a recession would likely have a return outcome that is larger than the buffer zone of 15% used in our example. For larger tail events (either up or down), a simple strategy of stocks and bonds outperforms[4].

[3] We assume a cash return of 4%.

[4] The exact SPY price beyond which the de-risking strategy outperforms will vary over time and depend on variables impacted by prevailing market conditions.



Conclusion

Buffer ETFs have rapidly gained investor interest, reflecting a growing preference for defined outcomes in risk management. While these strategies can be appealing—particularly when equity market drawdowns at maturity fall within the buffer range—they are not without trade-offs. For investors seeking protection against more severe drawdowns without capping participation in substantial equity market rallies, simpler de-risking approaches—such as allocating to cash—may offer a competing approach that might be important to consider. In some scenarios, this could provide more effective balance between downside protection and upside potential.

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