



Silver



Defined Outcome ETFs

A definitive guide.



Gold



Bronze



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Executive Summary and Key Takeaways

Executive Summary

Defined outcome exchange-traded funds, or “buffer ETFs,” are becoming a more common way for investors to shield investment losses. Their options structures enable explicit loss protection over a given period but limit potential gains. And with their relatively high price tag, investors should make sure they get what they pay for. Defined outcome ETFs are not for everyone.

The defined outcome Morningstar Category had the most ETFs of any fund category, with 420 available at the end of 2025. It was also among the fastest growing, with an average annualized organic growth rate of 39% over the last three years, amassing USD 78 billion by year-end. Defined outcome ETFs are complex, though, and must be bought and sold in accordance with their stated outcome period to achieve an advertised outcome. The option structures that underpin these ETFs deliver a diverse array of outcomes. Morningstar’s research found that defined outcome ETFs provide the protection they promise but can be suboptimal long-term holdings.

Key Takeaways

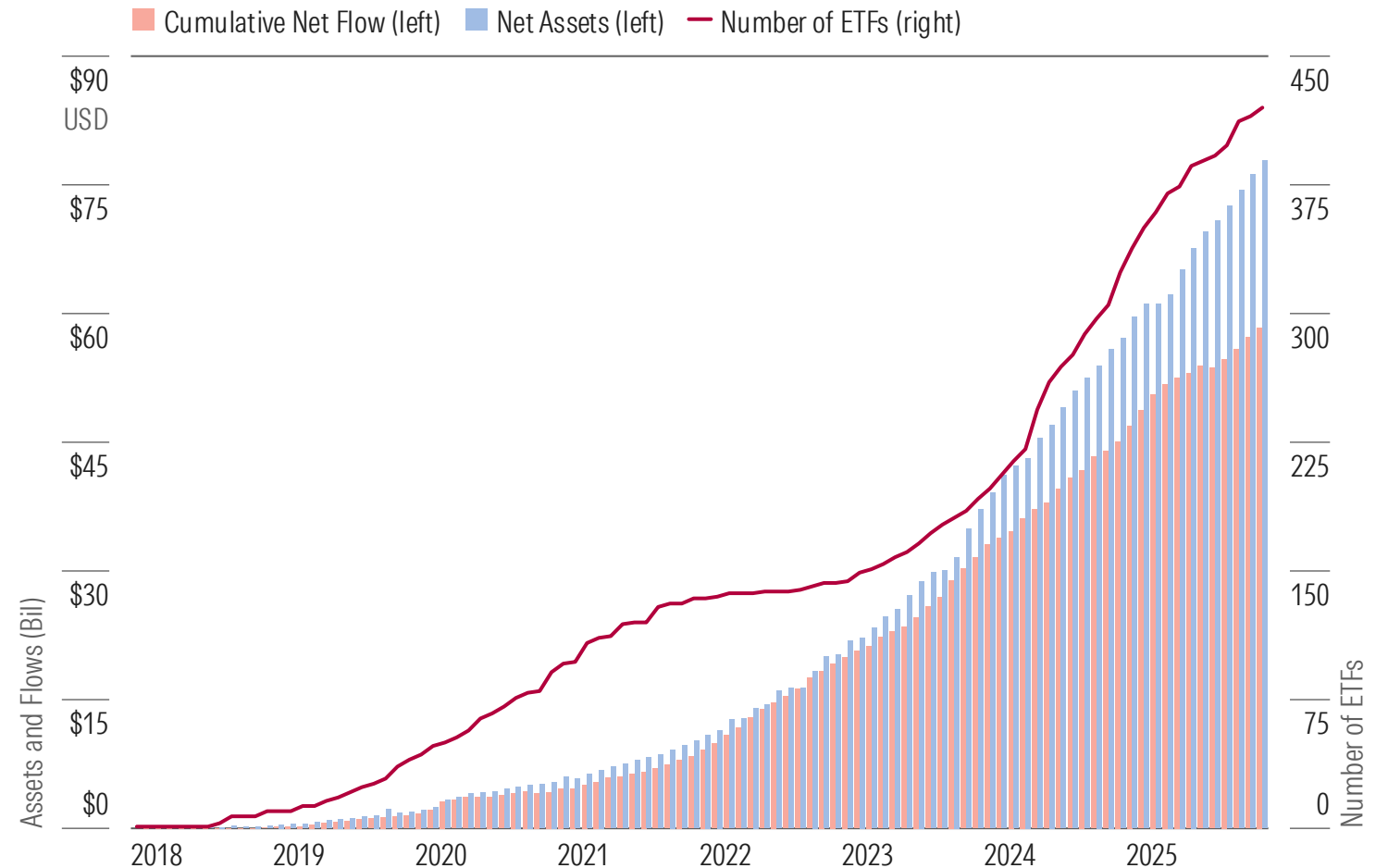
- The 420 ETFs in the defined outcome category claimed USD 78 billion and collected a combined USD 57 billion of inflows since 2020.
- First Trust and Innovator* were the two largest defined outcome ETF providers, claiming 86% of the category’s market share.
- Charging 0.75% on average, defined outcome ETFs are expensive compared with passive funds and some actively managed funds.
- The S&P 500 index is the most common reference asset for defined outcome ETFs. It was the benchmark for 74% of these ETFs.
- A standard buffer structure that protects against a given percent of losses is most common. Among those, a 15% buffer, before fees, is the most common.
- Other outcome structures have become more common. There were 79 max buffer ETFs, and firms continue to launch novel outcome structures.
- Market volatility and reference asset volatility heavily influence the maximum return an investor can earn over an outcome period.
- Defined outcome ETFs with larger buffers offer lower return potential than those with smaller buffers.
- Limited upside makes defined outcome ETFs unsuitable long-term holdings for most investors.
- Short-term holders should add defined outcome ETFs pro rata from their existing stock and bond allocations.

Introduction

Defined outcome ETFs have quickly become common risk management tools for individuals, advisors, and even some institutions. The ETFs use options contracts to protect against losses in exchange for limited upside potential. The result is a narrower range of outcomes than a conventional 60/40 portfolio, which may appeal to risk-averse investors despite their relatively high fees. The category's rapid growth demonstrates that investors are willing to pay for the protection delivered by defined outcome ETFs and that ETF providers are more than happy to provide them. Defined outcome ETFs held USD 78 billion across 420 ETFs at the end of 2025.

This paper provides actionable insights about how investors should use defined outcome ETFs in their portfolios and why the ETFs behave the way they do.

Defined Outcome ETF Growth

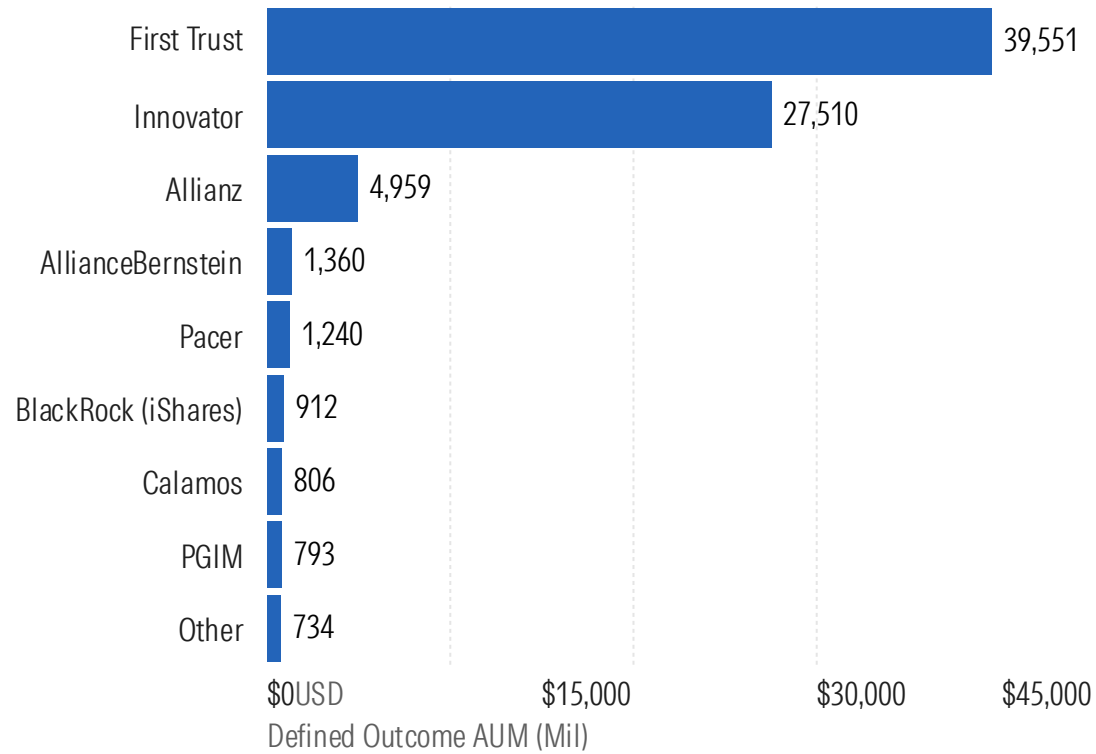


Defined Outcome ETF Landscape

Providers and Fees

Fees are a critical part of selecting any investment, and defined outcome ETFs are no different. First Trust and Innovator were first to market with defined outcome ETFs. They effectively used their first-mover advantage and now combine to hold 86% of defined outcome ETF assets, despite charging the highest fees in their peer group. Newcomers have undercut their average fee of 0.80% or more, but the top eight providers still charge an average fee of at least 0.50%.

Largest Defined Outcome ETF Providers



Average Fee Level by Provider

Provider	Avg Defined Outcome Fee (%)	Avg Passive Fee (%)	Avg Active Fee (%)
First Trust	0.88	0.63	0.94
Innovator	0.80	0.58	0.78
Allianz	0.74	N/A	0.74
AllianceBernstein	0.69	N/A	0.98
Pacer	0.61	0.61	0.64
BlackRock (iShares)	0.50	0.32	0.38
Calamos	0.69	N/A	1.28
PGIM	0.50	0.43	0.99
All Providers	0.75	0.55	0.99

Source: Morningstar Direct. Data as of Dec. 31, 2025. Exhibit on right: Equal-weighted average fee measured for each fee group. Average passive fee does not include strategic-beta funds. Profiles of the largest eight defined outcome ETF providers begin on Page 22.

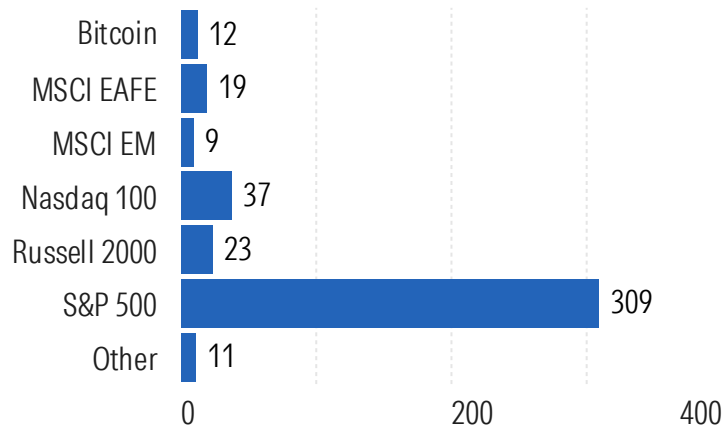
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Defined Outcome Structures

Reference Asset

Investor experience begins with the ETF's reference asset. The ETF's specific outcome objective determines how it will use options to manipulate risk and deliver its advertised outcome. The S&P 500 was the most common index-equivalent reference asset: 74% of defined outcome ETFs were pegged to its performance. Many use SPDR S&P 500 ETF SPY options because of their ample liquidity and favorable tax treatment inside the ETF wrapper. Other popular indexes were also common reference assets, and bitcoin is gaining popularity as a peg, too.

Count of Reference Assets

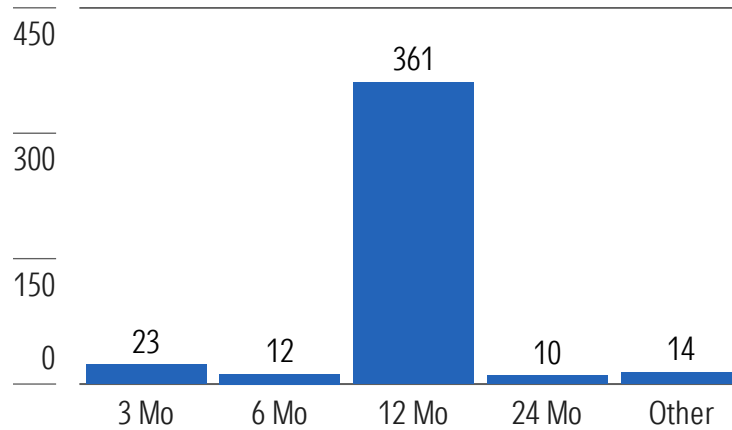


Source: Morningstar. Data as of Dec. 31, 2025.

Outcome Period

Defined outcomes are only assured over a given outcome period, which matches the life of the options contracts. An investor must purchase the ETF on day one of the outcome period and hold the entire period to get the advertised results. The most common outcome period was one year, but quarterly, laddered, or perpetual outcome periods are becoming more common.

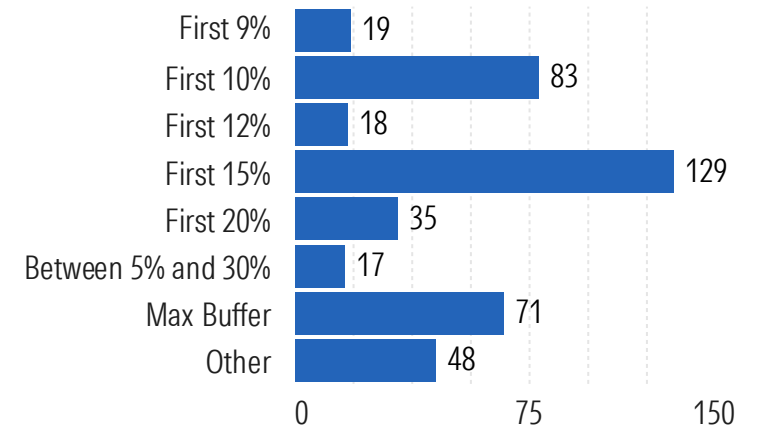
Count of Available Outcome Periods



Buffer Level

Buffer levels are closely linked to risk. Wider buffers give investors more downside protection but at the cost of lower upside potential. This trade-off is a critical consideration for an investor when choosing their optimal buffer level. ETFs protecting the first 10%-20% of losses were the most common. Max buffer ETFs, which aim to protect all losses for an outcome period, are also common. Buffer and cap levels are almost always quoted before fees.

Count of Available Buffer Levels



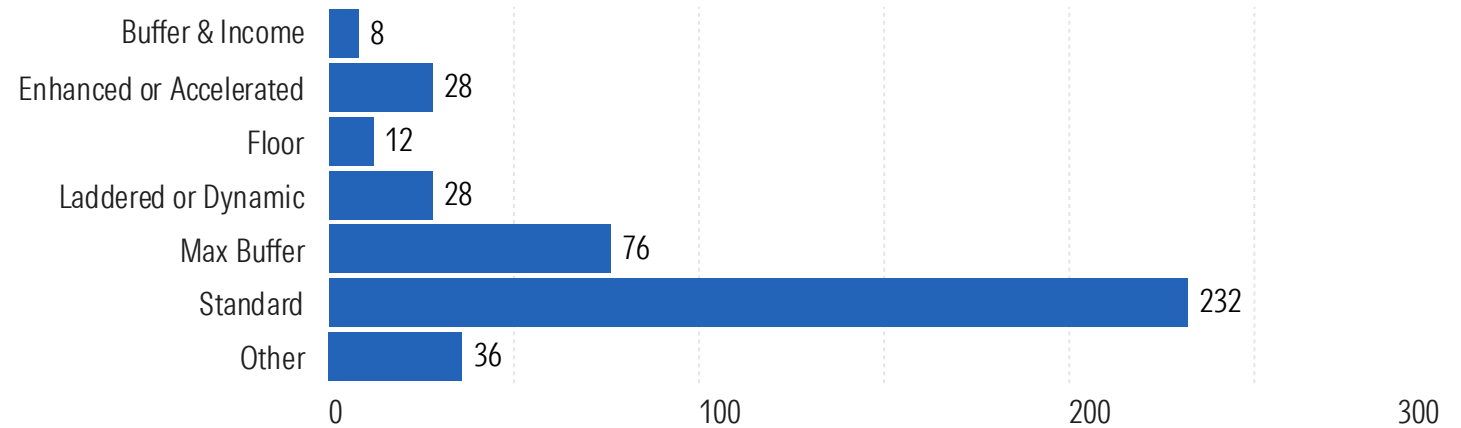
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Defined Outcome Structures

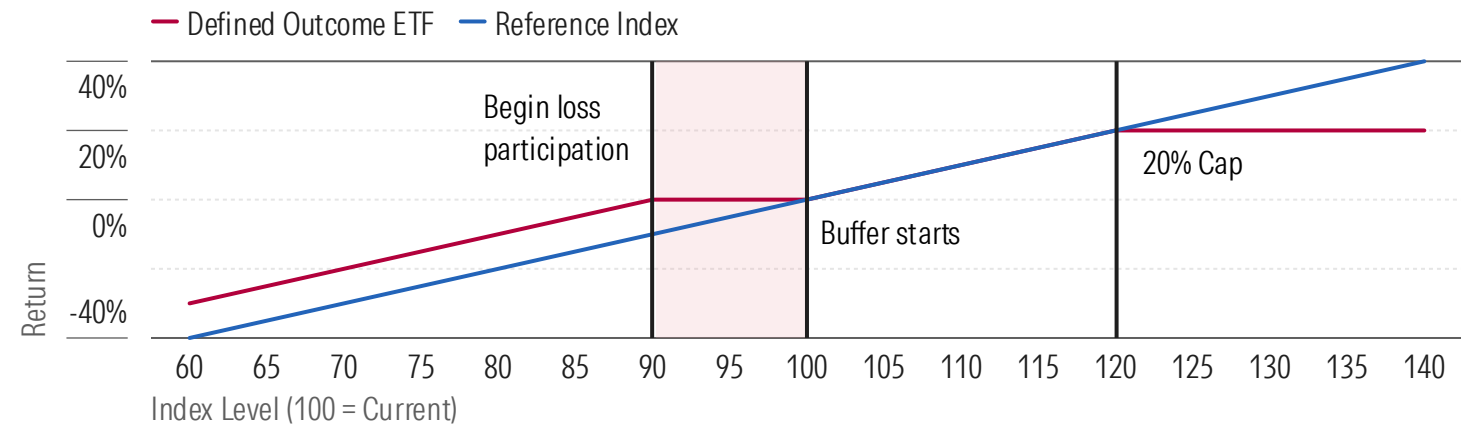
Defined outcome ETFs use options to repackage outcomes in various ways. A standard buffer, like protection against the first 10% of losses, is by far the most common. Other unique structures have begun to permeate the landscape, too. Max buffer ETFs offer the most protection but with little upside. Laddered and dynamic options strategies spread performance out over multiple outcome periods. Enhanced or accelerated structures leverage returns up to a cap while usually maintaining some downside buffer. Each promises an outcome distinct from the standard structure.

The bottom exhibit illustrates the payoff profile of a defined outcome ETF using a standard buffer structure. ETFs using the standard structure follow the performance of a reference asset, like the S&P 500 or Nasdaq 100, up to a cap while avoiding a certain percentage of the asset's losses should it decline. Defined outcome ETFs also forgo dividend payments. In this hypothetical example, investors can gain no more than 20% over the defined year but are shielded from the index's first 10% of losses, before fees. Performance will mimic the reference asset if it returns between zero and 20% in this example. See Appendix B on Page 34 for a more detailed example of how defined outcome ETFs work.

Count of Available Defined Outcome Structures



How a Standard 10% Buffer Strategy Makes Money



Connecting Risk and Return

Opportunity Cost Can Be High

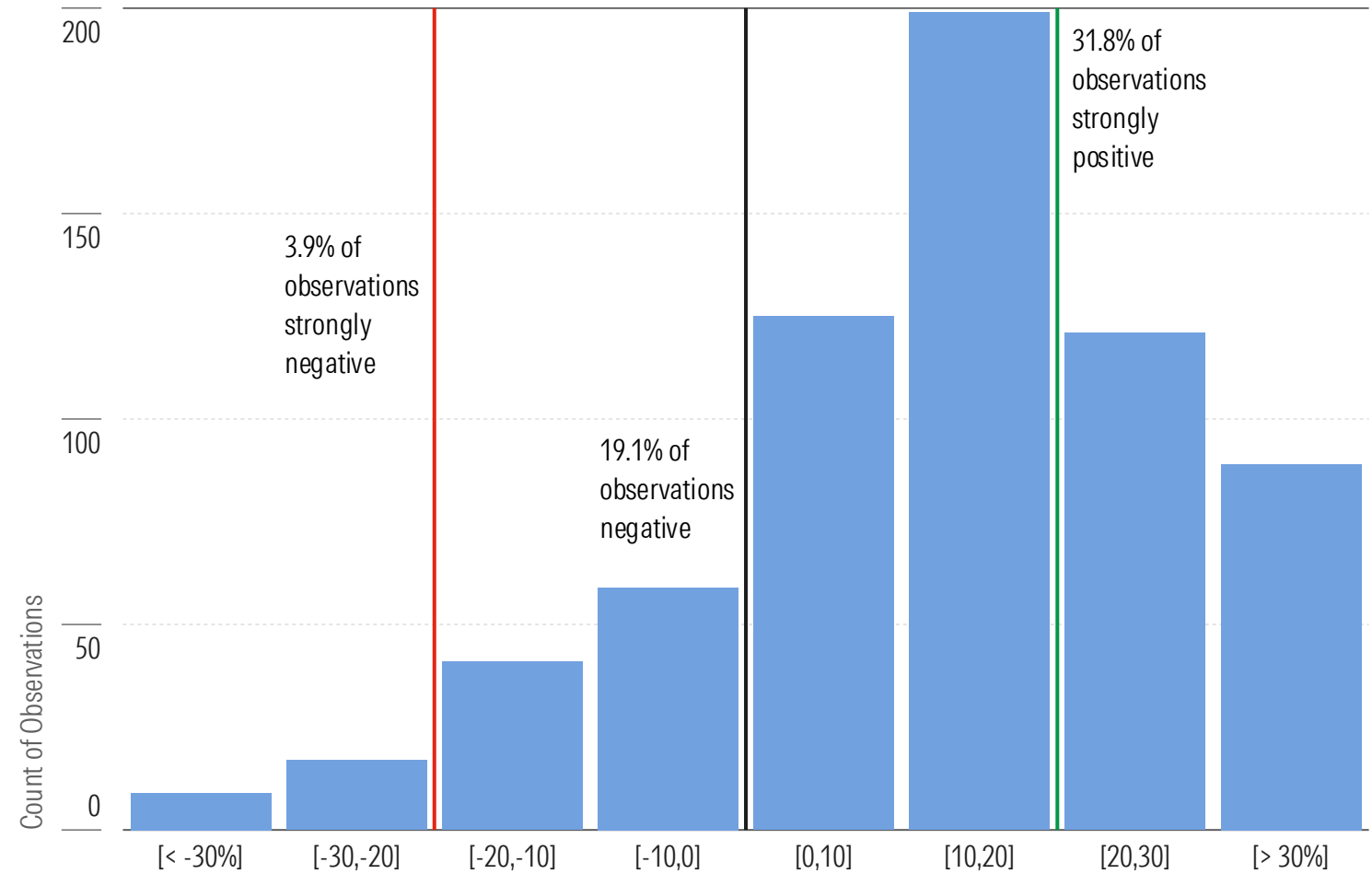
More risk usually means more reward in investing. Defined outcome ETFs reduce the risk of their reference asset, which means they can deliver lower rates of return than their reference asset.

History can help inform the effectiveness of different buffer levels and how much upside investors may forgo. For instance, the S&P 500 rarely lost more than 20% over 12-month periods going back to 1970, but it gained more than 20% in nearly a third of those periods.

Defined outcome ETFs deliver stock exposure with guardrails. Typical buffers of 10%-20% would have protected against most 12-month declines since 1970, but investors would have remained exposed to the extreme losses beyond their buffer. The trade-off would have been missed gains past the upside cap, which would have been frequently breached based on historical data.

Peace of mind provided by buffers may be worth the forgone gains for some. But defined outcome ETFs' total returns are likely to fall well short of uncapped stock or allocation portfolios over extended time horizons.

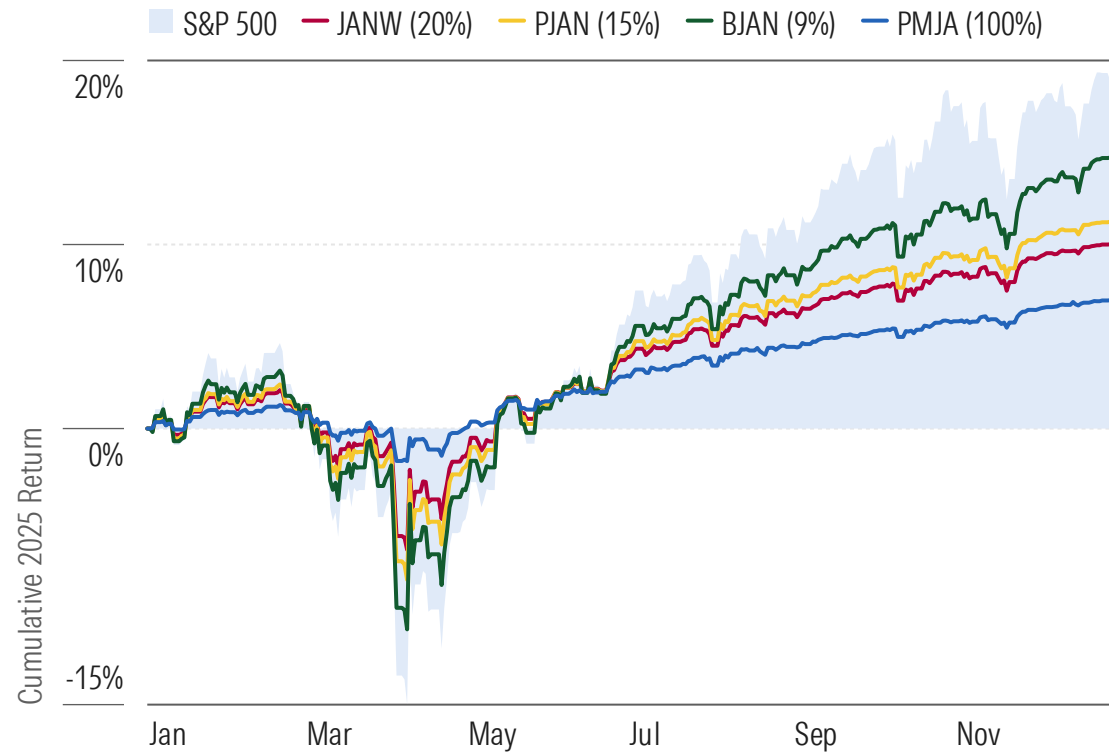
S&P 500 Rolling 12-Month Returns Since 1970



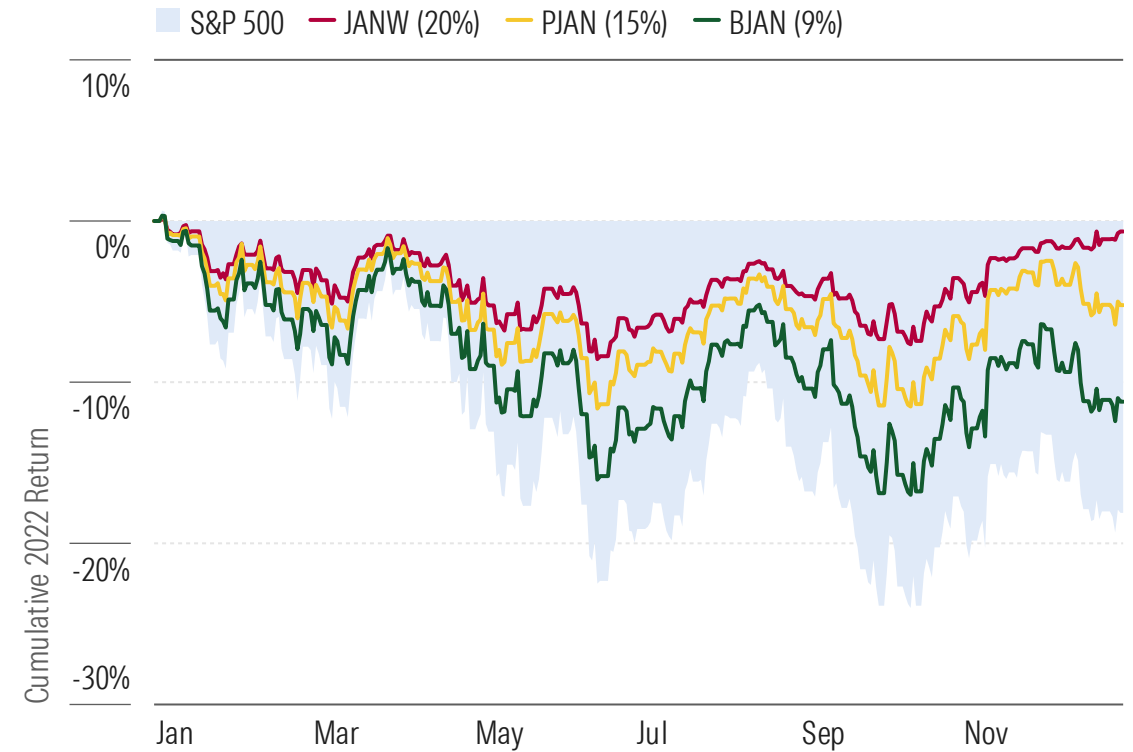
Buffer Levels Determine Risk and Reward

A defined outcome ETF's buffer level indicates its risk level. Larger buffers make for shallower drawdowns than smaller buffers, but they also make for lower returns in positive markets. Demonstrated below, a 100% max buffer ETF delivered the lowest return of all defined outcome ETFs with a 12-month outcome period pegged to S&P 500 performance. The inverse was also true. A 20% standard buffer ETF shielded investors from the S&P 500's entire 18% loss in 2022, before fees, while ETFs with smaller buffers suffered losses.

Larger Buffers Mean Lower Returns in Positive Markets



Smaller Buffers Mean Greater Losses in Negative Markets



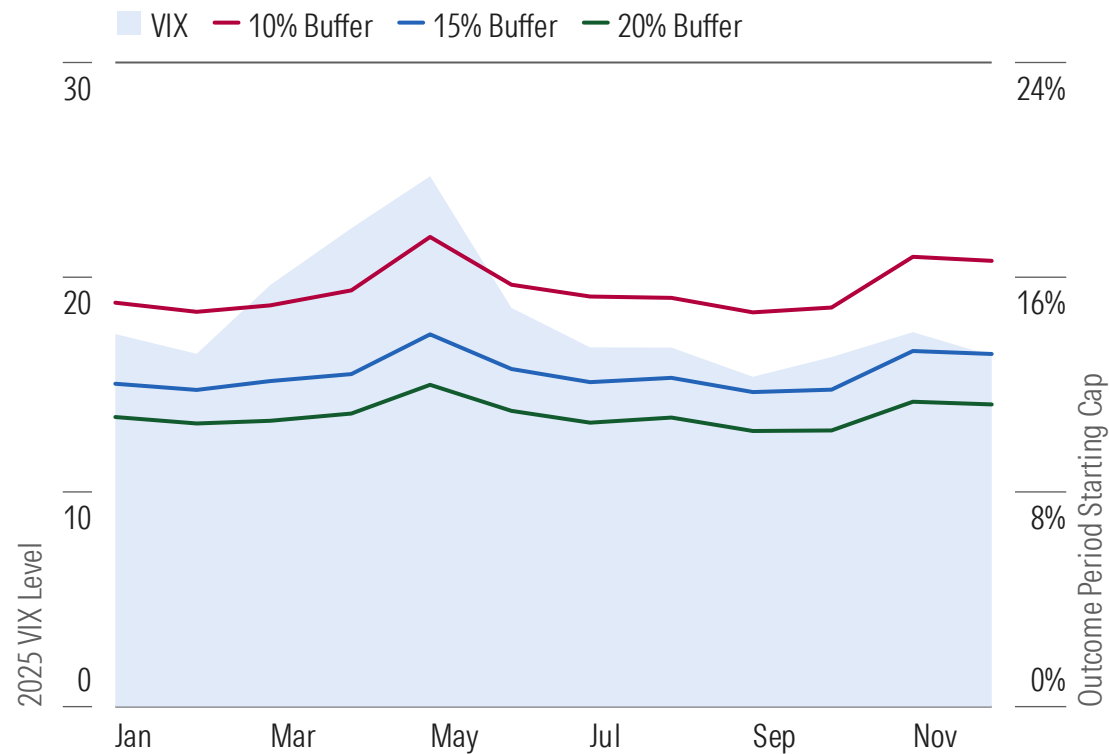
Source: Morningstar Direct. Data as of Dec. 31, 2025. ETFs shown: AllianzIM US Large Cap Buffer20 Jan ETF JANW, Innovator US Equity Power Buff ETF Jan PJAN, Innovator US Equity Buff ETF Jan BJAN, PGIM S&P 500 Max Buffer ETF - January PMJA. S&P 500 total return index is used to show the opportunity cost of forgoing dividends. PGIM S&P 500 Max Buffer ETF - January PMJA was not available in 2022.

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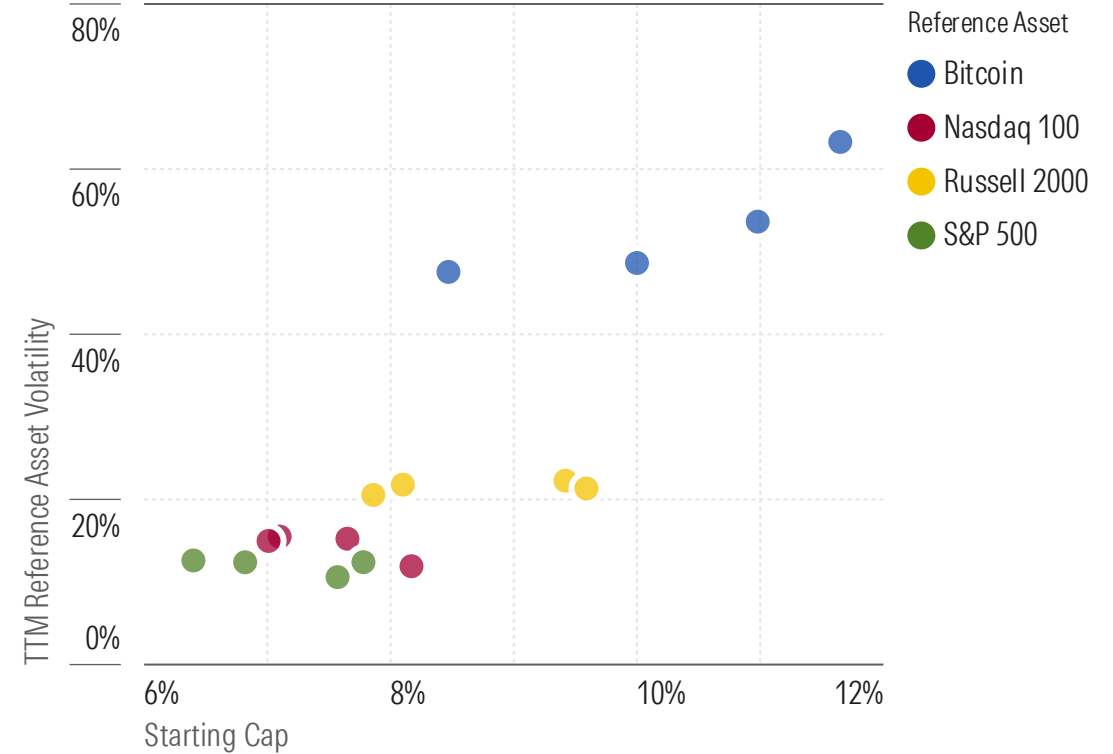
Volatility Determines Return Potential

The forces shaping option prices determine a defined outcome ETF's cap rate, or its maximum possible return over an outcome period. Chief among those forces is volatility. The left exhibit shows how cap rates vary with the CBOE Market Volatility Index (VIX). The right exhibit illustrates a strong positive relationship between cap rates and a reference asset's trailing 12-month volatility (as measured by its standard deviation of daily returns). All else equal, greater volatility almost always translates to a higher cap rate and greater return potential.

Market Volatility Influences Outcome Period Cap



Reference Asset Volatility Also Influences Cap Rates



Source: Morningstar Direct. Data as of Dec. 31, 2025. Left-hand exhibit: Defined outcome ETFs with the same buffer level and the same reference asset (S&P 500 or equivalent) used to illustrate starting cap rates. Monthly series of those ETFs with annual outcome periods beginning in 2025 are displayed. Right-hand exhibit: Max buffer ETFs from the same provider (Calamos) with different outcome periods and reference assets used. Same relationship exists across other defined outcome structures.

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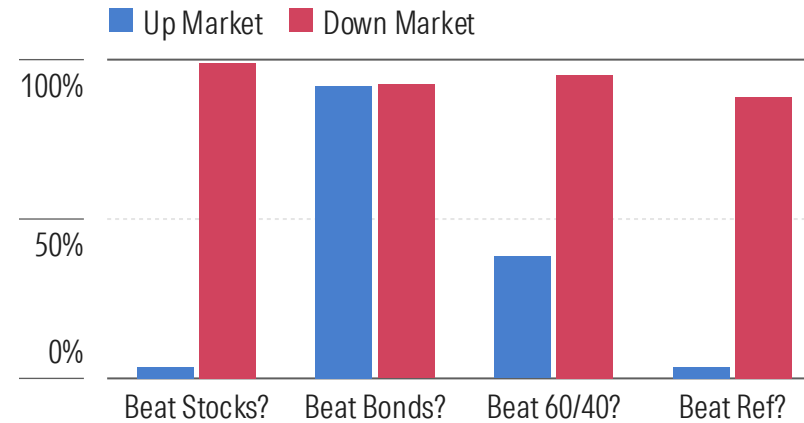
Hype or Substance?

Defined outcome ETFs do what they purport to do: shield against losses but lag when markets rise.

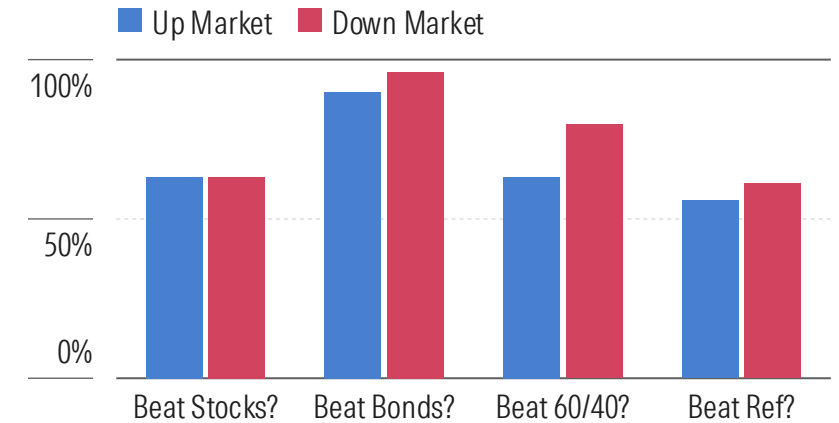
Defined outcome ETFs with a standard buffer structure have proved their ability to reduce volatility and drawdowns. They were reliably less volatile than their respective reference asset in both up and down markets.

Less can be gleaned from relative returns. Standard buffer ETFs easily handled bonds during a period of rising interest rates (2022) and showed promise versus stocks on a risk-adjusted basis. However, the distribution of outcomes by individual buffer ETFs was wide, and outcomes depended on the period tested. Average results show that defined outcome ETFs do what they claim, but variation across specific outcomes shows they have embedded timing risk.

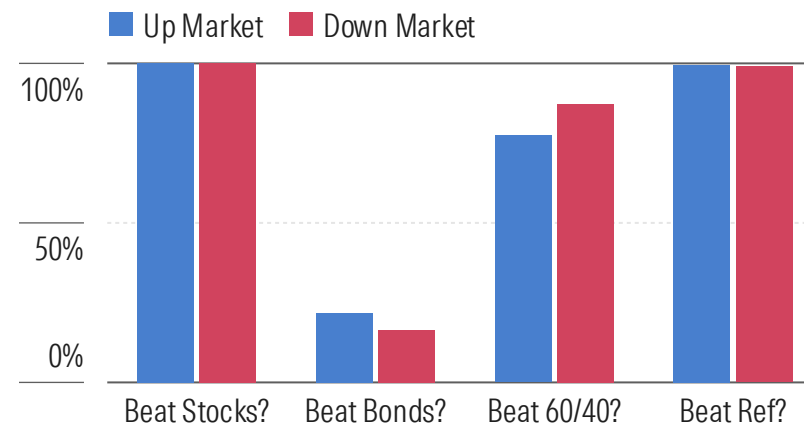
Total Return Success Rate



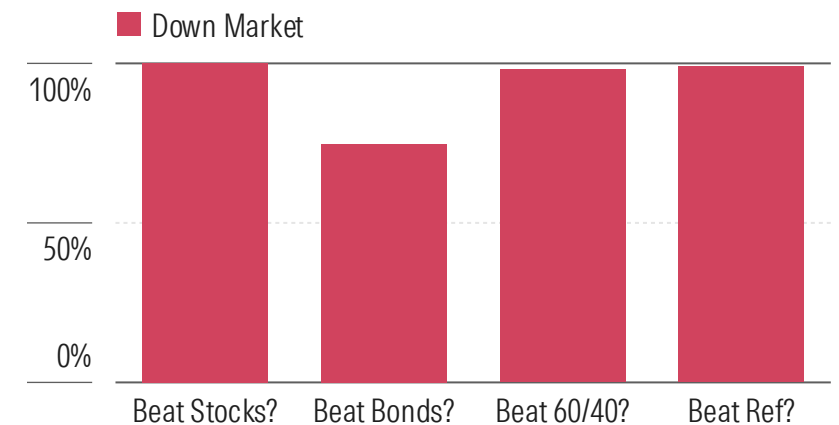
Risk-Adjusted Return Success Rate



Lower Volatility Success Rate



Max Drawdown Success Rate



Source: Morningstar. Data as of Dec. 31, 2025. Defined outcome ETFs with a standard buffer structure pegged to an equity index or equivalent are tested against their respective reference asset's index equivalent, "Ref"; Morningstar US Market index, "Stocks"; Morningstar US Core Bond index, "Bonds"; and a 60/40 mix of the two indexes, "60/40." Success rates measure the percentage of defined outcome ETFs that did better than each comparator for its 12 most recent 12-month periods when the Morningstar US Market Index was positive (2025, "up market") and negative (2022, "down market").

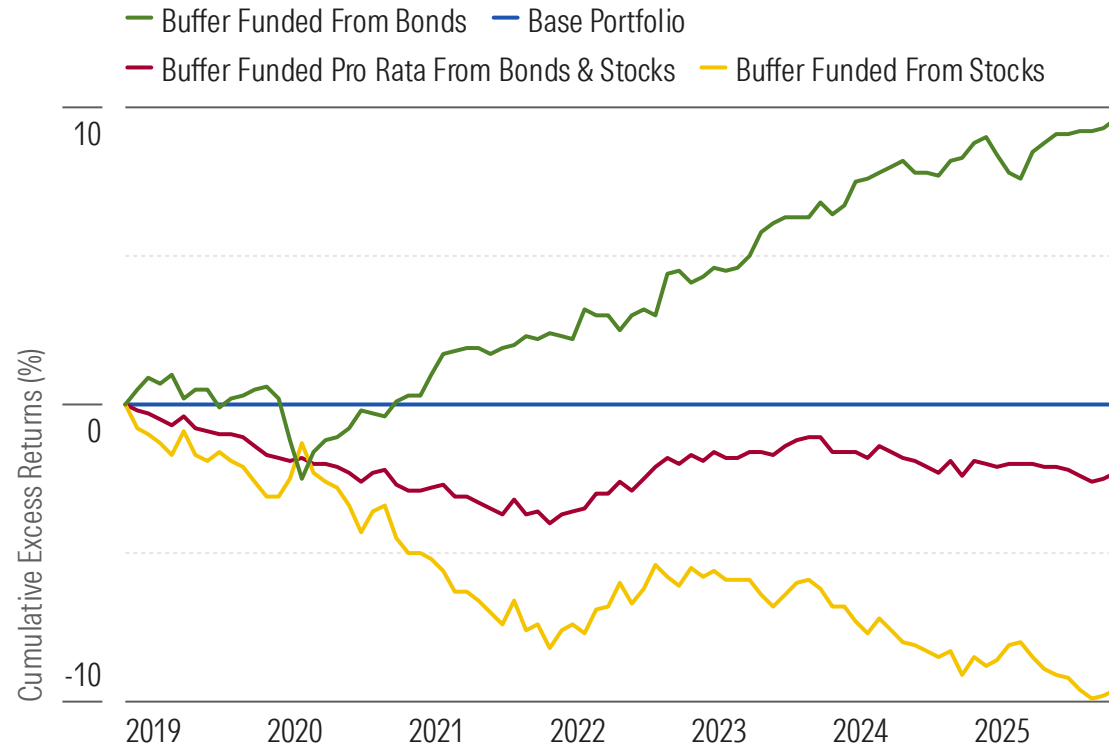
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Implementing Defined Outcome ETFs

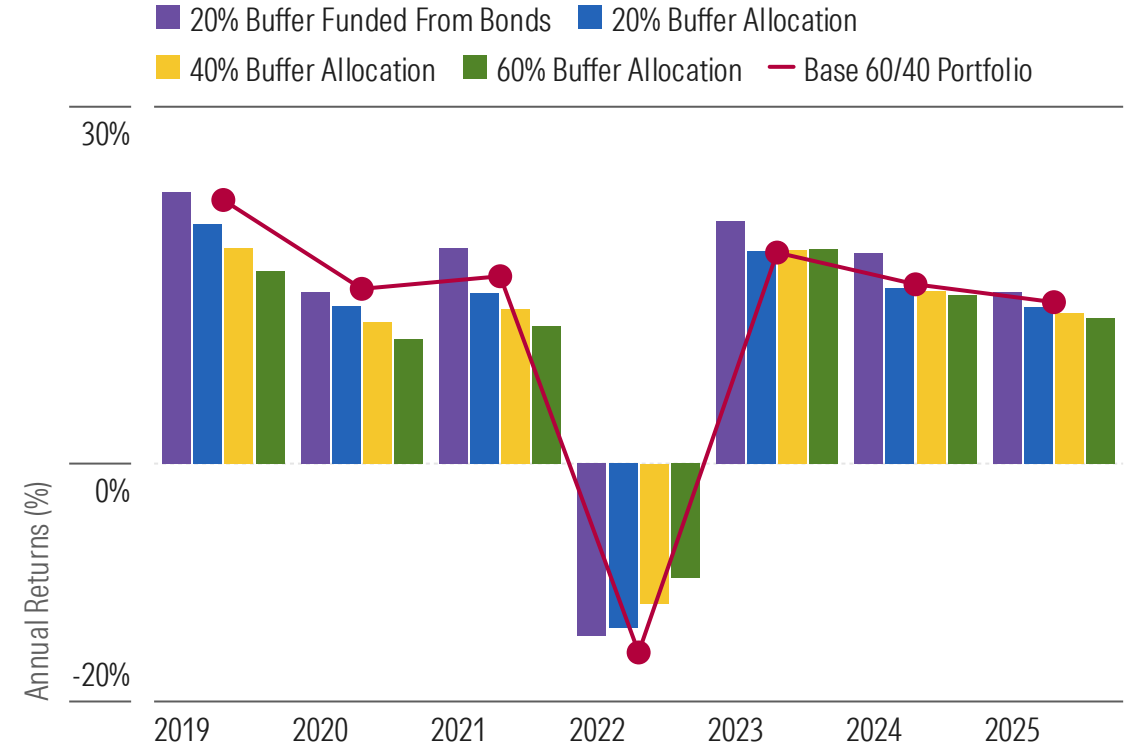
Trading Upside for Downside Protection

Defined outcome ETF investors pay for downside protection with return potential, in addition to their annual fee. Those with longer investment horizons should likely avoid a strategic allocation to a buffer ETF because of this forgone upside. While they have performed well in stress periods like 2022, defined outcome ETFs are best used as a short-term tool for risk-averse investors or those with short investment horizons.

Reallocating From Stocks to Buffers Dents Returns in Up Markets



Higher Buffer Allocations Reduce Both Upside and Downside



Source: Morningstar Direct. Data as of Dec. 31, 2025. Innovator US Equity Power Buffer ETF PJAN used as a defined outcome ETF proxy. Exhibit on the right displays a buffer allocation funded pro rata from stock and bond sleeves unless stated otherwise.

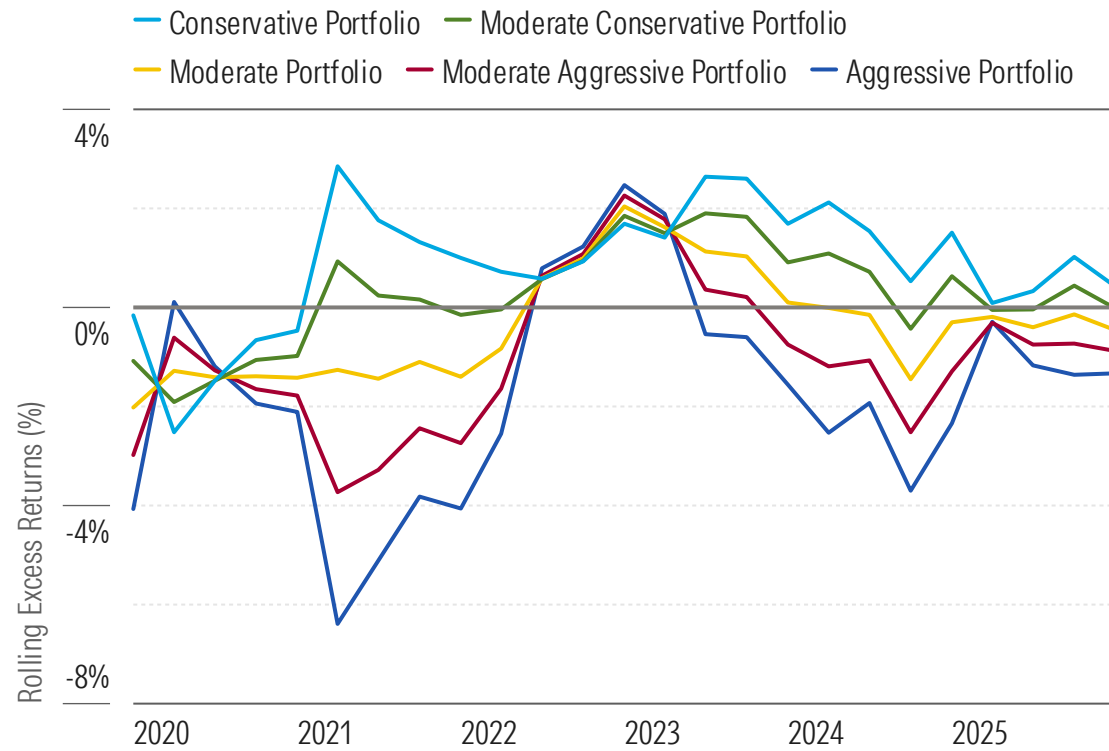
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Diversifying Conservative Portfolios

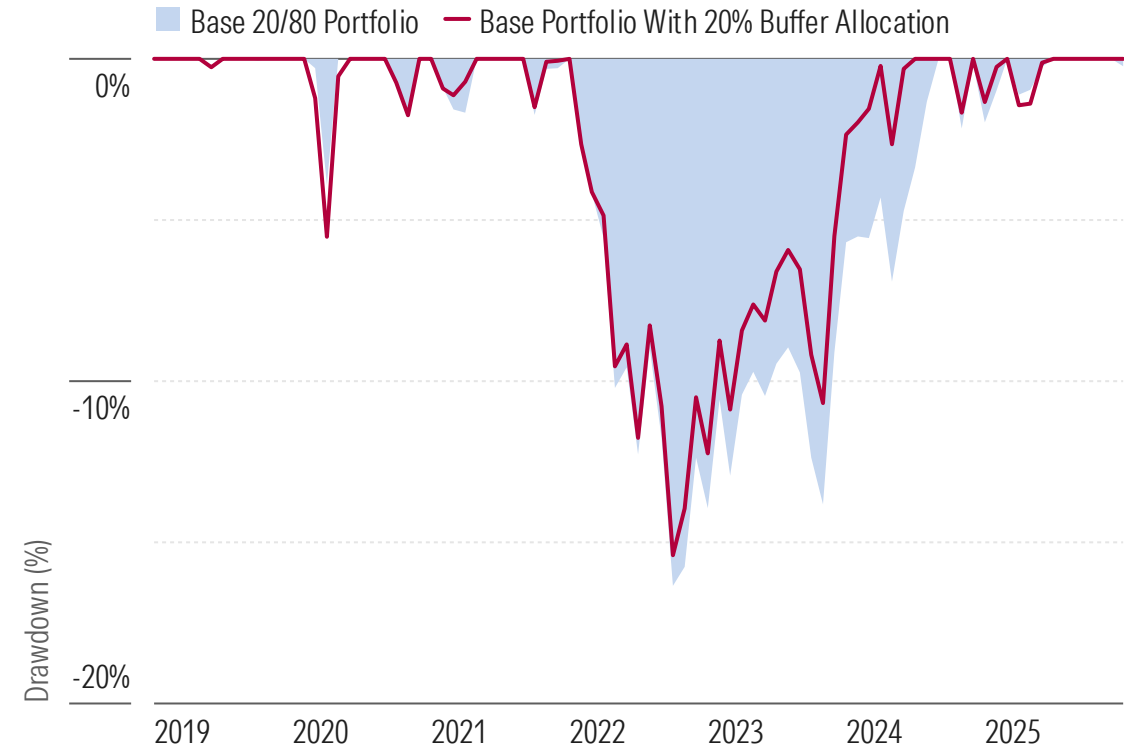
While defined outcome ETFs do little for stock-heavy portfolios, they can deliver some upside while also protecting against losses for those with short investment horizons. Defined outcome ETFs move with the stock market throughout an outcome period, but their lower equity correlation should still limit drawdowns. Over the past few years, adding a standard buffer ETF to a conservative portfolio (80% bonds) delivered greater upside than the base allocation without sacrificing much protection during significant drawdowns.

Defined Outcome ETFs Can Diversify a Bond-Heavy Allocation

20% buffer allocation to different stock/bond combinations.



Defined Outcome ETFs Still Help Protect Downside



Source: Morningstar Direct. Data as of Dec. 31, 2025. Excess returns calculated against respective base allocations without buffer ETF, 12 months rolling three months forward. Innovator US Equity Power Buffer ETF PJAN used as a standard buffer ETF proxy.

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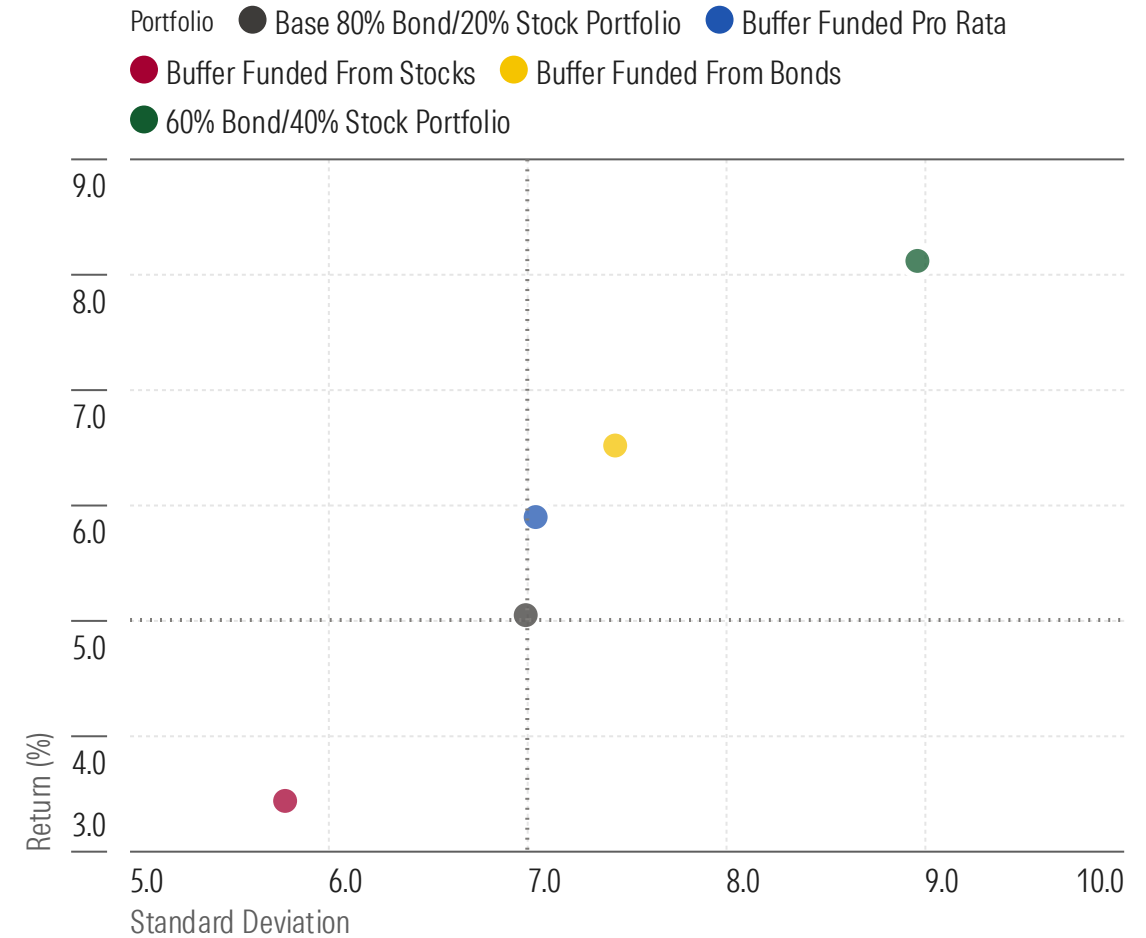
How to Fund a Defined Outcome Allocation

Defined outcome ETFs can look appealing when the correlation between stocks and bonds rises, like it did in 2022. Their buffer kicks in when stocks lose value, independent of the returns of other asset classes. This distinct outcome profile can add another source of diversification to a traditional stock/bond portfolio. But how should investors make space for them?

This exhibit shows that funding defined outcome ETFs from a stock sleeve severely dents upside potential. But swapping a portion of bonds for these ETFs can jeopardize the bond sleeve's hedging abilities during extreme downturns. While they provide a slight cushion during drawdowns, defined outcome ETFs still fall alongside their underlying index past the stated buffer level. For example, a 10% standard buffer ETF would still lose more than 10% during the S&P 500's sudden fall in March 2020. The upside potential from replacing bonds with defined outcome ETFs may be tempting, but it undermines the downside protection they promise in the first place.

The goldilocks funding source may be a pro rata allocation from both sleeves that balances upside capture and downside protection. This gives investors the peace of mind they signed up for without sacrificing too much upside. Investors can expect lower volatility and better performance in extreme drawdowns compared with the baseline stock/bond allocation.

A Pro Rata Allocation Balances Risk and Reward



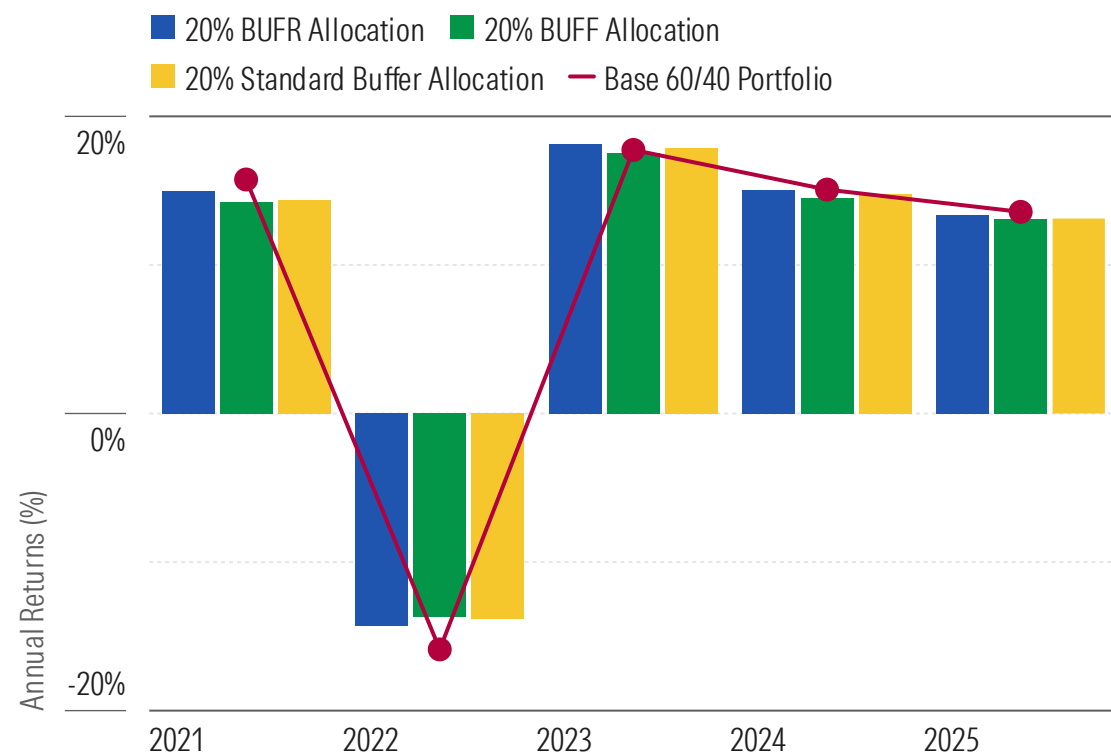
Source: Morningstar Direct. Time Period: Jan. 1, 2019, to Dec. 31, 2025. Innovator US Equity Power Buffer ETF PJAN used as defined outcome ETF proxy. The exhibit displays a 20% allocation to a standard buffer ETF within an 80/20 portfolio.

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Laddered ETFs Ease Implementation

Timing risk is a concern for defined outcome ETFs because of their rigid outcome structure. Laddered ETFs attempt to solve that problem. They stagger monthly standard buffer ETFs to eliminate the timing risk of a poor outcome for a single vintage and reduce the need to closely follow an outcome period. This simplifies the rebalancing process for advisors and makes implementation relatively easy, especially in model portfolios. Performance does not differ dramatically from the individual vintages, but they tend to smooth out returns.

Laddered ETFs Can Improve Flexibility



Largest Laddered Defined Outcome ETFs

Name	Ticker	Inception Date	Annual Fee (%)	Approximate Buffer Range (%)
AllianzIM Buffer15 Uncapped Allc ETF	SPBU	3/5/2025	0.79	15.00
Calamos Laddered S&P 500 Str Alt Prt ETF	CPSL	9/9/2024	0.79	100.00
FT Vest Laddered Buffer ETF	BUFR	8/10/2020	0.95	10.00
Innovator Laddered Allc Pwr Bfr ETF	BUFF	7/17/2020*	0.89	15.00
Innovator Laddered Allocation Buffer ETF	BUFB	2/8/2022	0.89	9.00
PGIM Laddered S&P 500 Buffer 12 ETF	BUFP	6/11/2024	0.50	12.00

Source: Morningstar Direct. Data as of Dec. 31, 2025. Laddered ETF allocation funded pro rata from both stock and bond sleeve. *Innovator Laddered Allocation Buffer ETF BUFB followed another strategy before July 17, 2020.

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Looking Ahead

Assessing Merit and Use Cases

Defined outcome ETFs are not for everyone. For the right investor in the right circumstance, defined outcome ETFs can be an effective tool to control risk. Other investors may want to stay away. The following framework summarizes the trade-offs to consider:

Pros:

- Explicit and reliable risk control if the outcome period is followed.
- Known outcomes help risk-averse investors stick to their investment plans.
- Investors with short time horizons benefit from equity exposure with guardrails.
- A variety of defined outcome types allows advisors to tailor an investment to an investor's specific risk tolerance.

Cons:

- High opportunity cost, especially in the long run.
- Expensive: Defined outcome ETFs charge 0.75% annually, on average.
- Large swings in market volatility and interest rates can affect cap levels.
- The defined outcome mechanism is restrictive for most ETFs. An outcome is only assured if the ETF is purchased at the beginning of the period and held to the end.

Alternative outcome structures, like ladders or the introduction of shorter outcome periods, ease some of these drawbacks and are gaining traction. Laddered ETFs are a hands-off approach to get most of the defined outcome experience without the implementation constraints. However, investors pay for that flexibility, and many laddered ETFs charge at least 0.80% annually.

Whom Do Defined Outcome ETFs Fit Best?

Consideration	Worse Fit	Better Fit
Investor Risk Tolerance	Not Risk Averse	Very Risk Averse
Investor Age	Younger	Older
Investment Horizon	Long	Short

Common Defined Outcome ETF Use Cases

Use Case	Merit
Protect for imminent retirement	Good
Protect for approaching retirement	Moderate
Protect for distant retirement	Bad
In retirement (need income)	Bad
In retirement (don't need income)	Moderate
Imminent large purchase	Good
Derisk stock exposure	Moderate

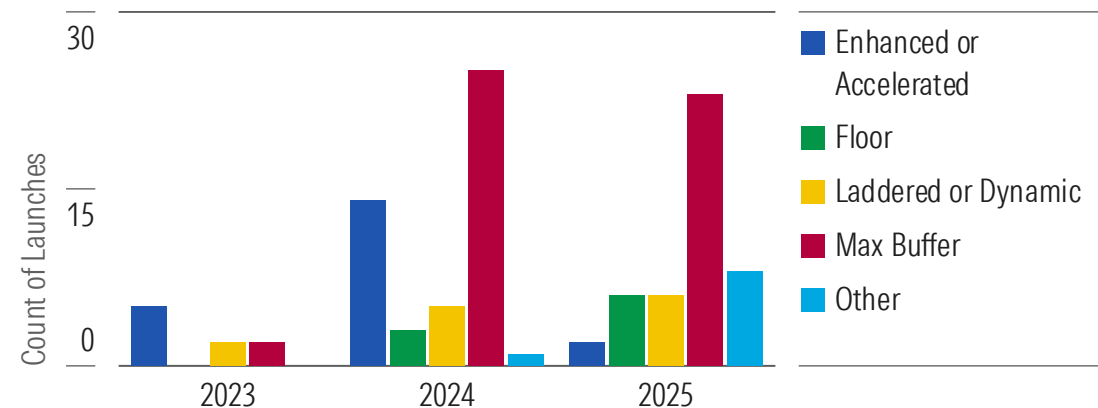
What's Next for Defined Outcome ETFs

Defined outcome ETFs have moved past standard buffer ETFs to different outcomes that deliver distinct performance patterns. Different doesn't necessarily mean better, but that hasn't stopped issuers from launching a variety of new structures over the past three years. We expect that trend to continue.

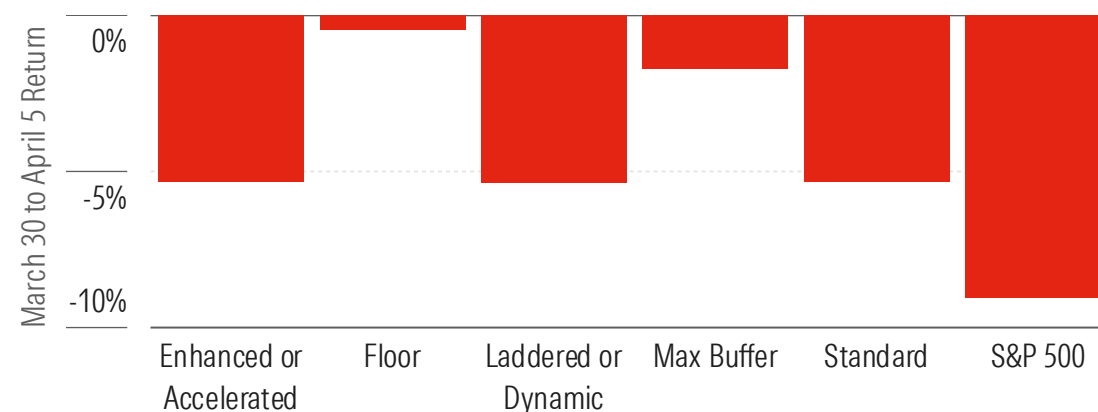
New ETFs might not have a set outcome period. Others might not have an explicit buffer or cap. Further developments may create defined outcome ETFs that can occupy a larger portion of an investor's portfolio without the need to buy or sell on a specific date to achieve the advertised result. This rigidity has been a limiting factor in wider adoption, so ETF providers are eager to find a solution. Investors appreciate flexibility, and more-flexible products that still deliver some definition are gaining traction.

Regardless of structure, predictability is the main selling point for defined outcome ETFs. The week surrounding so-called "Liberation Day" in April 2025 provided a key test for the various outcome structures. Most passed. All did better than the S&P 500 index, on average. In many regards, the results were predictable depending on the structure used. Investors should continue to prioritize predictable defined outcome ETFs that they are confident will behave as expected, especially when markets get choppy.

Novel Defined Outcome ETF Launches



Average Return During April 2025 Drawdown



Provider Profiles

First Trust

Defined Outcome ETF AUM (USD Mil)

\$39,551.25

Defined Outcome Average Fee

0.88%

Index-Equivalent Exposure (count)

S&P 500 (76)

Nasdaq 100 (13)

MSCI EAFE (5)

Russell 2000 (5)

MSCI Emerging Markets (4)

S&P 500 Equal Weight (4)

Bitcoin (2)

Gold (1)

Outcome Structures

Standard Buffer (67)

Max Buffer* (12)

Enhanced or Accelerated (12)

Laddered or Dynamic (10)

Buffer and Income (4)

Floor (2)

Other (3)

Buffer and Floor Levels

First 10% (23)

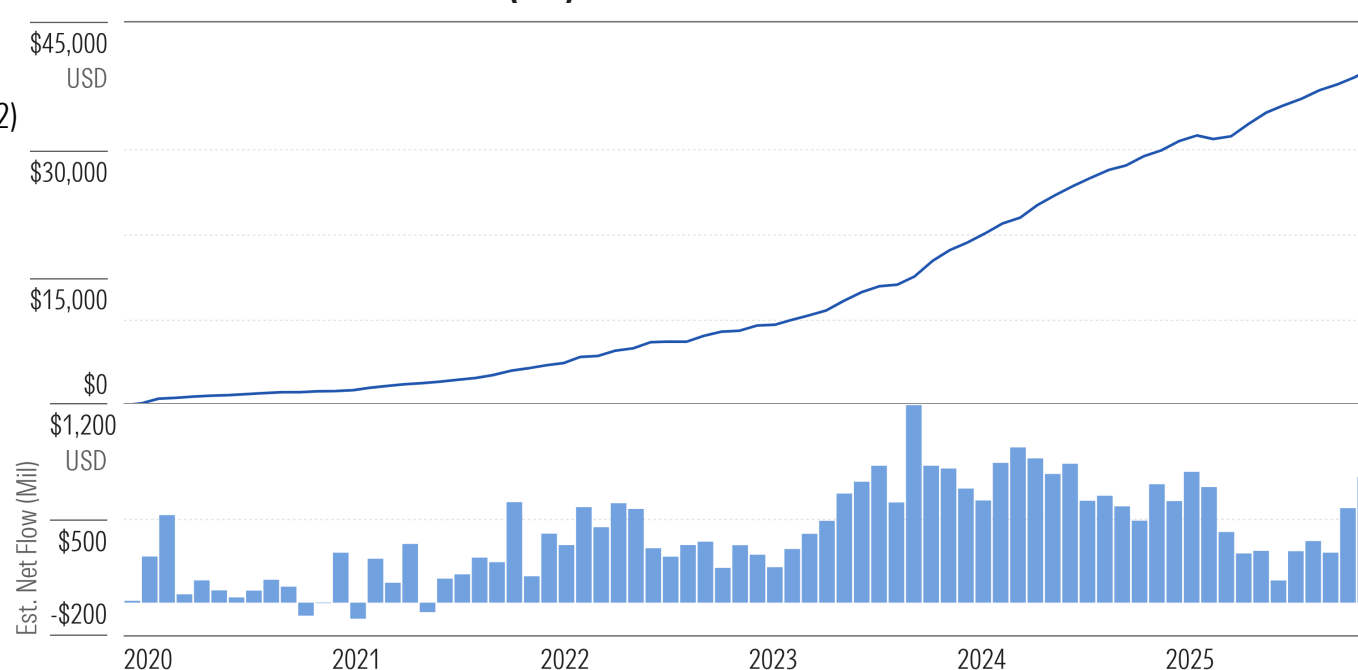
First 15% (22)

100% Buffer (13)

5% to 30% (13)

Other (39)

Defined Outcome ETF Net Assets (Mil)



Largest Defined Outcome ETFs	AUM (USD Mil)	Annual Fee	Description
FT Vest Laddered Buffer ETF BUFF	\$8,374.26	0.95%	Laddered, ongoing 10% buffer, linked to SPDR S&P 500 ETF Trust SPY
FT Vest Laddered Deep Buffer ETF BUFD	\$1,627.39	0.95%	Laddered, ongoing 5% to 30% buffer, linked to SPDR S&P 500 ETF Trust SPY
FT Vest US Equity Buffer ETF Dec FDEC	\$1,232.52	0.85%	Standard, annual 10% buffer, linked to SPDR S&P 500 ETF Trust SPY
FT Vest US Equity Buffer ETF Jul FJUL	\$1,175.64	0.85%	Standard, annual 10% buffer, linked to SPDR S&P 500 ETF Trust SPY
FT Vest US Equity Buffer ETF Aug FAUG	\$1,141.90	0.85%	Standard, annual 10% buffer, linked to SPDR S&P 500 ETF Trust SPY

Source: Morningstar, First Trust. Data as of Dec. 31, 2025. *If an upside cap of 7% is not possible with 100% downside protection, max buffer ETFs will reduce downside protection incrementally.

See Important Disclosures at the end of this report.

Innovator*

Defined Outcome ETF AUM (USD Mil)

\$27,510.32

Defined Outcome Average Fee

0.80%

Index-Equivalent Exposure (count)

S&P 500 (87)

Nasdaq 100 (14)

MSCI EAFE (13)

Russell 2000 (13)

MSCI Emerging Markets (5)

20+ Year Treasury Bonds (2)

Bitcoin (1)

Outcome Structures

Standard Buffer (84)

Max Buffer (22)

Buffer and Income (4)

Enhanced or Accelerated (4)

Laddered or Dynamic (3)

Floor (2)

Other (16)

Buffer and Floor Levels

First 15% (64)

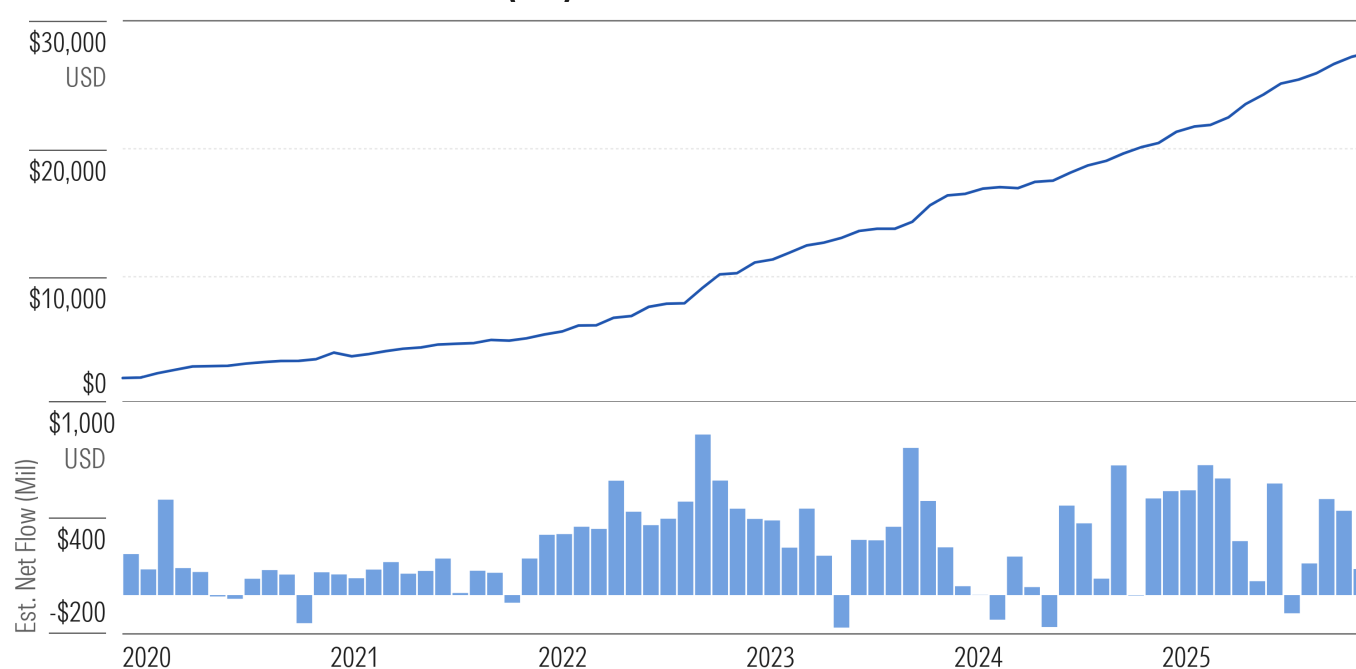
100% Buffer (23)

First 9% (19)

5% to 35% (12)

Other (17)

Defined Outcome ETF Net Assets (Mil)



Largest Defined Outcome ETFs	AUM (USD Mil)	Annual Fee	Description
Innovator Defined Wealth Shield ETF BALT	\$2,194.27	0.69%	Standard, quarterly 20% buffer, linked to SPDR S&P 500 ETF Trust SPY
Innovator US Equity Power Buffer ETF Jan PJAN	\$1,182.21	0.79%	Standard, annual 15% buffer, linked to SPDR S&P 500 ETF Trust SPY
Innovator US Equity Power Buffer ETF Oct POCT	\$1,119.64	0.79%	Standard, annual 15% buffer, linked to SPDR S&P 500 ETF Trust SPY
Innovator US Equity Power Buffer ETF July PJUL	\$1,080.25	0.79%	Standard, annual 15% buffer, linked to SPDR S&P 500 ETF Trust SPY
Innovator US Equity Power Buffer ETF Dec PDEC	\$1,028.91	0.79%	Standard, annual 15% buffer, linked to SPDR S&P 500 ETF Trust SPY

Source: Morningstar, Innovator. Data as of Dec. 31, 2025. *On Dec. 1, 2025, Goldman Sachs agreed to acquire Innovator. The transaction is expected to close in second-quarter 2026. [Press release.](#)

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Allianz

Defined Outcome ETF AUM (USD Mil)

\$4,959.15

Defined Outcome Average Fee

0.74%

Index-Equivalent Exposure (count)

S&P 500 (49)

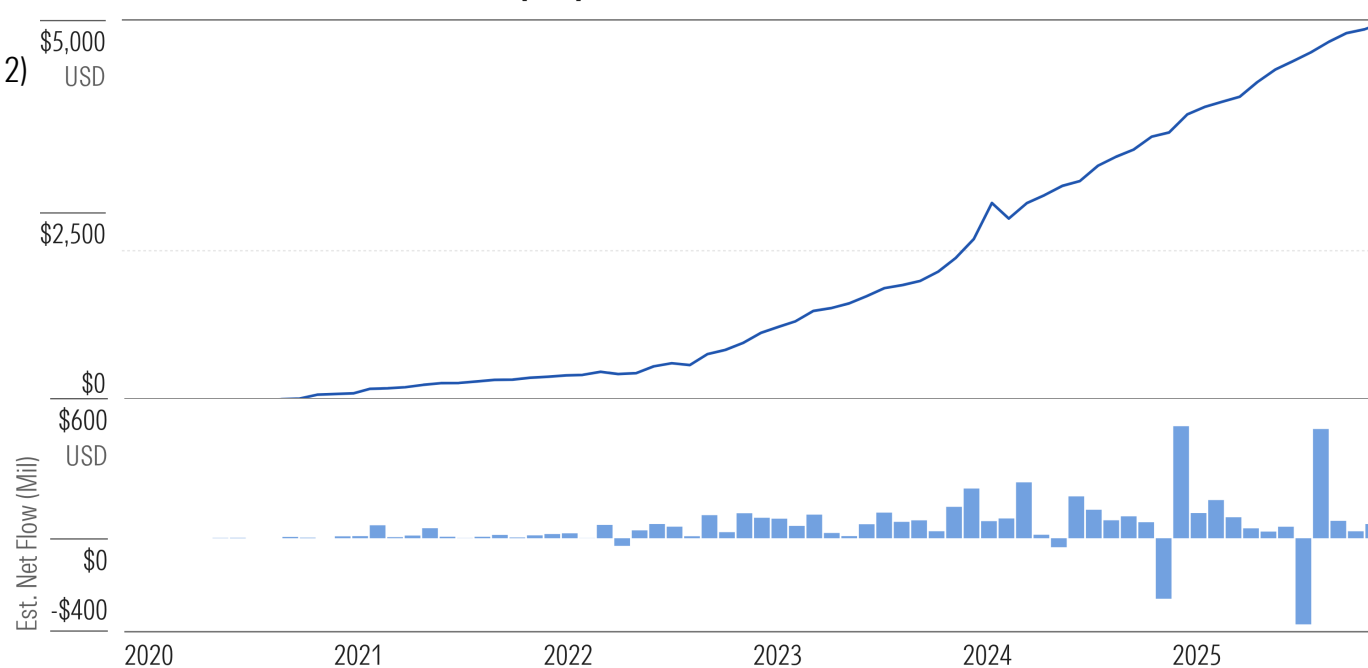
Outcome Structures

- Standard Buffer (31)
- Enhanced or Accelerated (12)
- Laddered or Dynamic (3)
- Floor (2)
- Max Buffer (1)

Buffer and Floor Levels

- First 10% (19)
- First 15% (14)
- First 20% (12)
- Max 5% (2)
- 100% Buffer (1)

Defined Outcome ETF Net Assets (Mil)



Largest Defined Outcome ETFs	AUM (USD Mil)	Annual Fee	Description
AllianzIM US Equity Buffer20 Oct ETF OCTW	\$540.33	0.74%	Standard, quarterly 20% buffer, linked to SPDR S&P 500 ETF Trust SPY
AllianzIM US Equity 6M Bfr10 Apr/Oct ETF SIXO	\$409.38	0.74%	Standard, biannual 10% buffer, linked to SPDR S&P 500 ETF Trust SPY
AllianzIM US Equity Buffer20 Jul ETF JULW	\$305.09	0.74%	Standard, annual 20% buffer, linked to SPDR S&P 500 ETF Trust SPY
AllianzIM US Equity Buffer20 Jan ETF JANW	\$294.07	0.74%	Standard, annual 20% buffer, linked to SPDR S&P 500 ETF Trust SPY
AllianzIM U.S. Equity Buffer15 UncDecETF DECU	\$281.76	0.74%	Standard, annual 15% buffer, linked to SPDR S&P 500 ETF Trust SPY

AllianceBernstein

Defined Outcome ETF AUM (USD Mil)

\$1,359.65

Defined Outcome Average Fee

0.69%

Index-Equivalent Exposure (count)

S&P 500 (2)

MSCI EAFE (1)

Outcome Structures

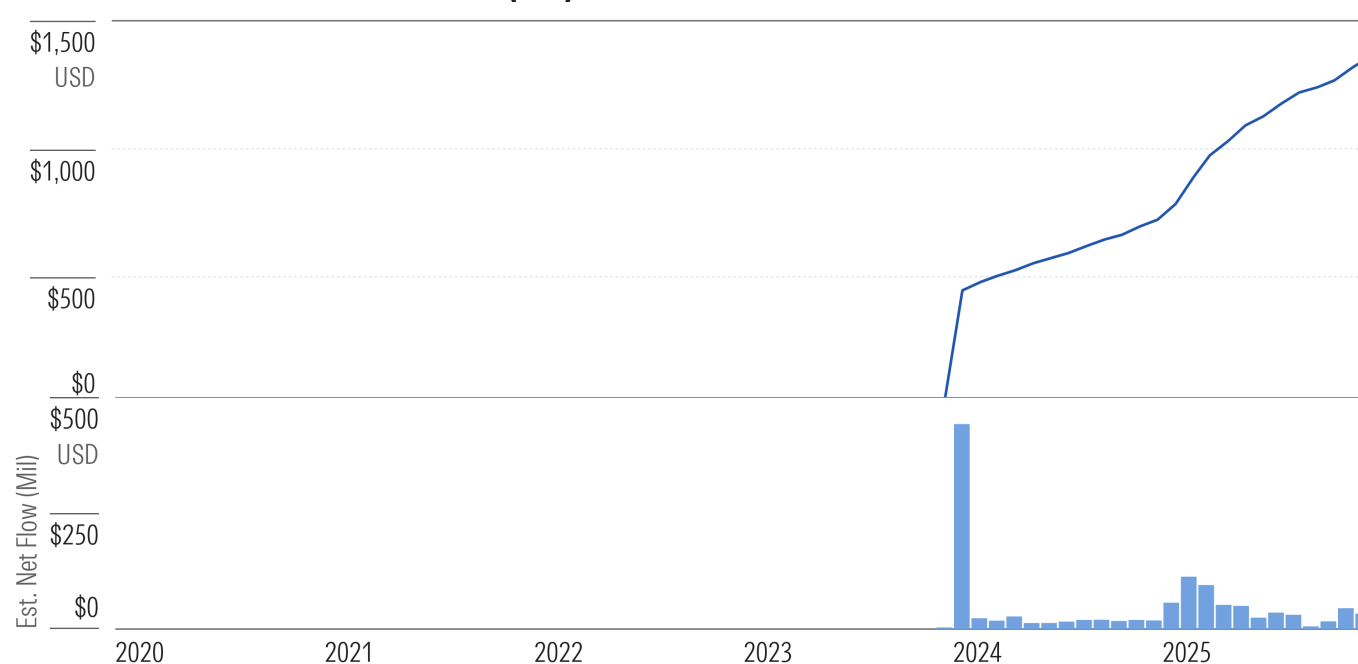
Standard Buffer (3)

Buffer and Floor Levels

First 10% (2)

First 15% (1)

Defined Outcome ETF Net Assets (Mil)



Largest Defined Outcome ETFs	AUM (USD Mil)	Annual Fee	Description
AB Conservative Buffer ETF BUFC	\$998.48	0.69%	Standard, quarterly 10% buffer, linked to SPDR S&P 500 ETF Trust SPY
AB Moderate Buffer ETF BUFM	\$284.07	0.69%	Standard, quarterly 15% buffer, linked to SPDR S&P 500 ETF Trust SPY
AB International Buffer BUFI	\$77.10	0.69%	Standard, quarterly 10% buffer, linked to iShares MSCI EAFE ETF EFA

Pacer

Defined Outcome ETF AUM (USD Mil)

\$1,240.24

Defined Outcome Average Fee

0.61%

Index-Equivalent Exposure (count)

S&P 500 (13)

Outcome Structures

Standard Buffer (8)

Max Buffer (4)

Laddered or Dynamic (1)

Buffer and Floor Levels

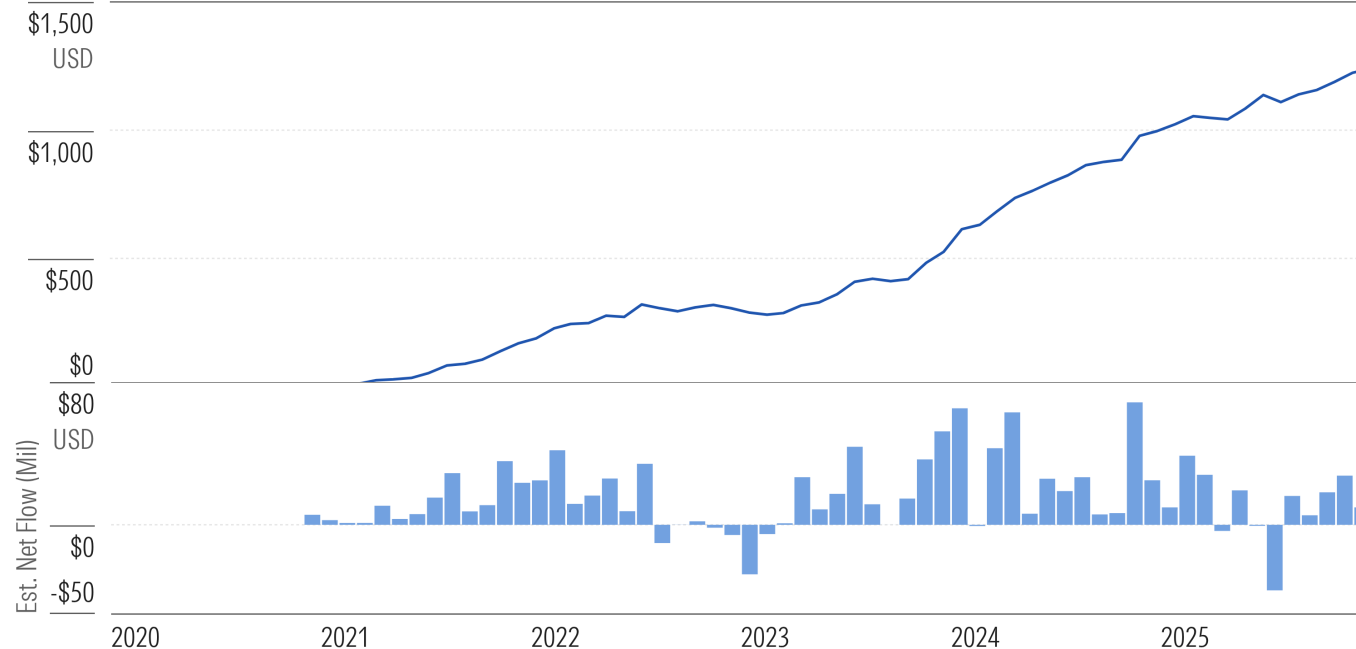
5% to 30% (4)

First 15% (4)

First 20% (4)

Other (1)

Defined Outcome ETF Net Assets (Mil)



Largest Defined Outcome ETFs	AUM (USD Mil)	Annual Fee	Description
Pacer Swan SOS Fund of Funds ETF PSFF	\$545.39	0.75%	Laddered, ongoing buffer, linked to SPDR S&P 500 ETF Trust SPY
Pacer Swan SOS Moderate (October) ETF PSMO	\$99.19	0.60%	Standard, annual 15% buffer, linked to SPDR S&P 500 ETF Trust SPY
Pacer Swan SOS Moderate (July) ETF PSMJ	\$89.34	0.60%	Standard, annual 15% buffer, linked to SPDR S&P 500 ETF Trust SPY
Pacer Swan SOS Moderate (April) ETF PSMR	\$84.32	0.60%	Standard, annual 15% buffer, linked to SPDR S&P 500 ETF Trust SPY
Pacer Swan SOS Moderate (January) ETF PSMD	\$78.05	0.60%	Standard, annual 15% buffer, linked to SPDR S&P 500 ETF Trust SPY

Source: Morningstar, Pacer. Data as of Dec. 31, 2025.

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BlackRock (iShares)

Defined Outcome ETF AUM (USD Mil)

\$912.03

Defined Outcome Average Fee

0.50%

Index-Equivalent Exposure (count)

S&P 500 (10)

Outcome Structures

Standard Buffer (4)

Max Buffer (4)

Laddered or Dynamic (2)

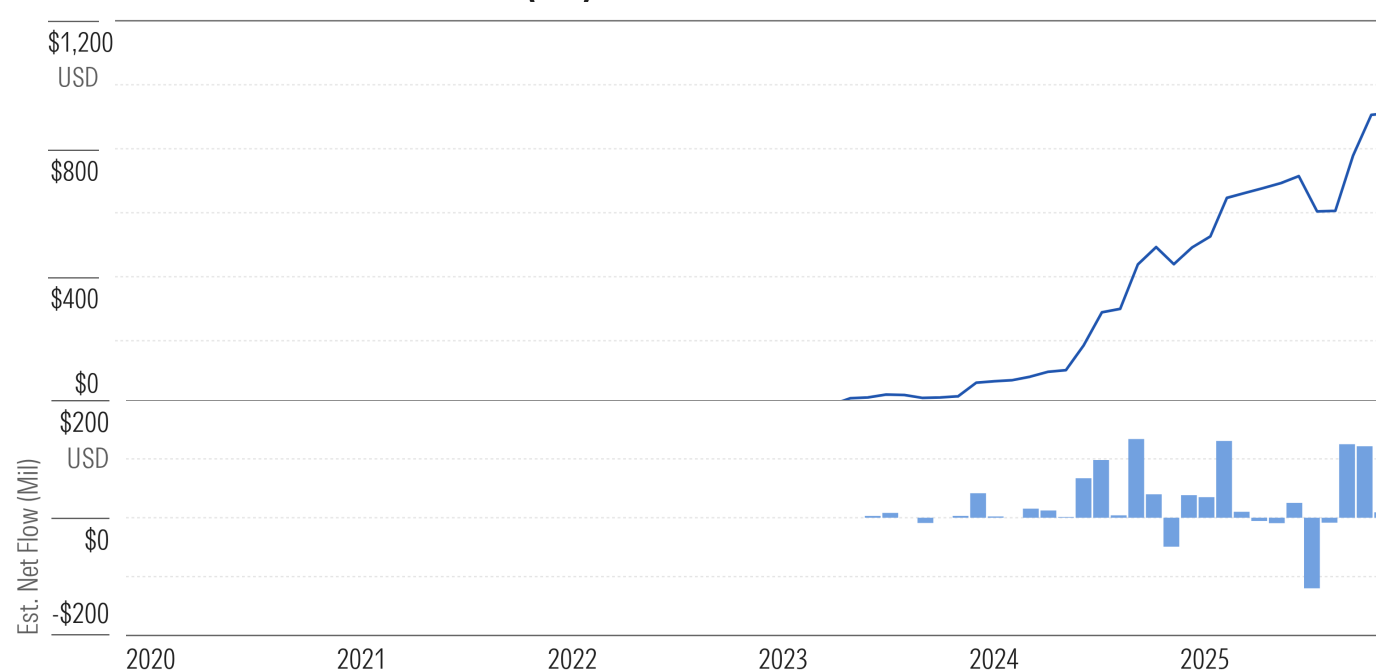
Buffer and Floor Levels

First 10% (4)

100% Buffer (4)

Other (2)

Defined Outcome ETF Net Assets (Mil)



Largest Defined Outcome ETFs	AUM (USD Mil)	Annual Fee	Description
iShares Large Cap 10% Target Buffer Mar ETF TENM	\$184.95	0.50%	Standard, annual 10% buffer*, linked to iShares Core S&P 500 ETF IVV
iShares Large Cap Max Buffer Jun ETF MAXJ	\$160.17	0.50%	Max, annual 100% loss protection gross of fees, linked to iShares Core S&P 500 ETF IVV
iShares Large Cap Moderate Quarterly Laddered ETF IVVM	\$147.32	0.50%	Laddered, ongoing downside protection and cap, linked to iShares Core S&P 500 ETF IVV
iShares Large Cap Deep Quarterly Laddered ETF IVVB	\$129.79	0.50%	Laddered, ongoing downside protection and cap, linked to iShares Core S&P 500 ETF IVV
iShares Large Cap Max Buffer Sep ETF SMAX	\$117.24	0.50%	Max, annual 100% loss protection gross of fees, linked to iShares Core S&P 500 ETF IVV

Source: Morningstar, BlackRock. Data as of Dec. 31, 2025. *Annual outcome period begins on April 1, 2026, currently a modified, shortened outcome period.

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Calamos

Defined Outcome ETF AUM (USD Mil)

\$806.06

Defined Outcome Average Fee

0.69%

Index-Equivalent Exposure (count)

S&P 500 (13)

Bitcoin (9)

Russell 2000 (4)

Nasdaq 100 (4)

Outcome Structures

Max Buffer (24)

Laddered or Dynamic (1)

Floor (5)

Buffer and Floor Levels

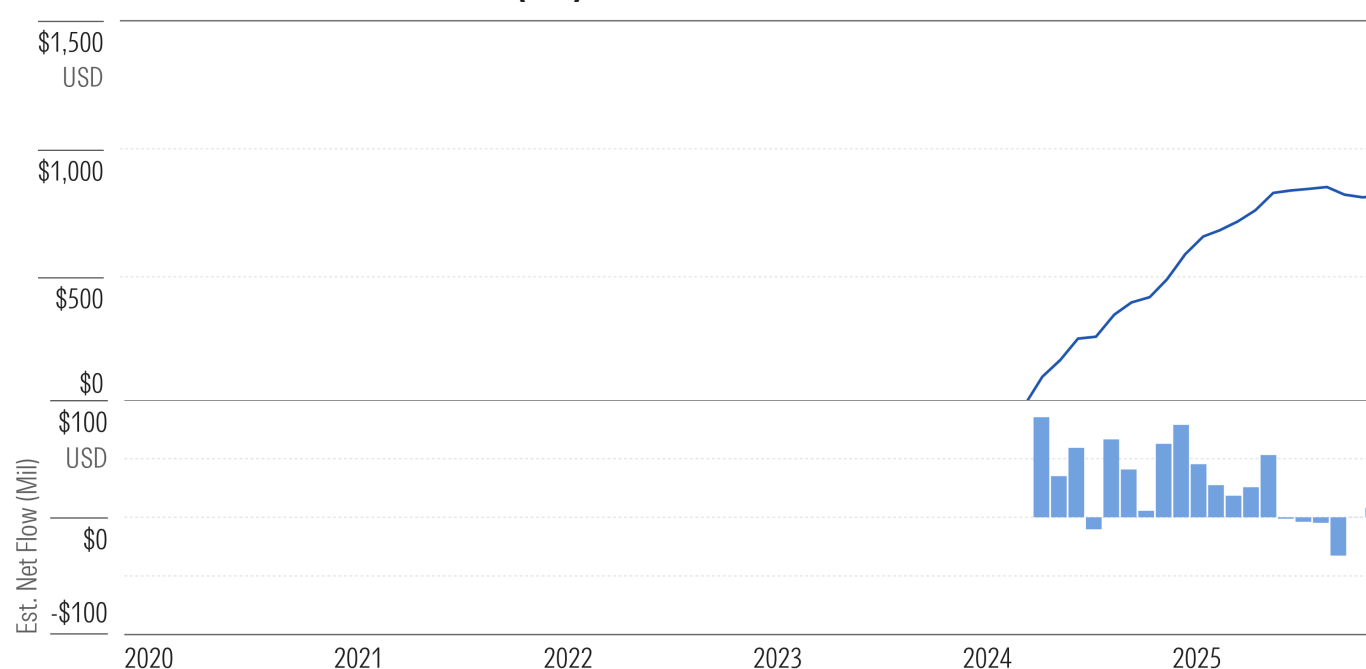
100% Buffer (24)

Max 20% (3)

Max 10% (2)

Other (1)

Defined Outcome ETF Net Assets (Mil)



Largest Defined Outcome ETFs	AUM (USD Mil)	Annual Fee	Description
Calamos Laddered S&P 500 Str Alt Prt ETF CPSL	\$93.20	0.79%	Laddered, ongoing downside protection, linked to SPDR S&P 500 ETF Trust SPY
Calamos S&P 500 Str Alt Prt ETF-May CPSM	\$55.91	0.69%	Max, annual 100% loss protection gross of fees, linked to SPDR S&P 500 ETF Trust SPY
Calamos Russell 2000 Str Alt Prt ETF-Jan CPRY	\$53.95	0.69%	Max, annual 100% loss protection gross of fees, linked to iShares Russell 2000 ETF IWM
Calamos S&P 500 Str Alt Prt ETF-Aug CPSA	\$44.56	0.69%	Max, annual 100% loss protection gross of fees, linked to SPDR S&P 500 ETF Trust SPY
Calamos S&P 500 Str Alt Prt ETF-Dec CPSD	\$43.06	0.69%	Max, annual 100% loss protection gross of fees, linked to SPDR S&P 500 ETF Trust SPY

PGIM

Defined Outcome ETF AUM (USD Mil)

\$793.13

Defined Outcome Average Fee

0.50%

Index-Equivalent Exposure (count)

S&P 500 (38)

Nasdaq 100 (5)

Outcome Structures

Standard Buffer (28)

Max Buffer (12)

Laddered or Dynamic (3)

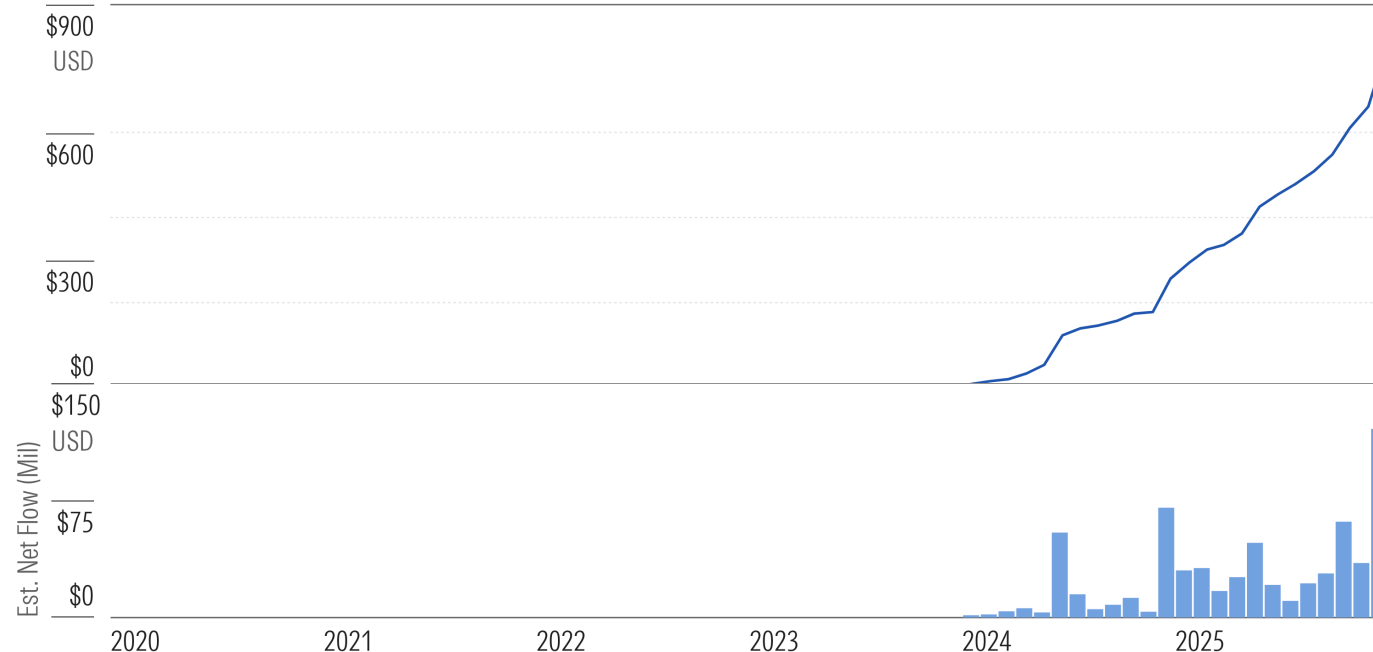
Buffer and Floor Levels

First 12% (18)

First 20% (13)

100% Buffer (12)

Defined Outcome ETF Net Assets (Mil)



Largest Defined Outcome ETFs	AUM (USD Mil)	Annual Fee	Description
PGIM Laddered S&P 500 Buffer 12 ETF BUFP	\$98.73	0.50%	Laddered, ongoing 12% buffer, linked to SPDR S&P 500 ETF Trust SPY
PGIM Laddered S&P 500 Buffer 20 ETF PBFR	\$81.41	0.50%	Laddered, ongoing 20% buffer, linked to SPDR S&P 500 ETF Trust SPY
PGIM S&P 500 Buffer 20 ETF - July PBJL	\$39.83	0.50%	Standard, annual 20% buffer, linked to SPDR S&P 500 ETF Trust SPY
PGIM S&P 500 Buffer 20 ETF - September PBSE	\$34.45	0.50%	Standard, annual 20% buffer, linked to SPDR S&P 500 ETF Trust SPY
PGIM S&P 500 Buffer 20 ETF - October PBOC	\$33.51	0.50%	Standard, annual 20% buffer, linked to SPDR S&P 500 ETF Trust SPY

Appendix A: Defined Outcome ETF Glossary

Defined Outcome ETF Common Terms

- **Buffer:** The level of protection a defined outcome ETF seeks to provide during its outcome period. An ETF with a 10% buffer will protect the first 10% of the index's losses. This percentage is usually quoted before fees. For a fund charging 1% annually, advertising a buffer of 10% annually, the effective buffer is 9%.
- **Cap:** The maximum return an investor can realize in the stated outcome period. This rate is typically quoted before fees. An ETF charging 1% annually with an advertised cap of 10% over a one-year outcome period has an effective 9% annual cap.
- **Reference asset:** The ETF, index, or other investment that underlies a defined outcome ETF. For many, this will be the S&P 500, SPY, or other broad-based indexes or ETFs.
- **Outcome period:** The period that a defined outcome ETF was designed to deliver on its objective. This is closely tied to the duration of the options contracts that are used to build a buffer. Outcome periods are usually one year, but they can vary. An investor must buy and hold the defined outcome ETF for the whole outcome period to realize the stated buffer and cap.
- **Call option:** A call option gives the call buyer the right to buy the underlying ETF or index at a given price (strike price) at a given time. Buying a call option generates upside exposure. A call seller sells the right to buy the underlying asset at a given price. Selling a call option caps investor returns.
- **Put option:** A put option gives the put buyer the right to sell the underlying ETF or index at a given price (strike price) at a given time. Buying a put option generates downside protection. A put seller sells the right to sell the underlying asset at a given price. Selling a put option reengages downside participation.
- **Put spread:** In this context, buying a put spread means buying an at-the-money put option and selling an out-of-the-money put option. A defined outcome ETF with a 10% buffer sells the OTM put 10% below the current level of the index, protecting the first 10% of losses. If the reference asset loses 15% during the outcome period, the ETF will lose 5%, before fees.

Outcome Structure Definitions

- **Standard:** Defined outcome ETFs with a standard buffer structure deliver upside exposure of a reference asset up to a cap, but they protect against a specified portion of reference asset's loss over an outcome period.
- **Buffer & Income:** These ETFs try to deliver a reliable stream of income in addition to a standard buffer that protects against a given portion of a reference asset's loss over a defined period.
- **Max Buffer:** These ETFs provide exposure to a reference asset's upside (up to a cap), but they prevent a net-of-fee loss over an outcome period.
- **Floor:** Floor ETFs deliver upside exposure of a reference asset up to a cap while limiting losses to a specified level over an outcome period. Max buffer ETFs are an example of ETFs with floors because they should not decline over an outcome period, before fees. Other common floor levels are 10% and 20%.
- **Enhanced or Accelerated:** These ETFs aim for leveraged upside exposure of a reference asset, up to a cap, while providing a specified level of downside protection, commonly in the form of a buffer or floor.
- **Laddered or Dynamic:** These ETFs usually don't have a specified outcome period to achieve an advertised outcome. Instead, they combine standard buffer ETFs in a way that provides continuous downside protection and continuous yet limited upside exposure to a reference asset.
- **Other:** ETFs in this classification don't fit neatly into other outcome structure groups, yet they still aim to deliver a specified result for their investors. For example, "dual direction" ETFs don't fit into the other outcome structure groups, but they provide exposure to a reference asset within explicit boundaries over an outcome period.

Appendix B:

Understanding the Buffer Mechanism

How Does a Defined Outcome ETF Work?

A defined outcome ETF with a standard buffer structure owns three layers of options with the same expiration date: a long call to mimic index returns, a put spread to protect against a specific range of loss, and a short call to finance the option structure. Together, and in the example below, these options protect the fund against the first 15% decline of the reference asset while not allowing it to gain more than 15% in the outcome period. Detailed earlier, the upside cap usually increases when interest rates go up or implied volatility increases.

Components of a Standard Buffer

Option Structure	Example (index level = 100)	Purpose
Buy deep in-the-money call	Long call with strike price = 1.	Sythetic exposure to index returns. This call has virtually no risk of expiring worthless, so it moves in lockstep with the index's returns.
Buy at-the-money put	Long put with strike price = 100.	Downside protection. This shields the fund from any losses below current index level.
Sell out-of-the-money put	Short put with strike price = 85	Fund the long put. This exposes the fund to any losses if the index falls below 85, or by 15%.
Sell out-of-the-money call	Short call with strike price > 100	Fund the long put. This caps the fund's upside above the call's strike price. The strike price depends on the pricing of the puts and calls, which moves with interest rates and volatility.

Payout Table of a Standard Buffer ETF Option

Index Value at Expiration	Long Put (Strike Price = 100)	Short Put (Strike Price = 85)	Short Call (Strike Price = 115)	Total Payout	Excess Value vs. Index
130.00	-	-	(10)	120.00	(10)
120.00	-	-	(5)	115.00	(5)
115.00	-	-	-	115.00	-
110.00	-	-	-	110.00	-
100.00	-	-	-	100.00	-
90.00	10	-	-	100.00	10
85.00	15	-	-	100.00	15
80.00	20	(5)	-	95.00	15
70.00	30	(15)	-	85.00	15

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