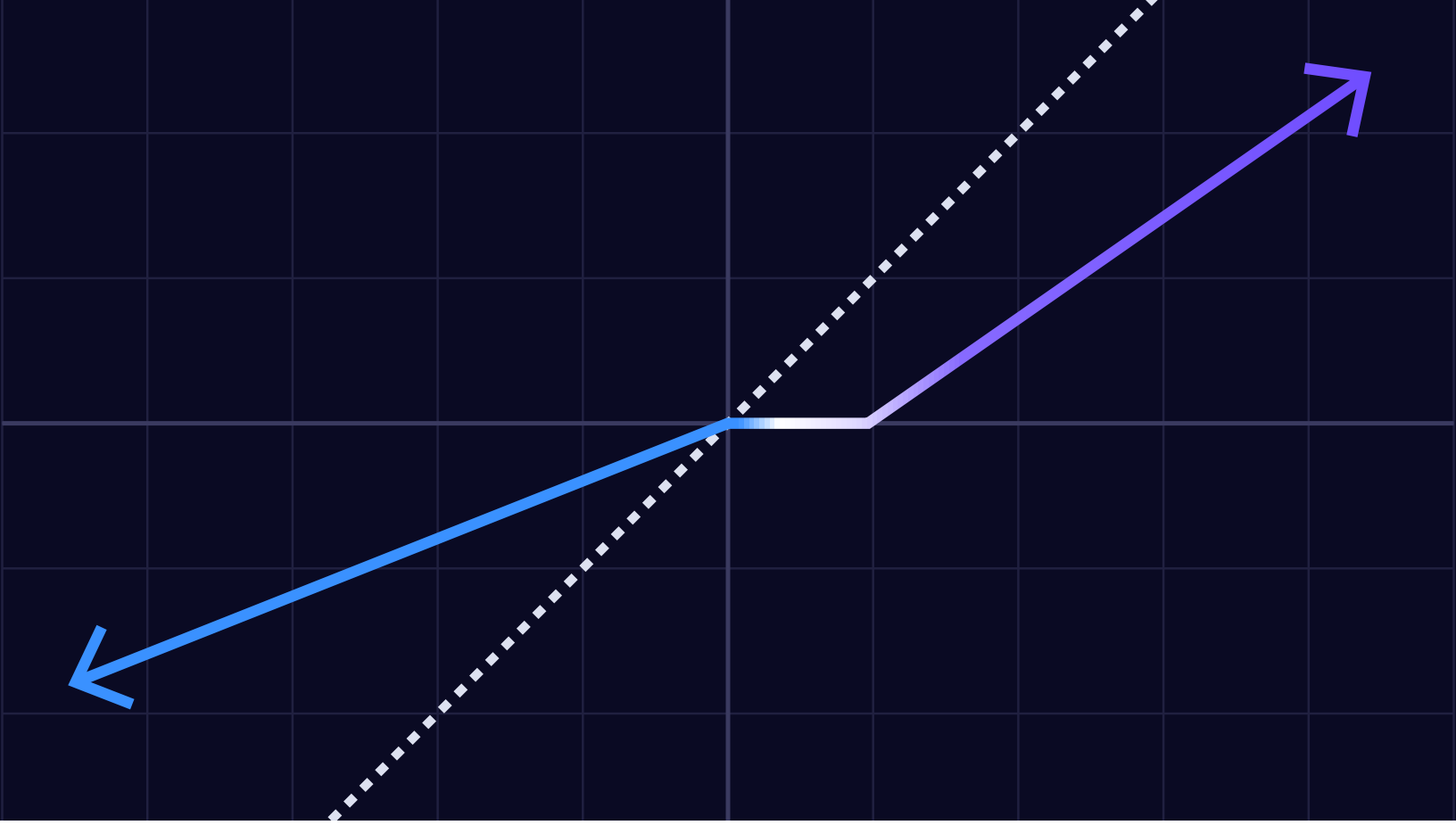

ARK's Defined Innovation Exposure Term ETFs

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Author: Rahul Bhushan,
Global Head of Investment Products

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1.0 Introduction

ARK invests in the future, the technologies and companies that have the potential to transform industries and redefine the global economy. We give investors access to what we believe are the most transformational businesses in the areas of **Artificial Intelligence, Robotics, Energy Storage, Multiomic Sequencing,** and **Blockchain Technology.**

Mindful that some investors might be uncomfortable with the volatility and open-ended return profiles that come with high-growth strategies, we've developed a suite of options-overlay "Defined Outcome" ETFs that provide a more structured way to access disruptive innovation while giving investors greater control over risk and return. By predefining potential outcomes over fixed time horizons, Defined Outcome ETFs offer a flexible toolkit that can be used to tailor exposure according to individual goals, timelines, and risk preferences.

Whether looking to smooth volatility, express a conviction with greater clarity, or simply add more precision to your portfolio, the Defined Outcome ETF is designed to meet investors where they are.Defined outcome ETFs use a combination of option strategies to offer a pre-determined payoff profile over a fixed period. At inception, investors know the maximum downside participation as well as the structure of the upside, typically subject to caps or hurdles. These ETFs are designed for those seeking growth participation with embedded protection.

This white paper is an educational guide and a product explainer. It begins with the fundamentals of options, followed by an introduction to the "Greeks"—the sensitivities that govern options' day-to-day behavior. We then delve into pricing mechanics, hedging behaviors, and the structural realities behind the scenes: how these strategies are built and managed within a live market.

By the end of this paper, investors should understand how options work, how they shape returns within outcome-based funds, how pricing and hedging mechanisms affect net asset values (NAVs), and how to real-world performance in live ETFs should be interpreted.

Along the way, we provide visual aids (e.g., payoff diagrams, Delta curves, hedging flows) to clarify key concepts. We want investors and advisors to evaluate these products with full transparency and the knowledge resources they need to develop confidence.

The final section introduces ARK's Defined Innovation Exposure Term (DIET) Buffer ETFs. We explain the rationale behind the ETFs' structure, how we constructed the option exposures, and what role those exposures are intended to play within a broader portfolio. We believe this new suite of Funds offer a differentiated way to access ARK's thematic exposures while giving investors greater control over outcomes in an increasingly uncertain market environment.

2.0 What Are Options?

Options are financial contracts that derive their value from an underlying asset (like a stock or ETF). They give the holder the **right—though not the obligation—**to buy or sell the underlying asset at a predetermined price on or by a specific date. That predetermined price is known as the **strike price**, and the specific date is the **expiration date** (when the option contract ends).[1]

By using options, investors can tailor payoff profiles—effectively shaping the potential outcomes of an investment. This makes them powerful tools for risk management and strategic positioning.

2.1 Types Of Options: Calls And Puts

Two main types of options should be understood:

- A **call option** gives the holder the right to buy the underlying asset at the strike price. If the market price of the asset rises above the strike, the call becomes valuable, because it allows purchase at below market price. In other words, calls gain value when the underlying asset goes up. *For example, if you own a call option with a $100 strike on a stock that rises to $120, you can buy it for $100 and immediately sell it for $120, netting a $20 gain per share (minus the premium).*
- Conversely, a **put option** gives the holder the right to sell the underlying asset at the strike price; the option gains value if the underlying asset's market price falls below the strike. Puts function as insurance against declines. If the asset drops, the put can be exercised to sell at a higher (strike) price. *For instance, if you hold a put option with a $90 strike and the stock drops to $70, you can still sell it for $90, effectively locking in a $20 gain per share (minus the premium).*

To acquire an option, the buyer pays a **premium** (the option's price) to the seller/writer of the contract. If the option expires worthless (i.e., the right is not advantageous to exercise), the loss to the buyer is limited to that premium, which is the profit earned by the seller.

2.2 Key Option Terms

Let's clarify some other relevant terms:

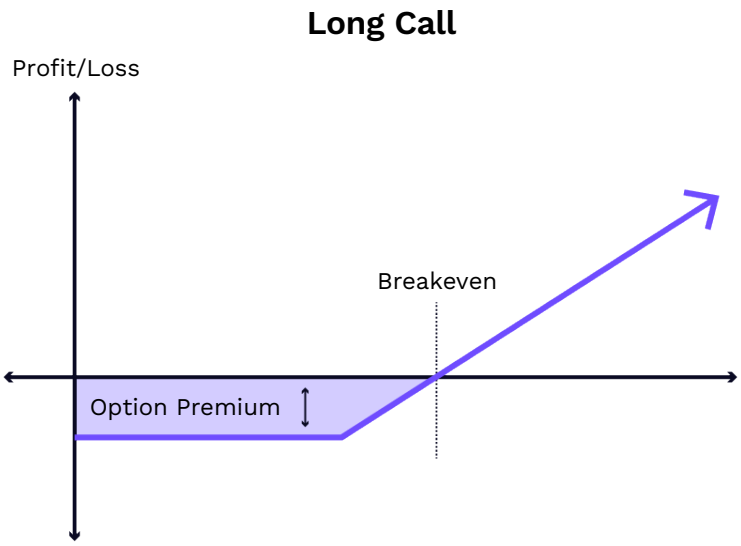
- **Premium:** The price paid by the option buyer to the seller ("writer") for the rights conveyed by the option. This represents the option's current value—the full cost of entering the position.
- **Underlying Asset:** The financial instrument—such as a stock, ETF, or index—upon which the option contract is based.
- **Strike Price:** The agreed-upon price at which the underlying asset can be bought or sold if the option is exercised.
- **Expiration Date:** The date on which the option contract terminates. After that date, the option either is exercised or expires worthless.
- **Long Call:** An options trading strategy where an investor buys a call option, paying a premium for the right, but not the obligation, to buy an underlying asset at a specific price (the strike price) by a certain expiration date.
- **Short Call:** An options trading strategy where an investor sells a call option on a stock, receiving a premium in exchange for the obligation to sell the underlying stock at a specified price (the strike price) to the option buyer, if they choose to exercise it.
- **Long Put:** An options trading strategy where an investor buys a put option, giving them the right, but not the obligation, to sell an underlying asset at a specific price (the strike price) by a certain date (expiration).
- **In the Money (ITM):** An option is *"in the money"* when exercising it would result in a profit. It has intrinsic value. Options can be **ITM**, meaning the underlying price is already beyond the strike: a call is **ITM** when the underlying asset is greater than the strike; a put is **ITM** when the underlying asset is less than the strike. Either way, exercising would yield a profit.
- **Out of the Money (OTM):** An option is *"out of the money"* when exercising it would not be profitable. It has no intrinsic value. **OTM** means the option is not yet profitable to exercise (e.g., a call with strike above the market price, or a put with

strike below market), and **at the money (ATM)** typically refers to strikes roughly equal to the current underlying price.

- **At the Money (ATM):** An option is *"at the money"* when the price of the underlying asset is equal to (or very close to) the strike price. It has little or no intrinsic value but still might carry time value.

2.3 Payoff Profiles

Often visualized as a "hockey stick" curve, each option has a characteristic payoff diagram at expiration, as shown below.

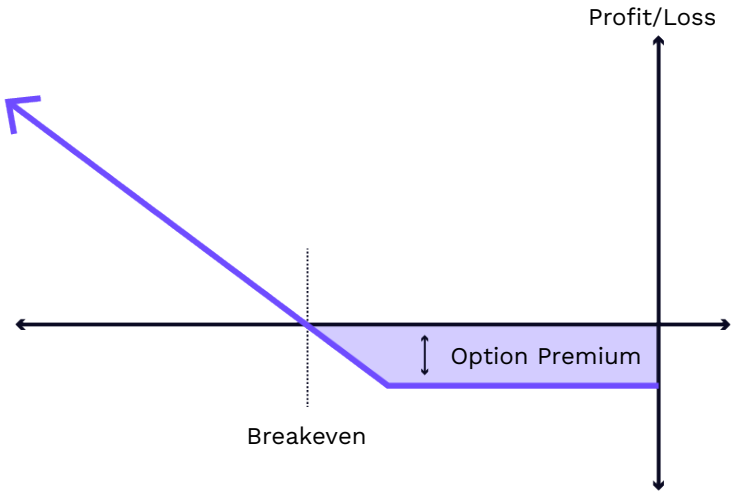


Sources: ARK Investment Management LLC, 2025. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency.

For a long call, the payoff is **zero** (ignoring premium), if the underlying asset finishes below the strike price (the option expires unexercised); then it **increases linearly,** if the underlying ends above the strike (the call is exercised for a profit). A "long call" thus offers **unlimited upside** potential with a fixed downside (the premium paid).

In contrast, a long put's payoff is zero if the underlying asset finishes above the strike (no need to sell below market), and **rises linearly as the underlying falls** below the strike (since the put lets you sell at a higher-than-market price). This asymmetry makes calls useful for participating in upside with limited risk, and it makes puts useful for protecting against downside beyond a known cost.

Long Put



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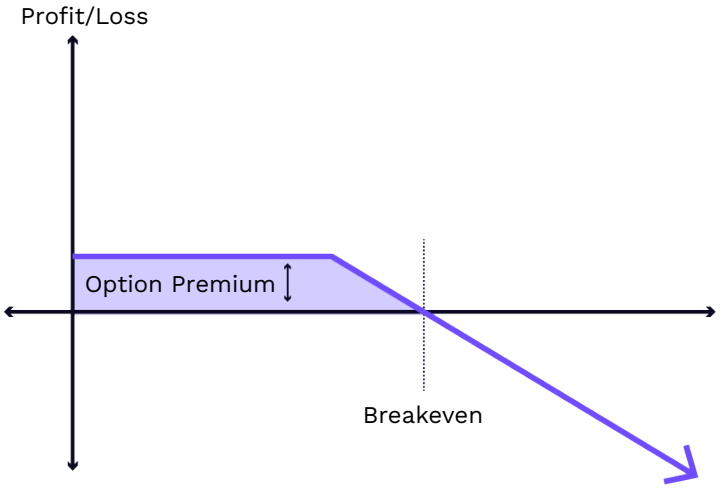
A short call position profits, if the underlying asset remains **below the strike price**; and it loses value, if the price rises above it. While the **premium received upfront** is the **maximum gain**, the potential **loss theoretically is unlimited**, making this a risky standalone strategy. It often is used in combination with other positions to generate income or capital gains.

Short Call



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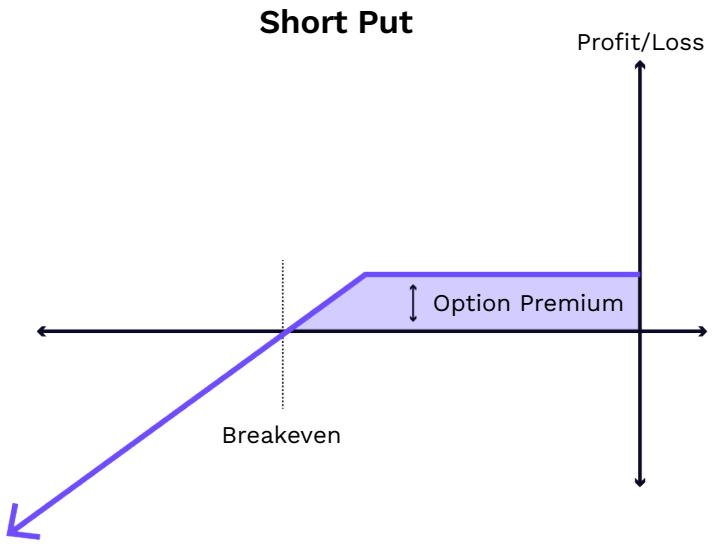
In contrast, selling a put involves a commitment to **buy the underlying asset**, if it drops below the strike price. The short put profits when the underlying stays above the strike, the maximum gain being the **premium received**. That said, the **downside risk increases linearly** as the asset price falls—a **bullish strategy** with significant risk.



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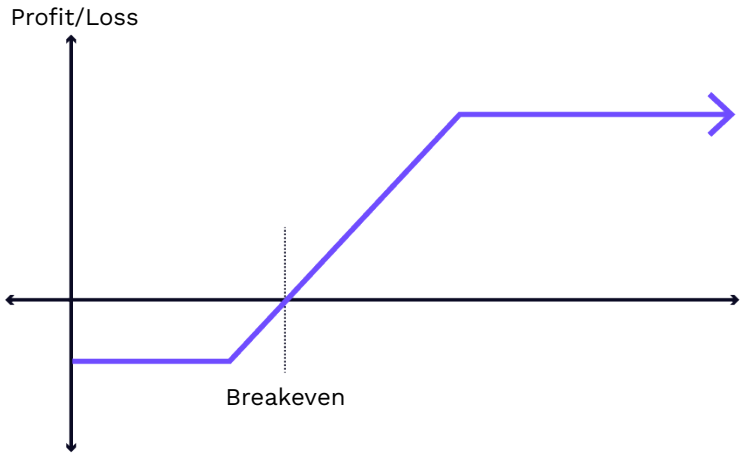
2.4 Option Spreads And Combinations

Beyond single options, investors often **combine multiple option positions** to target a specific outcome or range of outcomes. An **options spread** generally involves **buying and selling multiple options of the same type** (all calls or all puts) on the same underlying asset, with differing strikes and/or expirations. By pairing options, spreads can **limit downside risk while also capping upside potential.**

A simple **bull call spread** involves buying a call at a lower strike and selling a call at a higher strike, creating a strategy that profits if the underlying rises but caps gains at the upper strike, with the maximum profit equal to the difference between the strikes minus the net premium paid.

Call Spread



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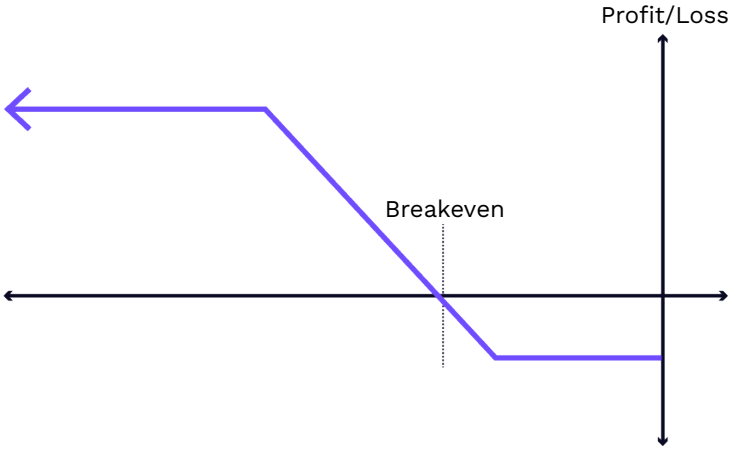
A similar structure can be used to express a bearish view. By buying a higher-strike put and selling a lower-strike put on the same underlying asset and expiration date, an investor profits if the underlying asset declines moderately. The long put provides downside exposure, while the short put reduces the cost of the position but also limits the maximum gain.

Put Spread



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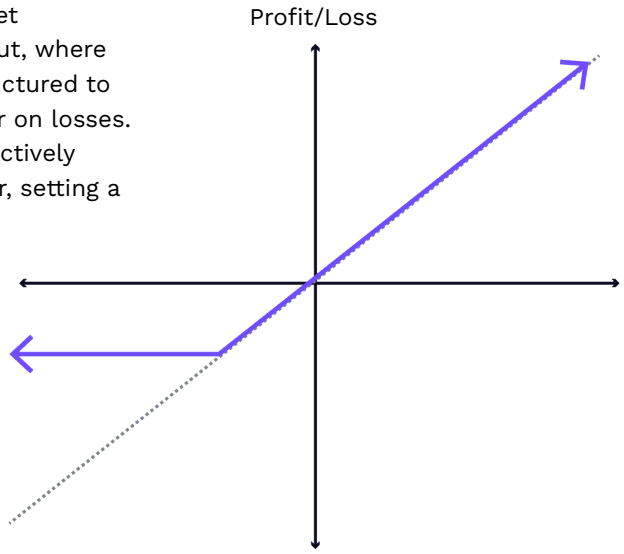
Other combinations focus on hedging. These assume that the investor is holding the underlying asset, which is represented by the diagonal line in the payoff diagram below (i.e., gains and losses move one-for-one with the asset's price). A floor involves owning the asset and buying a protective put, ensuring protection below a certain level. This strategy protects against downside while retaining full upside exposure.

Floor

Own the underlying asset combined with a long put, where the put premium is structured to establish a defined floor on losses. The cost of the put effectively offsets against this floor, setting a maximum loss level.



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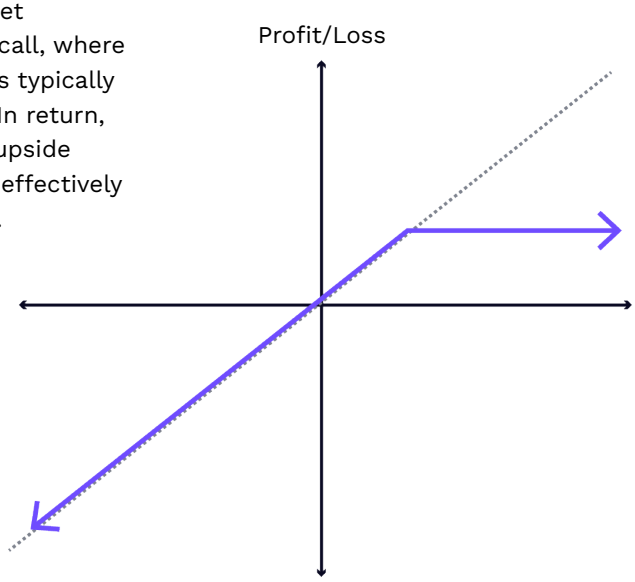
The inverse structure is a **cap**: the investor **owns the underlying asset** and **sells a call option** to generate income. While the **call premium enhances returns**, gains are **capped at the strike** of the call, making this strategy useful in **range-bound or mildly bullish outlooks** or to **fund downside protection partially.**

Cap

Own the underlying asset combined with a short call, where the premium received is typically distributed as income. In return, the position sacrifices upside beyond the call's stike, effectively capping potential gains.

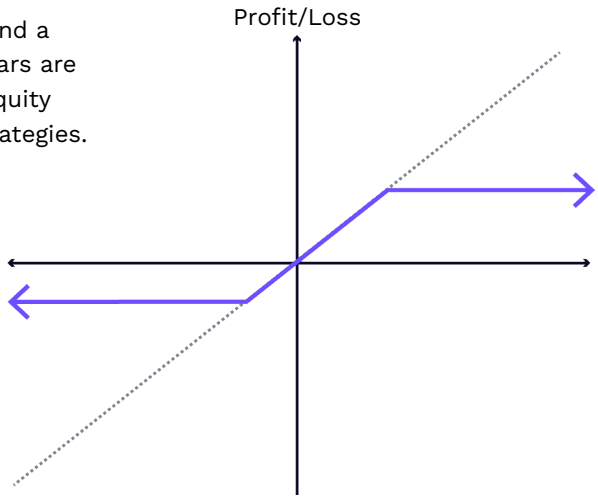


Sources: ARK Investment Management LLC, 2025. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security or cryptocurrency.

Combining both a floor and a cap creates a **collar**. Here, the investor **holds the underlying asset, buys a put** for limited downside protection, and **sells a call** to finance that put. The result is a **defined range of outcomes: limited downside risk** in exchange for **capped upside participation.** Collars are common in **structured equity and defined outcome strategies.**

Collar

Combining both a floor and a cap creates a collar. Collars are common in structured equity and defined outcome strategies.



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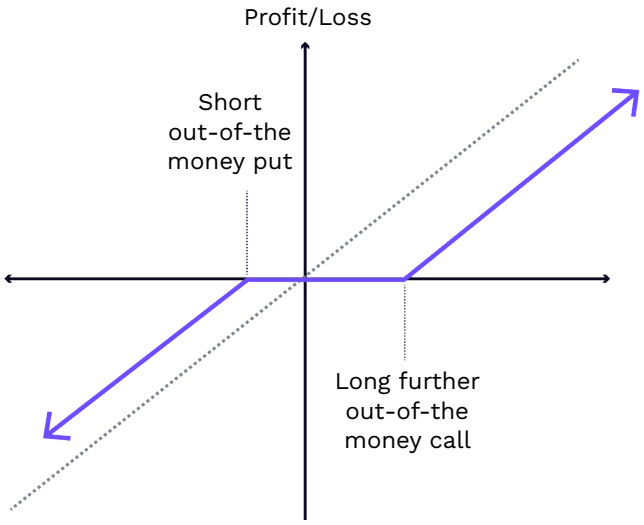
To express a directional view without paying premium, investors often turn to a **risk reversal.** This involves **selling a put** and **buying a call**, typically both **out-of-the-money (OTM)**. The call is **typically set further out-of-the-money,** creating **a higher threshold for gains**. While still funded by the **short put**, the long call kicks in only **after a more significant rally**, making it a popular structure when expressing **high-conviction bullish views.**

Risk Reversal



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Option overlays of this type form the foundation of defined outcome strategies. By combining puts, calls, and the underlying asset, investors can shape both downside protection and upside participation, creating a more controlled and transparent return profile from the outset.

3.0 Understanding "The Greeks"

"The Greeks" are risk measures—each represented by a Greek letter—that describe how an option's price (or an option strategy's value) changes in response to different factors. Essentially, they are sensitivities: **Delta, Gamma, Theta, Vega, and Rho** are the primary Greeks that shed light on the behavior of an options portfolio.

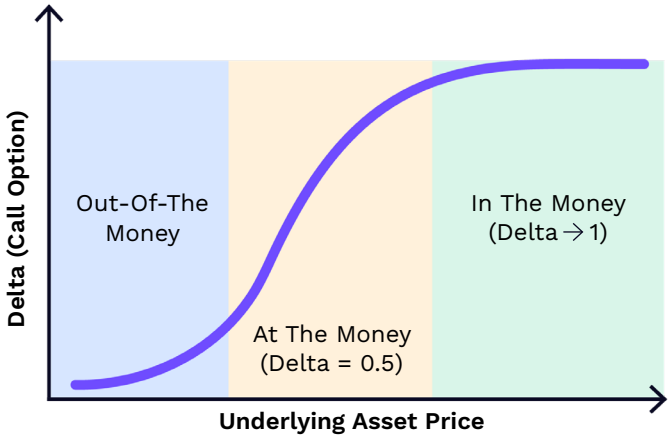
Understanding the meanings of **Delta, Gamma, Theta, Vega, and Rho** will help investors see how a Defined Outcome ETF might perform over time—not just at the end of the outcome period. Below we explain each Greek in clear language and discuss their respective practical implications for outcome-based strategies.

Delta (Δ): Directional Exposure

Delta measures how much an option's price is expected to change for a given $1 move in the underlying asset. It reflects the option's sensitivity to the underlying asset and is one of the most commonly used *"Greeks"* in options analysis.

For a **call option**, Delta ranges from **0 to +1** (or 0% to +100%), meaning the call's price increases as the underlying asset rises. A Delta of 0.5 suggests that the option will gain ~$0.50 in value, if the underlying asset increases by $1, and lose $0.50, if it falls by $1. The deeper a call option is **in the money (ITM)**, the closer its Delta approaches 1.

Delta = approximate change in option price per $1 move in underlying asset.



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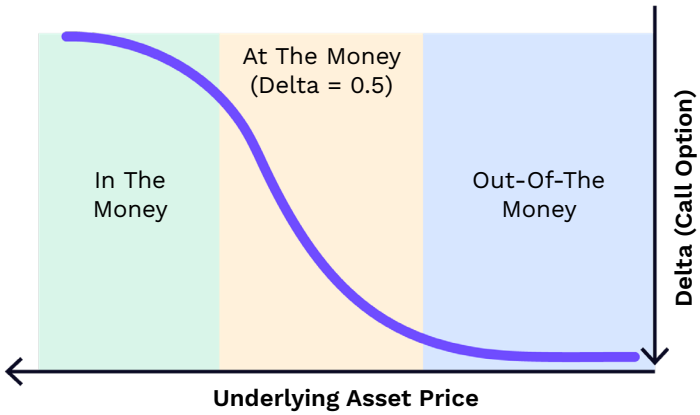
For a **put option**, Delta ranges from **0 to -1**, since puts gain value as the underlying price declines. A Delta of -0.7 means that the put is expected to gain $0.70 for every $1 drop in the underlying asset. The deeper a put option is **in the money**, the closer its Delta approaches -1.

Delta = approximate change in option price per $1 move in underlying asset



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In the context of an **options-based portfolio or fund**, Delta provides an estimate of the **net directional exposure** to the underlying asset. For example, if a fund holds a mix of options whose combined Delta sums to +0.30, the portfolio behaves as though it were 30% long the underlying asset.

This dynamic makes Delta especially useful for understanding how the portfolio might behave under small moves in the underlying—a *"first-order"* sensitivity. Portfolio managers often track Net Delta to ensure that exposure aligns with intended market views.

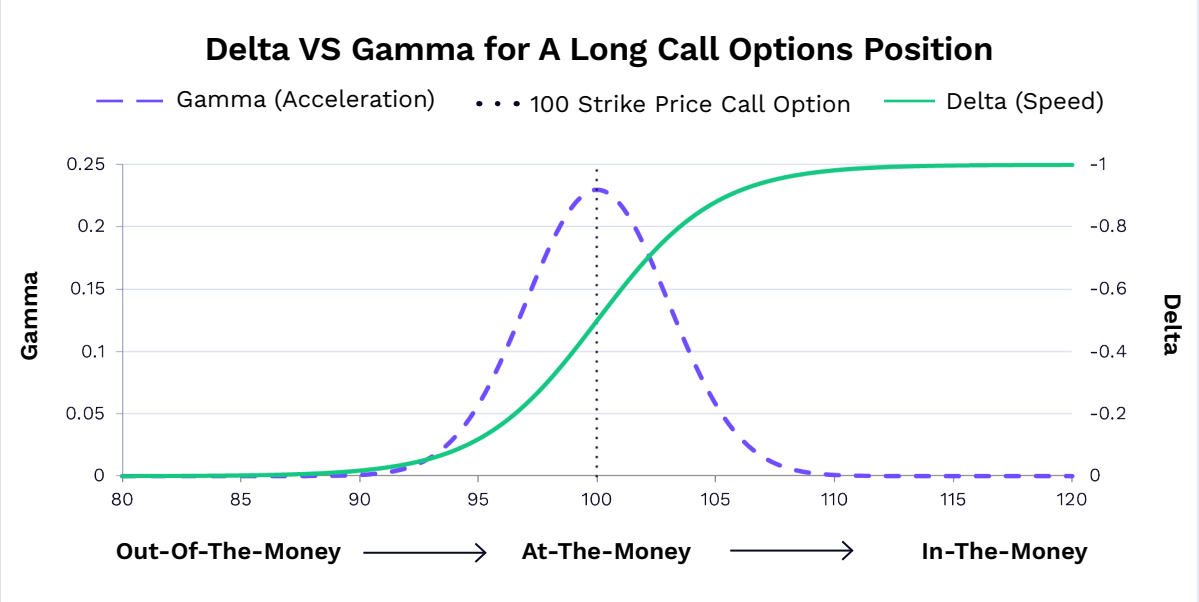
Finally, Delta also is interpreted—a rule of thumb rather than a strict statistical measure—as an **approximate probability** that the option will expire **in the money**.

3.2 Gamma (Γ): Changing Delta (Convexity)

Gamma measures the **rate of change of Delta**—that is, how much Delta will adjust for a given change in the underlying asset's price. It captures the **curvature** or **convexity** in an option's behavior.

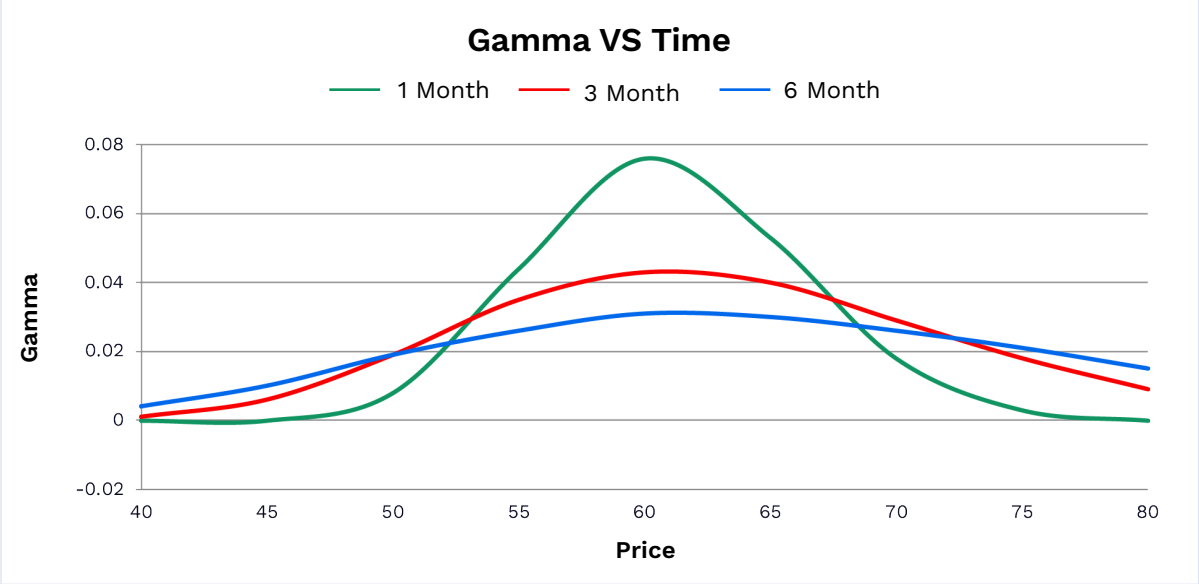
If Delta reflects the **current speed** of an option strategy's exposure, then Gamma is the **accelerator or brake**. It determines whether that speed increases or decreases as market conditions shift.

High Gamma means that Delta can change rapidly, creating **nonlinear behavior** in the option's exposure. For example, a portfolio may have low initial Delta; but as the underlying asset moves closer to a critical level (such as a hurdle or buffer), Delta may rise sharply, driven by Gamma. **Low Gamma**, by contrast, implies a more stable, predictable exposure profile.



Sources: TradingBlock, ARK Investment Management LLC, 2025. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security.

Gamma is typically **highest for at-the-money options near expiration**, because small changes in the underlying asset at that point can flip an option from worthless to valuable (or vice versa), causing Delta to adjust sharply.



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In the context of **defined outcome strategies**, Gamma tends to show up near the **inflection points** of the payoff curve, such as around a **performance cap or buffer limit**. As the underlying price approaches those points, Delta can change meaningfully; Gamma drives that shift.

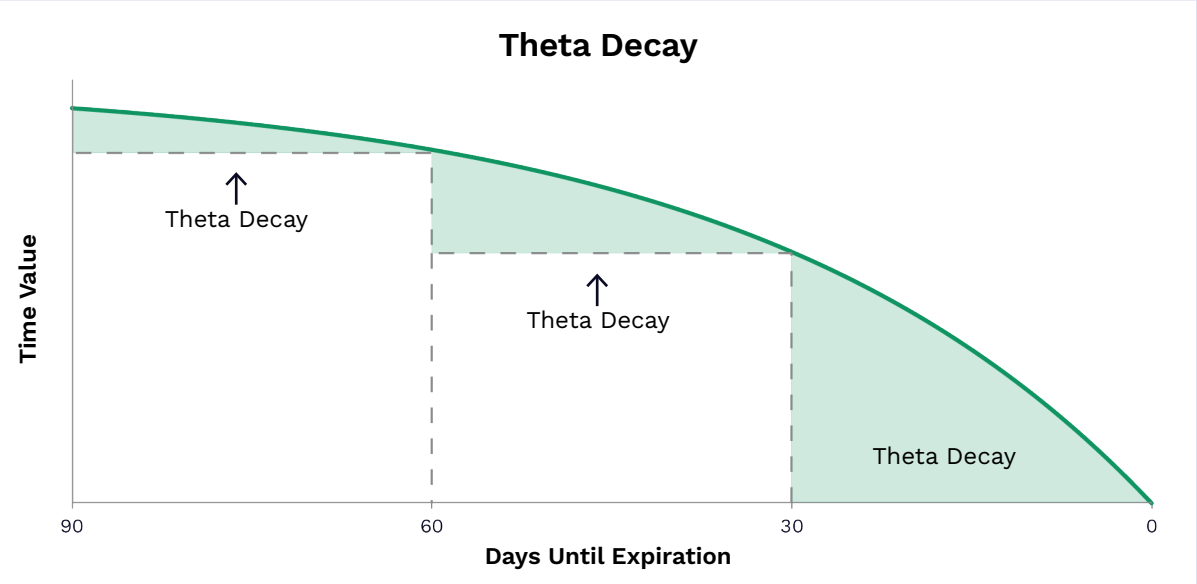
For long-term investors who hold through to expiration, Gamma is less of a concern. But those entering or exiting mid-period should understand that **Gamma can cause the portfolio's exposure to shift with market moves**, affecting interim NAV in nonlinear ways.

In short, Gamma explains both **why outcome curves bend rather than form straight lines** and why exposure isn't constant throughout the outcome period.

3.3 Theta (Θ): Time Decay

Theta measures how much an option's value is expected to decrease as time passes, **all else being equal**. It represents the **cost of waiting**—the erosion of an option's price due to the passage of time.

All options lose value as expiration approaches, assuming no movement in the underlying asset, because the time available for the option to move into the money (and become profitable) is shrinking. Theta quantifies that time-based decay.



Sources: Option Alpha, ARK Investment Management LLC, 2025. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security.

For example, a Theta of -0.05 implies that, holding all else constant, the option's price will decrease by approximately $0.05 per day due to time decay.
In a portfolio context, **short options have positive Theta**—they benefit from time decay—**while long options have negative Theta**, since they lose value as time passes.

For defined outcome strategies that involve holding options to expiration, Theta matters less in terms of total return at maturity; but it can still affect **interim NAV**, especially mid-period, as options decay nonlinearly over time. Understanding Theta helps to explain why NAV might drift, even if the underlying asset remains flat.

Ultimately, Theta is the *"rent"* the investor pays for optionality over time. The closer you get to expiration, the faster the meter runs.

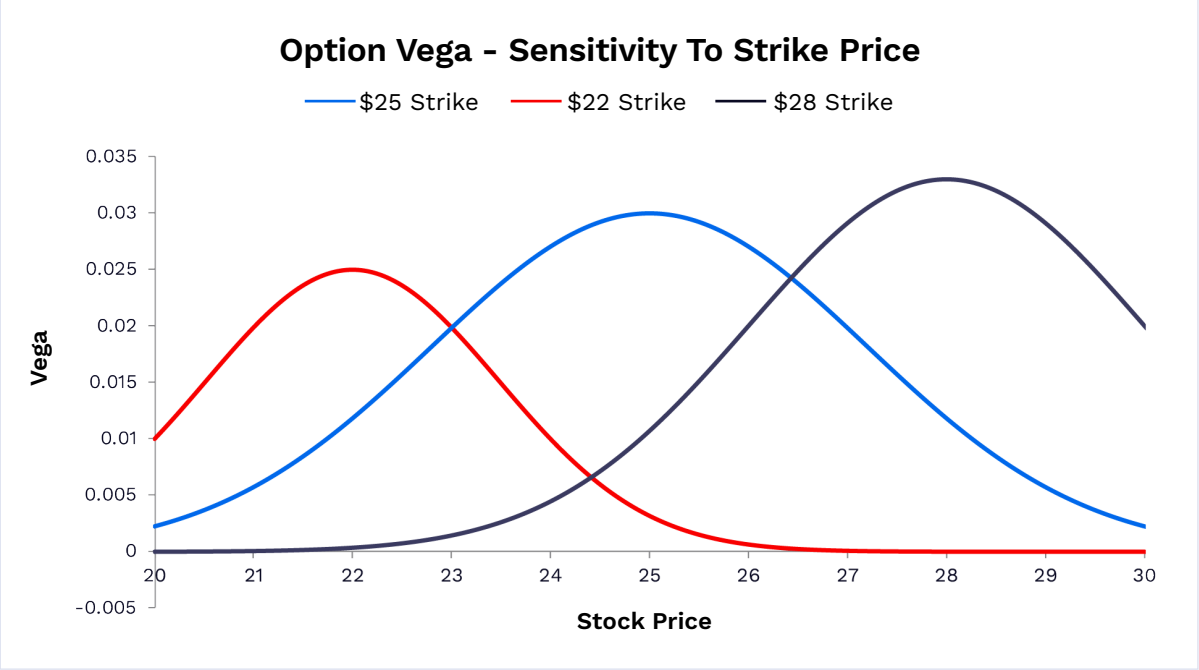
3.4 Vega (V): Volatility Sensitivity

Implied volatility is the market's estimate of how much the underlying asset price could move in the future, regardless of direction. **Vega** measures how much an option's price is expected to change with a **1 percentage point change in implied volatility**, all else being equal. Vega therefore represents the option's **exposure to market uncertainty.**

Implied volatility (IV) reflects the market's expectation of how much the underlying asset might move in the future. The higher the expected movement, the more valuable the optionality, because there is greater chance that the option will end up in the money.

For example, if an option has a Vega of 0.10, and implied volatility increases from 20% to 21%, the option's price would be expected to rise by $0.10.

Vega is highest for at-the-money options with longer times to expiration, as they have the most to gain (or to lose) from changes in volatility. Deep in-the-money or near-expiration date options have relatively low Vega, since there is less uncertainty left to price in.



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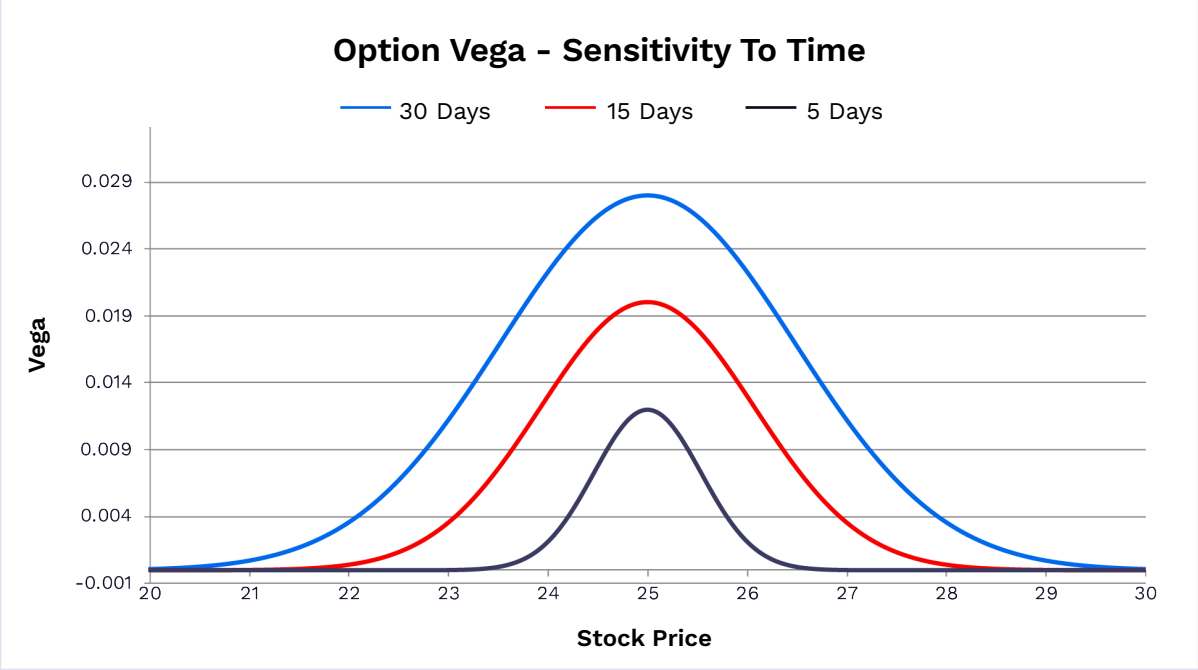

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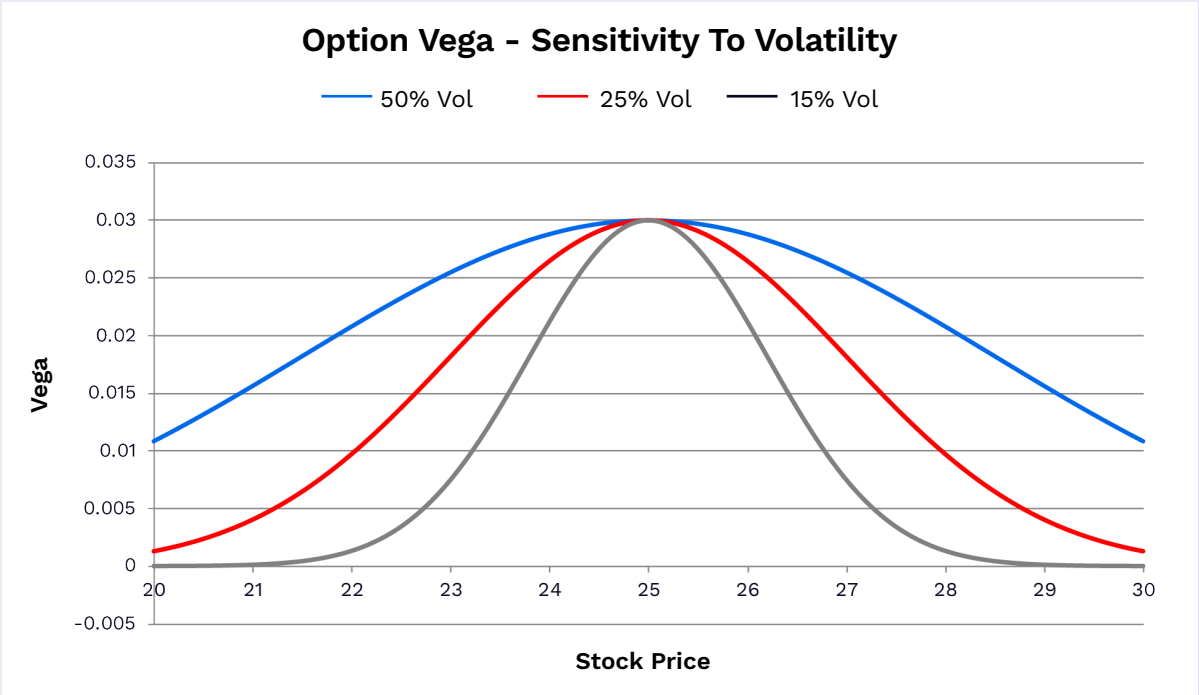

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In a portfolio context, **long options positions have positive Vega**. They benefit from rising volatility. **Short options have negative Vega**, as increased volatility raises the cost of buying them back. For defined outcome strategies, **Vega can be important during volatile market regimes.**

In short, **Vega tells us how much the option's value will respond to changing market expectations**. When uncertainty rises, optionality becomes more valuable. Vega quantifies that effect.

3.5 Rho (ρ): Sensitivity To Interest Rates

Rho measures how much an option's price is expected to change in response to a **1 percentage point change in interest rates**, assuming all other factors remain constant. Rho reflects the option's **exposure to the cost of capital**.

For example, if a call option has a Rho of +0.06, and interest rates rise from 2% to 3%, the option's price would increase by approximately $0.06. Conversely, a Rho of -0.04 on a put option would imply a $0.04 decrease in value, if rates rise by 1%.

Call options tend to have positive Rho, because higher interest rates reduce the present value of the strike price, which is paid later, making calls slightly more attractive. **Put options typically have negative Rho**, because they benefit less from that dynamic.

Rho is most relevant for longer-dated options, where the time value component is more sensitive to discounting effects. Short-dated options have minimal Rho, since the impact of interest rates on their value is limited over a short timeframe.

In the context of an options-based strategy, **Rho typically is the least impactful of the major Greeks**, especially in environments where interest rates are stable or move gradually. That said, during periods of sharp monetary policy shifts, or in low-rate regimes in which small changes can matter proportionally, Rho can influence interim pricing of options, particularly those with longer maturities.

3.6 Why The Greeks Matter

The Greeks—Delta, Gamma, Theta, Vega, and Rho—give us a framework for understanding how a defined outcome strategy behaves **between inception and expiration date**. While the **payoff at expiration** is pre-defined and what ultimately matters for long-term investors, the path taken to reach that point can vary depending on market conditions. The Greeks help illuminate that path, as follows:

- **Delta** shows how much upside or downside the strategy is capturing currently. A Delta of 0.5 means the position should gain or lose about half as much as the underlying asset for a given move.
- **Gamma** explains how Delta evolves—nonlinearly—as the underlying asset approaches inflection points like buffers or caps. Sensitivity can accelerate mid-period, especially around performance zones.
- **Theta** reminds us that options carry a cost over time. Even if the market remains flat, the strategy's NAV could decline temporarily due to time decay. This is not a flaw. Instead, it reflects the ongoing price of embedded protection.
- **Vega** introduces a sensitivity to **volatility expectations**. Depending on the payoff profile and the current underlying price, rising volatility can increase—or decrease—interim NAVs, while falling volatility can have the opposite effect, even if the underlying asset hasn't moved.
- **Rho**, while often small in impact, can affect pricing for longer-dated options when interest rates shift significantly.

Together, the Greeks explain **why the day-to-day behavior of defined outcome strategies is not linear or static**. For investors who hold through to expiration, the structure works to produce the specific exposures and results stated. But for those who monitor, enter, or exit mid-period, understanding these sensitivities enables more informed decisions.

An educated investor or advisor can contextualize price movements and explain them confidently. For example, why might NAV drift lower mid-year, despite no move in the underlying asset? Or why might gains trail the underlying in strong early rallies? Answers to such questions provide insight, reinforcing transparency and strengthening trust in how the strategy operates.

4.0 How Options Are Priced And Hedged

Greeks help to explain how a strategy behaves during its life. Understanding why an option is priced the way it is—and how its price evolves—requires a deeper look behind the scenes. This section explores the core ingredients of option pricing, the role of implied volatility, and how market participants hedge their exposures in real time. We also examine how execution factors like bid/offer spreads, liquidity, and open interest influence implementation costs, and why those structural dynamics are especially important for outcome-based strategies that rely on multi-leg options positions.

4.1 The Ingredients Of An Option Price

Every option can be broken into two core components: **intrinsic value** and **time value**.

The **intrinsic value** is straightforward: it is the amount the option is already *"in the money."* For a call, the intrinsic value is the difference between the underlying asset price and the strike. For a put, the intrinsic value is the difference between the strike and the underlying asset price.

Time value reflects uncertainty: the possibility that the option might become profitable in the future. This uncertainty makes options prices differ from their intrinsic value. Several factors influence an option's time value:

- **Implied Volatility (IV):** Higher expected volatility increases the chance of a large move, raising the value of both puts and calls.
- **Time to Expiration:** Longer durations give the option more time to move into the money.
- **Interest Rates:** Affect the present value of future cash flows, particularly for longer-dated options.
- **Dividends:** Reduce the stock's expected forward price, since the share price typically drops by the dividend amount on the ex-dividend date.

These inputs are processed by models like Black-Scholes[2] or binomial trees,[3] which generate theoretical prices for each option. That said, these models assume perfect markets and continuous trading. In reality, options are priced and traded in a marketplace where liquidity, supply and demand, dealer inventory, and structural preferences significantly influence what an investor will actually pay or receive.

4.2 How Volatility Shapes Strategy Cost: Term Structure And Skew

Among the various inputs into an option's price, implied volatility (**IV**) is the most important. IV reflects the market's estimate of how volatile the underlying asset will be during the life of the option. Higher IV translates into higher time value for individual options, as it raises the probability of the option finishing in the money.

Importantly, implied volatility is not a single number but varies across both time and strike, forming the **volatility surface.**

- **Across time:** Longer-dated options typically have different IVs than short-dated ones, often forming an upward-sloping "term structure" of volatility.
- **Across strikes:** Options at different moneyness levels—how far in the money (ITM) or out of the money (OTM) they are—carry different implied volatilities. In equity markets, that typically manifests as a **volatility skew**—where OTM puts trade at higher IVs than OTM calls. It reflects persistent demand for downside protection among institutional investors, and it raises the cost of constructing defined outcome strategies with meaningful buffers.

In some asset classes, the skew can reverse or flatten. In commodities and currencies, for example, IVs may be higher for both wings (deep OTM puts and calls), producing what's called a **volatility smile**, which reflects symmetric uncertainty: large moves are expected in either direction.

Importantly, when constructing multi-leg option strategies—like put spreads or risk reversals— practitioners do not use a single implied volatility figure. Instead, they price each leg of the trade using the specific IV at each strike and maturity on the volatility surface. As a result, the **cost and profile of a defined outcome strategy are highly sensitive to how volatility is distributed across strikes**, not just to how much volatility exists overall.

4.3 The Role Of Dealers And Market Makers

In most cases, structured option strategies, such as those used in Defined Outcome ETFs, are not traded against retail participants or passive liquidity. Instead, they are executed with market makers and dealers, who stand ready to quote prices on large, complex orders and manage risk exposures internally or via offsetting trades.

Those counterparties are not speculators. Their objective is to maintain a neutral book, hedging their directional and volatility exposures in real time while profiting from spreads and order flow. In doing so, they serve as critical intermediaries between strategy designers (such as ETF issuers) and the live options market.

When a Defined Outcome ETF enters into a structure—say, by buying a put spread and selling a call option—the market maker fills the trade, then uses dynamic hedging to neutralize the associated risks. That is not a one-time adjustment. As the underlying price and implied volatility change, the dealer's risk exposures evolve, requiring ongoing rebalancing using both options and the underlying asset.

4.4 Dynamic Hedging, Gamma Risk, And Reflexivity

To understand how hedging affects market behavior (and by extension, fund NAVs), it is helpful to walk through the mechanics of what dealers do after they have filled a trade.

Let's consider a Defined Outcome ETF that has entered a **risk reversal** position, which involves selling a put and buying a call—both out-of-the-money. The dealer, on the other side of the trade, is now **short the call and long the put**.

As the underlying asset begins to move:

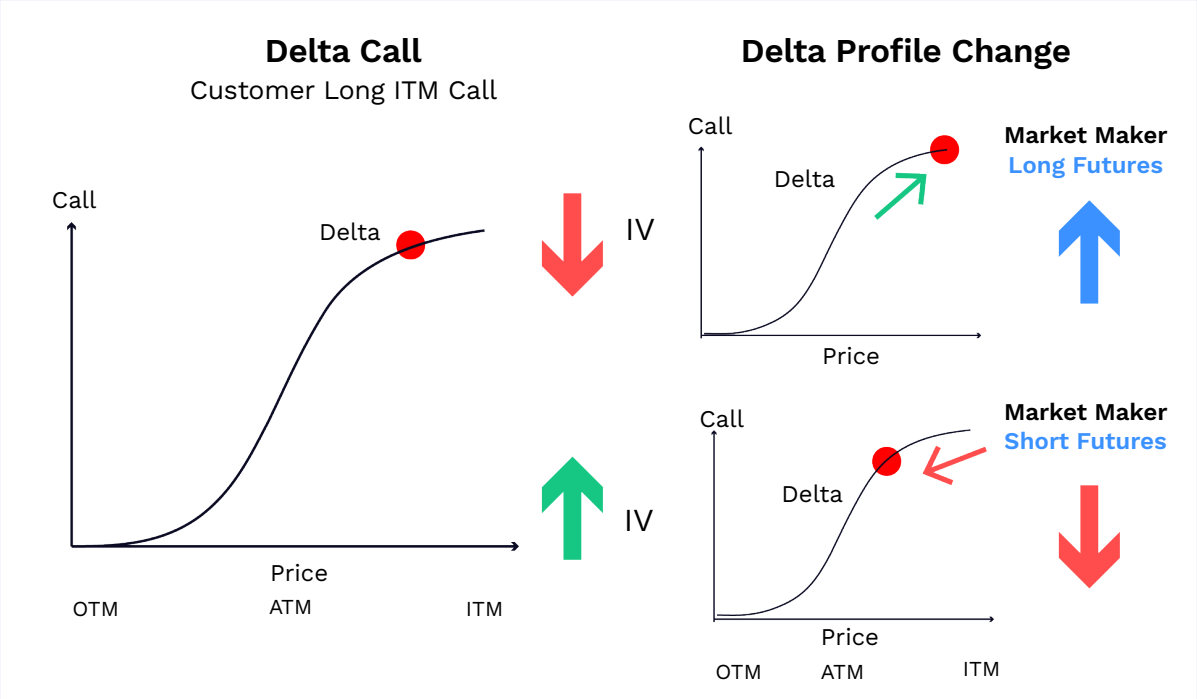
- If the price **rises toward the call strike**, the dealer's short call gains Delta. To remain Delta-neutral, the dealer might need to **sell the underlying asset**, which can put pressure on the asset price.
- If the price **falls toward the put strike**, the dealer's long put gains Delta. The dealer must **buy the underlying asset** to offset that exposure.

These hedging flows are **not passive** but instead interact with market movements in real time. The interaction creates what is known as **dealer Gamma exposure**: as Gamma increases near critical price levels (such as buffers, hurdles, or strike thresholds), the hedging required becomes more aggressive. This behavior can amplify volatility near expiration date and contributes to **reflexivity** in the options market.

For Defined Outcome ETFs, those dynamics explain why:

- NAVs could drift lower, even if the underlying is flat (due to Theta decay and hedging-induced rebalancing).
- Upside participation could lag the underlying asset during sharp rallies early in the outcome period (as Delta exposure builds slowly).
- Volatility might spike near option expiration date as dealers hedge large Gamma exposures.

Understanding these flows provides important context for evaluating fund performance—not only at expiration date, but also during the holding period.



Sources: MenthorQ, ARK Investment Management LLC, 2025. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security.

4.5 Execution, Liquidity, And Roll Risk

Beyond pricing theory and hedging flows, execution quality matters. An option's theoretical model price might assume instantaneous and frictionless trade execution; in reality, several market structure variables affect how efficiently defined outcome strategies can be implemented.
Key among those variables are:

- **Bid/Ask Spreads:** Wider spreads increase the cost of entry and exit.
- **Open Interest:** Low open interest could signal limited liquidity at a given strike, raising the risk of slippage.
- **Volume:** High daily volume can improve execution but does not guarantee deep markets across all strikes or expiries.

These challenges become acute at **roll dates**—the moment at which existing positions expire and new outcome periods begin. Defined Outcome ETFs often roll large multi-leg structures at once; if the required strikes are illiquid or misaligned with standard expiration dates, transaction costs can rise materially.

In particular, **liquidity clustering** (where demand for protection or income is concentrated in specific maturities or strikes) can create execution bottlenecks. Dealers may widen spreads or adjust prices to manage their inventory risk, which can shift subtly the shape or cost of the newly constructed outcome profile.

Another factor is **volatility timing**. If implied volatility spikes around a roll window (because of macro events or earnings), option premiums might rise across the board. That dynamic makes protective structures more expensive and potentially constraining vis-a-vis the ETF's outcome levels for the next period.

4.6 Listed, Flexible Exchange Options (FLEX), And Over-The-Counter (OTC) Options

The final consideration in strategy design is the format of the options used: listed, FLEX, or OTC. Each offers trade-offs among precision, liquidity, transparency, and operational complexity.

- **Listed Options:** Standardized contracts with pre-set strikes and expirations, traded on exchanges like Cboe or NYSE. Listed options offer deep liquidity and public price discovery, but limited flexibility. For example, only certain strikes and monthly expirations are available, making it difficult to design precise hurdle rates or protect against specific downside bands.

- **FLEX Options (Flexible Exchange Options):** Introduced by Cboe in 1993, FLEX options allow institutional counterparties to customize key terms—including strike price, expiration date, and exercise style—while being centrally cleared and exchange-traded. FLEX options enable the construction of bespoke outcome structures (e.g., 14-month tenor with a 5% hurdle), without neglecting transparency or regulatory safeguards.
- **OTC (Over-the-Counter Options)** are fully bespoke bilateral contracts between institutions. They offer maximum customization but introduce counterparty credit risk, opaque pricing, and limited secondary liquidity. As a result, over-the-counter options generally are unsuitable for public ETFs.

For daily-NAV ETFs like ARK's DIET suite, FLEX options offer the optimal balance: customization for structural precision, combined with clearinghouse protection and institutional-grade transparency.

4.7 Why This Matters

Understanding how options are priced and implemented is critical for anyone evaluating outcome-based strategies. While the potential payoff at expiration date might appear simple, the path to that outcome depends on complex and dynamic inputs—volatility surfaces, dealer hedging flows, execution quality, and option format.

As a result:

- NAVs might behave in unintuitive ways during the outcome period.
- Identical strategies launched just days apart might differ in cost and structure.
- Active design and disciplined execution are essential to delivering the intended exposures.

For investors, that context deepens understanding and builds confidence. It also reinforces the idea that outcome-based investing is not a black box. Instead, it is a transparent and rules-based strategy grounded in decades of options market practice.

5.0 Why Launch A Defined Outcome ETF?

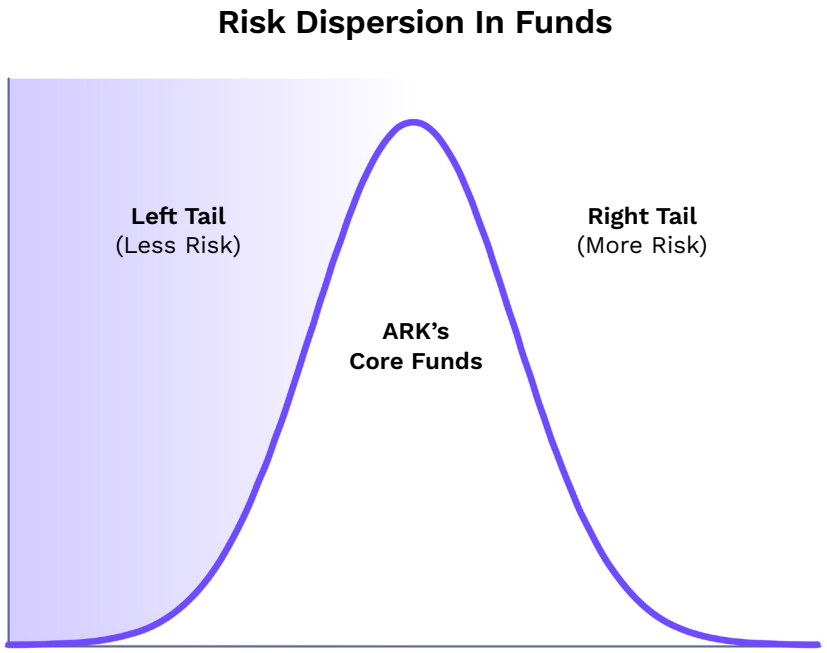
Our research suggests that the most meaningful investing outcomes often live in the "tails"—the extreme ends of the return distribution. Disruptive innovation, in particular, tends to produce asymmetric results: significant upside over time, punctuated by sharp, sometimes sudden drawdowns.

While ARK's core strategies are built to capture the fullness of that upside, we recognize that investors want to express their conviction in different ways. Some prefer unbounded exposure, while others want greater clarity around potential outcomes.

Investor preference is precisely why ARK has started to think about options-overlay strategies, and, in particular, about defined outcome ETFs. In ARK's case, our brand of defined outcome is defined innovation, which is indicative of the underlying reference asset exposure that we are using. ARK's Defined Innovation Funds will abide investor preference with strategies designed to complement traditional Delta-one exposures. By using options to reshape the return curve, Defined Innovation ETFs empower investors to fine-tune how they participate in both the left- and right-tail events.

Of course, navigating left- and right-tail events involves trade-offs. Strategies that aim to limit downside may sacrifice some upside, while those that seek to participate in stronger markets might accept a higher degree of downside. There is no free lunch, only different ways to balance risk and reward in accordance with an investor's objective.

Critically, ARK's Defined Innovation ETFs expand an investor's toolkit. With the aim of giving investors more control over how their conviction is expressed, ARK's Defined Innovation ETFs seek to provide a broader set of exposures that should align with a broader set of investor preferences.



Sources: ARK Investment Management LLC, 2025. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security.

5.1 Who Should Use Defined Innovation ETFs?

Defined Innovation ETFs can be applied flexibly across portfolio types and market environments. While they are built with structural precision, their real-world use cases are diverse.
Defined Innovation strategies should be particularly suitable for:

1. **Portfolio builders optimizing asymmetry.** Whether the objective is to capture upside more selectively or reshape downside risk within a broader allocation, Defined Innovation strategies allow for outcome-driven expressions of conviction.
2. **Allocators facing valuation uncertainty.** In environments of elevated multiples or tighter financial conditions, these strategies can support continued participation while anchoring expectations around defined outcomes.
3. **Tactical investors managing cycle turns.** For those with strong conviction in innovation themes, Defined Innovation ETFs provide a way to remain invested without assuming full directional risk.

Defined Innovation ETFs are not a replacement for core equity exposure. Instead, they are complementary instruments that can help fine-tune risk-return trade-offs within the portfolio construction process. Their value lies in offering more explicit control over outcomes during times of uncertainty or transition.

6.0 ARK DIET Buffer ETF Series

In this section, we introduce ARK's first Defined Innovation ETF strategies—the ARK Defined Innovation Exposure Term (DIET) ETF series—a buffered approach to investing in disruptive innovation. Here, investors will learn what ARK's buffered strategy entails, why ARK launched it, how it is constructed, and how it provides innovation exposure with reduced downside risk.

6.1 ARK DIET Buffer ETFs: Strategy Overview

The ARK DIET Buffer ETFs deliver a buffered return profile linked to the ARK Innovation ETF (ARKK). In essence, it is a modified version of ARKK designed to limit losses while preserving some upside potential. It is intended for investors seeking innovation exposure with a more controlled risk profile over a fixed 12-month outcome period.

The strategy targets reduced downside participation. If ARKK declines during the outcome period, the ARK DIET Buffer ETF will absorb approximately half the loss. For example, if ARKK falls by 20%, the ARK DIET Buffer ETF will decline by only ~10%.

To fund that limited protection, investors sacrifice the first ~5% of ARKK's gains each year. Doing so allows the strategy to offer ongoing upside participation after the 5% hurdle, at a defined participation rate.
Once ARKK's returns exceed the hurdle, the ARK DIET Buffer ETFs participate in approximately **50–80%**[4] of any additional upside. The ARK DIET ETFs target 50–80% upside participation after the 5% hurdle, but the exact level depends on market conditions at the start of each outcome period. Because the cost of downside protection and option premiums change with volatility and interest rates, participation may be higher in calmer markets and lower when protection is more expensive.

For example, if ARKK gains 4% over the outcome period, the ARK DIET Buffer ETF return would be 0%, as the return falls within the hurdle. If ARKK gains 60%, the ARK DIET Buffer ETF would be expected to return approximately 38.5% [(60% – 5%) × 70%], assuming a 70% participation rate beyond the hurdle.

ARKK — Addressing The Left-Tail

Annual Option Profile

Sources: ARK Investment Management LLC, 2025. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security. The examples provided are hypothetical and are not representative of actual return scenarios..

This buffered innovation exposure allows investors to remain linked to ARKK's performance while incorporating built-in limited downside protection against major drawdowns. Each fund in this strategy has a 12-month outcome period. The defined payoff profile is set at launch and runs for one year, after which it resets.

To provide flexibility, ARK is launching these buffered products on a rolling quarterly schedule, as follows:

ARK DIET Buffer ETF Suite

January 1, 2026	ARK DIET Q1 Buffer ETF (ARKD)
April 1, 2026	ARK DIET Q2 Buffer ETF (ARKI)
July 1, 2026	ARK DIET Q3 Buffer ETF (ARKE)
October 1, 2025	ARK DIET Q4 Buffer ETF (ARKT)

A new outcome period for each product begins in January, April, July, and October each year—a schedule that ensures investors can enter the strategy at regular intervals and always have the option to start with a fresh one-year outcome period.

ARKD, ARKI, ARKE, and ARKT are the first implementation of ARK's broader Defined Innovation framework. They offer a systematic way of reshaping exposure to innovation themes without exiting the market or relying on defensive assets.

6.2 Why Launch Buffered Innovation ETFs First?

We are launching the ARK DIET Buffer ETFs as ARK's first entry into options overlay ETFs, because of feedback from numerous advisors and clients. While many investors believe in ARK's long-term innovation themes, not all are comfortable with the full drawdowns that come with a pure-play innovation-focused strategy. Advisors in particular express the need for more risk-controlled tools that will help clients remain invested during periods of uncertainty.

We designed the ARK DIET Buffer ETFs to meet that need. The Suite offers access to ARKK's innovation exposure with a predefined risk/reward profile over a 12-month outcome period. By absorbing a portion of the downside and shaping the upside beyond a small hurdle, the structure provides a more measured way to participate in innovation.

In addition to selecting a "buffered" ETF as ARK's entry into options based strategies, we opted to use **The ARK Innovation ETF (ARKK)** as the reference asset. Why? Beginning with ARKK ensures that the first Defined Innovation ETF supports ARK's core mission. It gives advisors a complementary tool to use alongside existing growth allocations—not as a replacement, but as an additional path to engaging the opportunity.

More broadly, demand is growing for outcome-oriented strategies that provide transparency, control, and resilience, without stepping away from some long-term potential. This product was built to help meet that demand.

6.3 Design And Mechanics

The ARK DIET Buffer ETFs use a combination of direct exposure to ARKK (***The ARK Innovation ETF***) and a custom overlay of FLEX options that reshape its return profile over a fixed 12-month outcome period.

At its core, the fund holds a 100% position in ARKK, maintaining direct exposure to ARK's flagship innovation strategy. To modify the return profile, ARK overlays a portfolio of FLEX options that are set at the beginning of each outcome period and remain fixed for its duration.

The overlay consists of three key option positions:

1. **A 100% notional short at-the-money (ATM) call on ARKK**
   This short call generates premium, which funds the protective and upside components of the structure. It effectively creates a ~5% upside hurdle, meaning the first portion of gains on ARKK is foregone.

2. **A 50% notional long ATM put on ARKK**
   This put reduces downside participation by approximately half. Instead of offering a full buffer or floor, the structure is designed so that for each 1% decline in ARKK, the DIET Buffer ETF typically would fall by ~0.5%. For example, if ARKK declines by 20%, the DIET Buffer ETF would be expected to fall by about 10%.

3. **A long out-of-the-money (OTM) call struck at 105% of ARKK's starting price**
   This call restores upside participation beyond the 5% hurdle. The notional value of this position varies based on market conditions at the time of reset. After the hurdle is met, investors participate in gains at a rate typically ranging between **50–80%**.

This structure resets every 12 months. At the start of each new outcome period, a fresh set of options is struck based on ARKK's prevailing price and market-implied volatility. Investors who enter at launch lock in the defined buffer and upside terms. Those who enter or exit during the period will experience a modified payoff curve, depending on how ARKK has moved since inception.[5]
To support intra-period transparency, ARK provides real-time analytics and interactive outcome charts. While the ETF is fully liquid and can be traded daily, the full outcome profile is designed to apply over a one-year holding period.

6.4 Fitting Into A Broader Portfolio

The ARK DIET Buffer ETFs are designed to serve a clear role within a diversified portfolio: maintain exposure to innovation while reshaping the risk profile over a defined 12-month period. The strategy should appeal to investors who are aligned with ARK's long-term vision but want greater control over near-term drawdowns. By targeting reduced downside participation during the outcome period and offering structured upside participation beyond the 5% hurdle, with no fixed maximum return but at a defined participation rate, the ETF provides a more defined return path over the course of a year.

This strategy can be particularly useful for investors approaching retirement or other time-bound financial goals, where large drawdowns in the final years of accumulation are especially consequential. The strategy also should resonate with conservative investors who have avoided potentially risky innovation-focused strategies.

In portfolio construction, ARK's DIET Buffer ETFs can function as a partial substitute for traditional equity exposure, offering a buffered path through sectors that are otherwise highly volatile. It can also complement existing ARKK allocations by reducing sensitivity to short-term declines—especially after periods of strong performance or during heightened macro uncertainty.

The product also can serve as an alternative to structured notes, risk overlays, or hedging programs that commonly are used to manage tech-heavy exposures. Because it is implemented in an ETF wrapper with daily liquidity and no credit risk, it offers transparency and simplicity that structured products often lack.

Advisors will find that the one-year outcome period aligns naturally with client review cycles and risk planning frameworks. Knowing in advance that a position will absorb only a portion of any loss (and participate in gains beyond a predefined hurdle) can simplify annual allocation decisions.

In practice, the strategy allows for more granular control over innovation exposure, without exiting the theme entirely. It expands the toolkit available to portfolio managers who want to remain invested in long-term innovation trends while addressing near-term risk management goals.

Endnotes

1. Information provided in sections 2, 3, and 4 and draws heavily on content published by Investopedia, Britannica Money, and the IG Trading Glossary.

2. The Black-Scholes model, also known as the Black-Scholes-Merton (BSM) model, is a mathematical model used to calculate the theoretical fair price or value of options contracts, particularly European-style options. Developed in 1973 by economists Fischer Black and Myron Scholes, with contributions from Robert Merton, it revolutionized options trading by providing a standardized, structured approach to valuing these financial instruments. See Black, F. and M. Shcoles. 1973. “The Pricing of Options and Corporate Liabilities.” The Journal of Political Economy.

3. The binomial tree model, also known as the binomial option pricing model (BOPM), is a financial modeling technique used to value options and other instruments. Developed by John Cox, Stephen Ross, and Mark Rubinstein in the 1970s, it provides an alternative to the Black-Scholes formula, particularly for American options. See Cox, J. et al. 1978. Option Pricing: A Simplified Approach.” University of California at Berkeley, Working paper No. 79.

4. Subject to change with each quarterly strike, for each of the four ETFs.

5. If investors buy an ARK DIET ETF after a 12-month outcome period has already begun, their results will differ from those of someone who invested at launch. That is because part of the buffer or upside may have been used already, and the remaining return path depends on how much time is left and how ARKK has performed. To give investors more entry points, ARK offers quarterly launches, but anyone buying mid-period should review the fund’s current status to understand the available buffer and upside before investing.

About The Author

Rahul Bhushan

Global Head of
Investment Products

@RahulBhushanARK

Rahul joined ARK in September 2023 following ARK's acquisition of Rize ETF (now ARK Invest Europe), of which he was Co-Founder and Director. Rahul is Global Head of Investment Products as well as Director on the board of the ARK Invest UCITS ICAV. Rahul leads ARK's product development efforts, ensuring new strategies are aligned with market demand across regions and client segments. He works closely with the Commercial and Research teams, as well as external partners, to translate feedback into product concepts, support go-to-market readiness, and shape strategy specific messaging. Rahul also oversees tailored content for institutional and intermediary channels and help manage the full product lifecycle across both public and private offerings.

Prior to ARK's acquisition, Rahul served as Co-Founder and Director of Rize ETF, Europe's first specialist sustainable thematic ETF issuer launched in 2020. Prior to Rize ETF, Rahul served as Co-Head of ETF Investment Strategies at Legal & General Investment Management (LGIM), a platform LGIM acquired from ETF Securities in 2018. Working in the ETF industry since 2010, Rahul has developed a profound expertise in systematic investment strategies and product development, covering the full spectrum from ideation to strategy formulation.

Rahul earned his Master's Degree in Finance from IE Business School in Madrid, Spain. He is fluent in Swedish, French, and Hindi, and possesses conversational proficiency in Spanish.

Important Information

Investors should carefully consider the investment objectives and risks as well as charges and expenses of an ARK ETF before investing. This and other information are contained in the ARK ETFs' prospectuses and summary prospectuses, which may be obtained by visiting www.ark-funds.com. The prospectus and summary prospectus should be read carefully before investing.

There is no assurance that the Fund will meet its investment objective. The value of your investment in the Fund, as well as the amount of return you receive on your investment in the Fund, may fluctuate significantly. You may lose part or all of your investment in the Fund or your investment may not perform as well as other similar investments. Therefore, you should consider carefully the following risks before investing in the Fund. Each risk summarized below is considered a "principal risk" of investing in the Fund, regardless of the order in which it appears.

The principal risks of investing in the **ARK DIET Buffer ETFs** include: ***Limited Loss Risk***. There is no guarantee that the Fund will be successful in its strategy to limit the Fund's exposure to losses in the Underlying ETF's share price to no more than 50% of the Fund's NAV during the Outcome Period. In the event an investor purchases shares after the commencement of the Outcome Period or redeems shares prior to the end of the Outcome Period, the investor may not fully participate in the share price gains of the Underlying ETF beyond the Hurdle to which the Fund seeks to provide exposure. ***Derivatives Risk.*** Derivatives involve risks different from, and, in certain cases, greater than, the risks presented by more traditional investments. These include credit risk, liquidity risk, management risk and leverage risk. Derivative products are highly specialized instruments that require an understanding not only of the underlying instrument but also of the derivative itself, without the benefit of observing the performance of the derivative under all possible market conditions. The failure of another party to a derivative to comply with the terms may cause the Fund to incur a loss. Adverse changes in the value or level of the underlying asset, rate or index can result in a loss substantially greater than the amount invested in the derivative itself. ***Option Writing Risk***. The Fund invests in options that derive their performance from the performance of the Underlying ETF. Writing and buying options are speculative activities and entail investment exposures that are greater than their cost would suggest, meaning that a small investment in an option could have a substantial impact on the performance of the Fund. The Fund's use of options, due to the cost of the options, will reduce the Fund's ability to get returns equal to the Underlying ETF. ***FLEX Options Risk***. The Fund utilizes FLEX Options guaranteed for settlement by the OCC, and it bears the risk that the OCC will be unable or unwilling to perform its obligations under the FLEX Options contracts, which is a form of counterparty risk. Additionally, FLEX Options may be less liquid than certain other securities, such as standardized options. The Fund may experience substantial downside from certain FLEX Option positions, and FLEX Option positions may expire worthless. ***Liquidity Risk***. The Fund may invest in securities or instruments that trade in lower volumes and may make investments that are illiquid or that may become less liquid in response to market developments or adverse investor perceptions. There is no guarantee that a liquid secondary trading market will exist for the listed and OTC options in which the Fund may invest. A less liquid trading market may adversely impact the value of the listed options and the value of your investment. ***Other Investment Companies Risk***. In addition to investing in options, the Fund invests in the Underlying ETF, which is another investment company. Accordingly, shareholders will bear both their proportionate share of Fund expenses and, indirectly, the expenses of the Underlying ETF. Furthermore, the Fund is exposed to the risks to which the Underlying ETF may be subject.

New Fund Risk. There can be no assurance that the Fund will grow to or maintain an economically viable size, in which case the Board may determine to liquidate the Fund if it determines that liquidation is in the best interest of shareholders. Liquidation of the Fund can be initiated without shareholder approval. As a result, the timing of the Fund's liquidation may not be favorable.

Outcome Period Risk. The Fund's investment strategy is designed to deliver returns that match the Underlying ETF, subject to the Hurdle and the Fund's strategy to limit the Fund's exposure to losses in the Underlying ETF's share price to no more than 50% of the Fund's NAV during the Outcome Period, only if shares are bought by the first day of the Outcome Period and held until the end of the Outcome Period. If an investor purchases or sells shares during the Outcome Period, the returns realized by the investor will not match those that the Fund seeks to achieve. In addition, the Hurdle may change from one Outcome Period to the next within the range stated above and is unlikely to remain the same for consecutive Outcome Periods. Moreover, the Fund's returns will be reduced by Fund fees and expenses as well as any brokerage commissions, trading fees, taxes and non-routine or extraordinary expenses incurred by the Fund throughout an Outcome Period. Accordingly, the performance of the Fund over an Outcome period will be reduced by these fees and expenses.

Shares of ARK ETFs are bought and sold at market price (not NAV) and are not individually redeemed from the ETF. ETF shares may only be redeemed directly with the ETF at NAV by Authorized Participants, in very large creation units. There can be no guarantee that an active trading market for ETF shares will develop or be maintained, or that their listing will continue or remain unchanged. Buying or selling ETF shares on an exchange may require the payment of brokerage commissions and frequent trading may incur brokerage costs that detract significantly from investment returns.

ARK Investment Management, LLC is the investment adviser to the ARK DIET Buffer ETFs.

Foreside Fund Services LLC, distributor.

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ARK Invest Management LLC
St. Petersburg, FL 33701

info@ark-invest.com
www.ark-invest.com

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