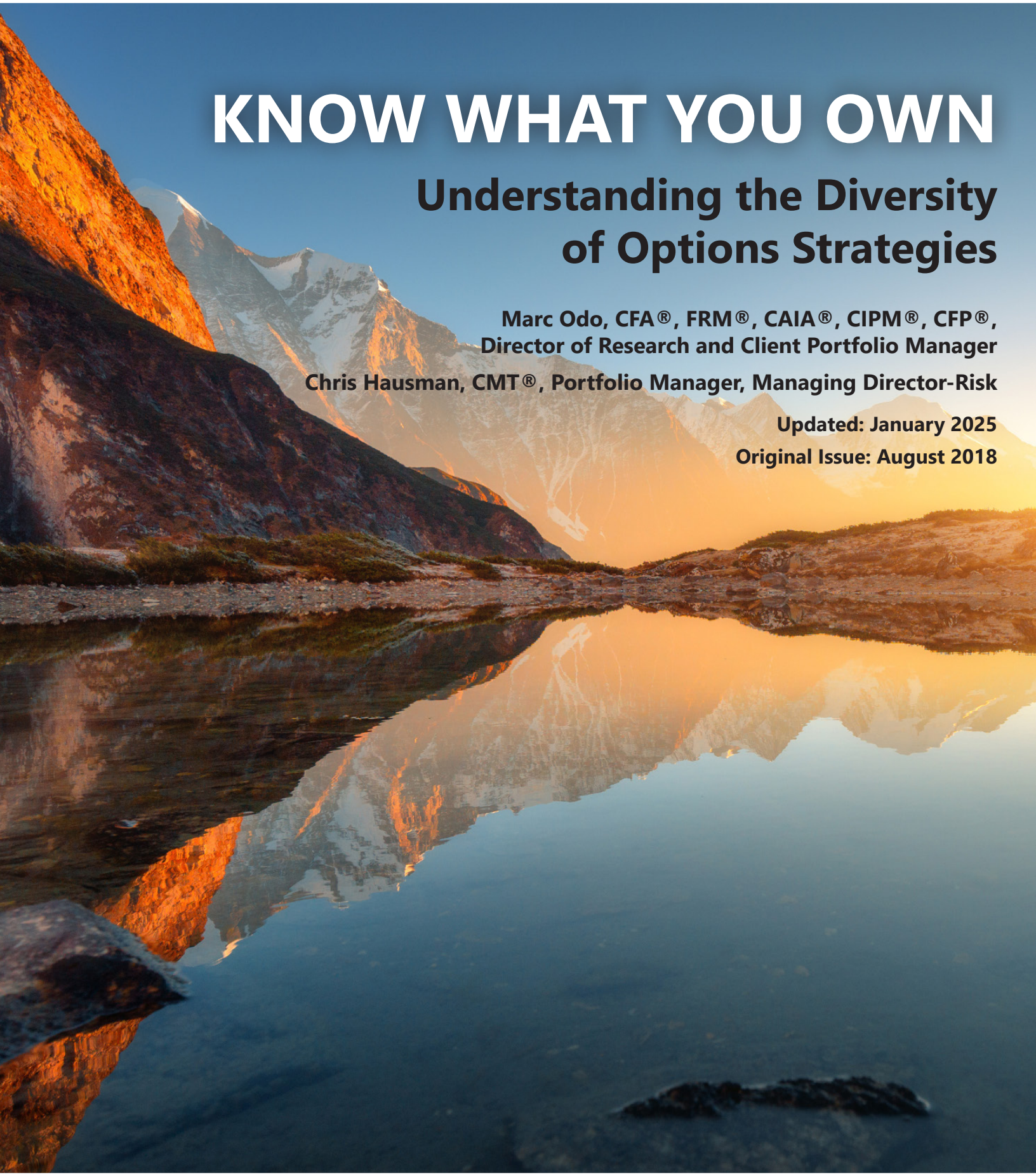
SWAN GLOBAL INVESTMENTS



KNOW WHAT YOU OWN

Understanding the Diversity of Options Strategies

Marc Odo, CFA®, FRM®, CAIA®, CIPM®, CFP®,
Director of Research and Client Portfolio Manager

Chris Hausman, CMT®, Portfolio Manager, Managing Director-Risk

Updated: January 2025

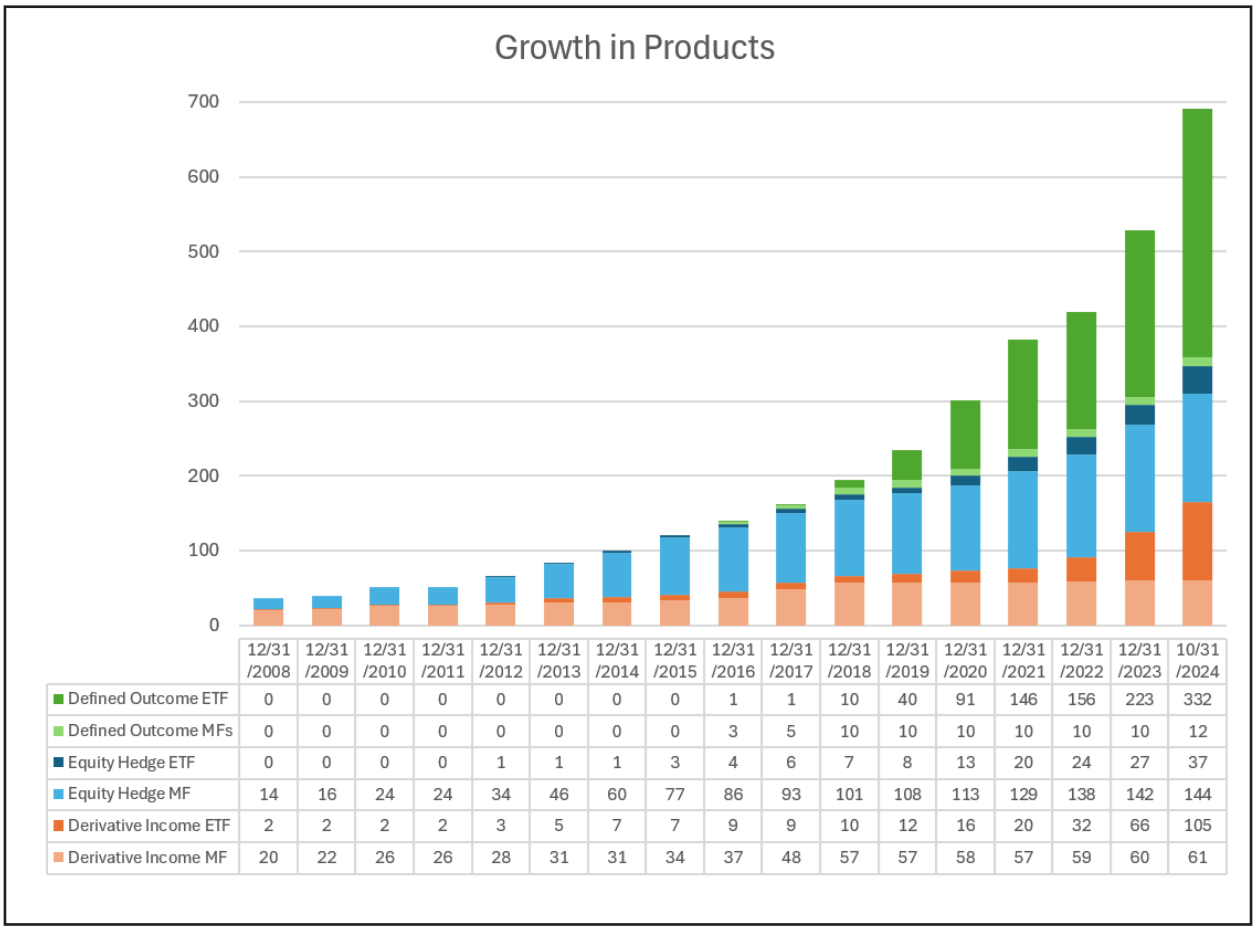
Original Issue: August 2018

INTRODUCTION

Options-based mutual funds and ETFs have seen explosive growth over the last decade. What was once considered a fringe or alternative asset class is now part of the investing mainstream.

During the Global Financial Crisis of 2007-09, there were only three dozen funds with less than $10 billion focused on options. As of October 31st, 2024, those numbers have climbed to almost

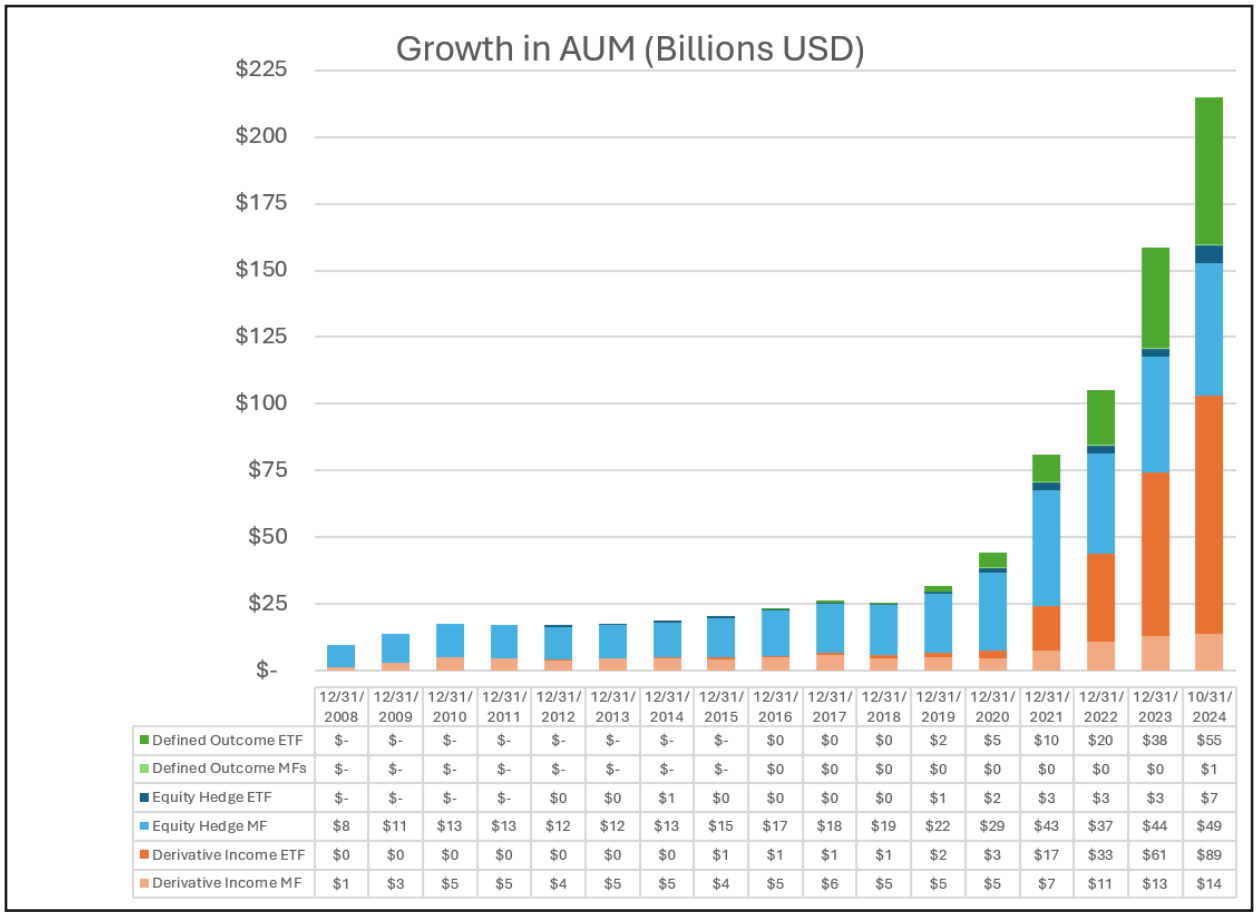
700 mutual funds and ETFs with over $200 billion under management.



	12/31/2008	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	10/31/2024
Defined Outcome ETF	0	0	0	0	0	0	0	0	1	1	10	40	91	146	156	223	332
Defined Outcome MFs	0	0	0	0	0	0	0	0	3	5	10	10	10	10	10	10	12
Equity Hedge ETF	0	0	0	0	1	1	1	3	4	6	7	8	13	20	24	27	37
Equity Hedge MF	14	16	24	24	34	46	60	77	86	93	101	108	113	129	138	142	144
Derivative Income ETF	2	2	2	2	3	5	7	7	9	9	10	12	16	20	32	66	105
Derivative Income MF	20	22	26	26	28	31	31	34	37	48	57	57	58	57	59	60	61

Source: Morningstar Direct

As the proliferation of options-based strategies has grown, understanding the category's diversity and employing relevant due diligence considerations will improve strategy selection and portfolio implementation.



	12/31/2008	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	10/31/2024
Defined Outcome ETF	$-	$-	$-	$-	$-	$-	$-	$-	$0	$0	$0	$2	$5	$10	$20	$38	$55
Defined Outcome MFs	$-	$-	$-	$-	$-	$-	$-	$-	$0	$0	$0	$0	$0	$0	$0	$0	$1
Equity Hedge ETF	$-	$-	$-	$-	$0	$0	$1	$0	$0	$0	$0	$1	$2	$3	$3	$3	$7
Equity Hedge MF	$8	$11	$13	$13	$12	$12	$13	$15	$17	$18	$19	$22	$29	$43	$37	$44	$49
Derivative Income ETF	$0	$0	$0	$0	$0	$0	$0	$1	$1	$1	$1	$2	$3	$17	$33	$61	$89
Derivative Income MF	$1	$3	$5	$5	$4	$5	$5	$4	$5	$6	$5	$5	$5	$7	$11	$13	$14

Source: Morningstar Direct

The way that financial advisors and investors view option-based strategies has evolved with the times. Previously all funds were lumped into a "one size fits all" category simply because a strategy employed options. However, how options are used is just as important as if options are used. Thankfully, Morningstar has revised their categorization system twice in the last five years to keep pace with the times.

Previously Morningstar had a single, broad category called "Options Based." The first major change occurred in 2021 when they carved out a new category called "Derivative Income" dedicated to funds that write options to generate supplemental income. In late 2024 the "Options Trading" category was further split into two: "Defined Outcome" and "Equity Hedge." Both categories have the goal of hedging downside risk via the use of put options, but there is a key difference. "Defined Outcome" funds are passively managed whereas "Equity Hedge" tends to have active management components.

Swan Global Investments is heartened by these recent developments. Swan is a pioneer in hedged equity and option trading strategies, with its Defined Risk Strategy launched in July 1997. Moreover, Swan had been advocating for Morningstar and the rest of the investing world to develop a more robust, nuanced view of option-based strategies. Morningstar's decision to migrate from a single options category to three distinct categories supports this view. Understanding these differences is key to making good investment decisions in the options-based space and will be the focus of this paper.

EQUITY HEDGE

Primary Objective: These strategies are defined as having a core, long portfolio but also taking active steps to hedge downside market risk via options. Investopedia defines a hedge as "an investment to reduce the risk of adverse price movements in an asset. Normally, a hedge consists of taking an offsetting position in a related security." In our opinion, options are an ideal instrument for reducing the price risk from a portfolio.

It is important to note that many strategies include the term "hedge" in their name but might not be directly reducing market risk. Some strategies produce returns that are uncorrelated to market movements. Combined with more traditional strategies that do track the market, such uncorrelated strategies can reduce the overall volatility of a portfolio. While reducing volatility is a worthy goal, there are two caveats to keep in mind. First, if the correlations increase, the volatility-reducing aspect of such strategies is diminished. Second, such strategies might not be investing in securities which directly reduce market risk.

We are limiting our definition of hedging strategies to those that explicitly seek to offset market risk. Using options nomenclature, hedging strategies actively seek to reduce the delta, or price sensitivity, within their portfolio. In addition, it is important to note that most hedging strategies also include some component of income or alpha/trading as well. These additional trades are usually used to offset the carrying cost of the hedges.

Variations on the Theme: There are a variety of ways in which one can implement a hedging strategy. Some of these variables include:

- The inclusion of additional trades to offset the cost of the hedge
- Where the levels of hedge protections are set (i.e., ATM or OTM put options)
- The amount spent on hedging or degree of protection
- The time to expiration of the hedges used
- Whether or not the strategy is always hedged or operates on a "risk-on/risk-off" approach
- Whether the underlying portfolio of equities is passively or actively managed

These variables will undoubtedly lead to a dispersion of results within the sub-category. For example, some funds appear to utilize puts expiring between 120 days and 365 days out, while other funds (including all of Swan's funds) use puts expiring greater than 365 days out. Other funds utilize shorter-term hedging of less than 120 days.

The time to expiration and type of hedge will have a great impact on how each of these funds will perform during a bear market. If the bear market extends beyond 120 days, most could run into a very cost prohibitive hedging environment.

When It Works: With an explicit hedge in place, it should come as no surprise that hedging strategies do best when markets sell off. After all, that is what hedging is designed to do. Generally speaking, the bigger the sell-off, the more valuable the hedges become. Given the fact that correlations tend to spike across most asset classes and strategies during a true market rout, direct, explicit hedging is one of the best ways to offset market risk.

Risks/When It Doesn't Work: The drawback to a hedging strategy should also be obvious— it will likely lag in an upward market. If the hedge is expected to rise in value if the market falls, then it stands to reason the hedge should fall in value if the market rises. During upward markets investors tend to view the hedge as a "cost".

Another risk to hedging strategies is the price paid for the hedge. The price of hedging is driven by supply and demand. During times of complacency, hedging can be cheap. However, when markets start selling off and investors panic, the price of hedging can skyrocket. A good hedging strategy should anticipate the price of hedging will increase when hedging is most needed and have a plan to accommodate that outcome.

Finally, there is counterparty risk. If one owns a hedge that is designed to pay off handsomely if the value of an asset falls, one should be sure that the counterparty in the agreement is able to pay. This risk was realized during the Global Financial Crisis, when some hedges were endangered by the counterparty's inability to meet their contractual obligations. Since the GFC there has a been a big push for hedging and derivative contracts to move to exchanges where the terms are standardized and the backing is provided by clearinghouses. Still, an analyst should take counterparty risk into consideration when conducting due diligence.

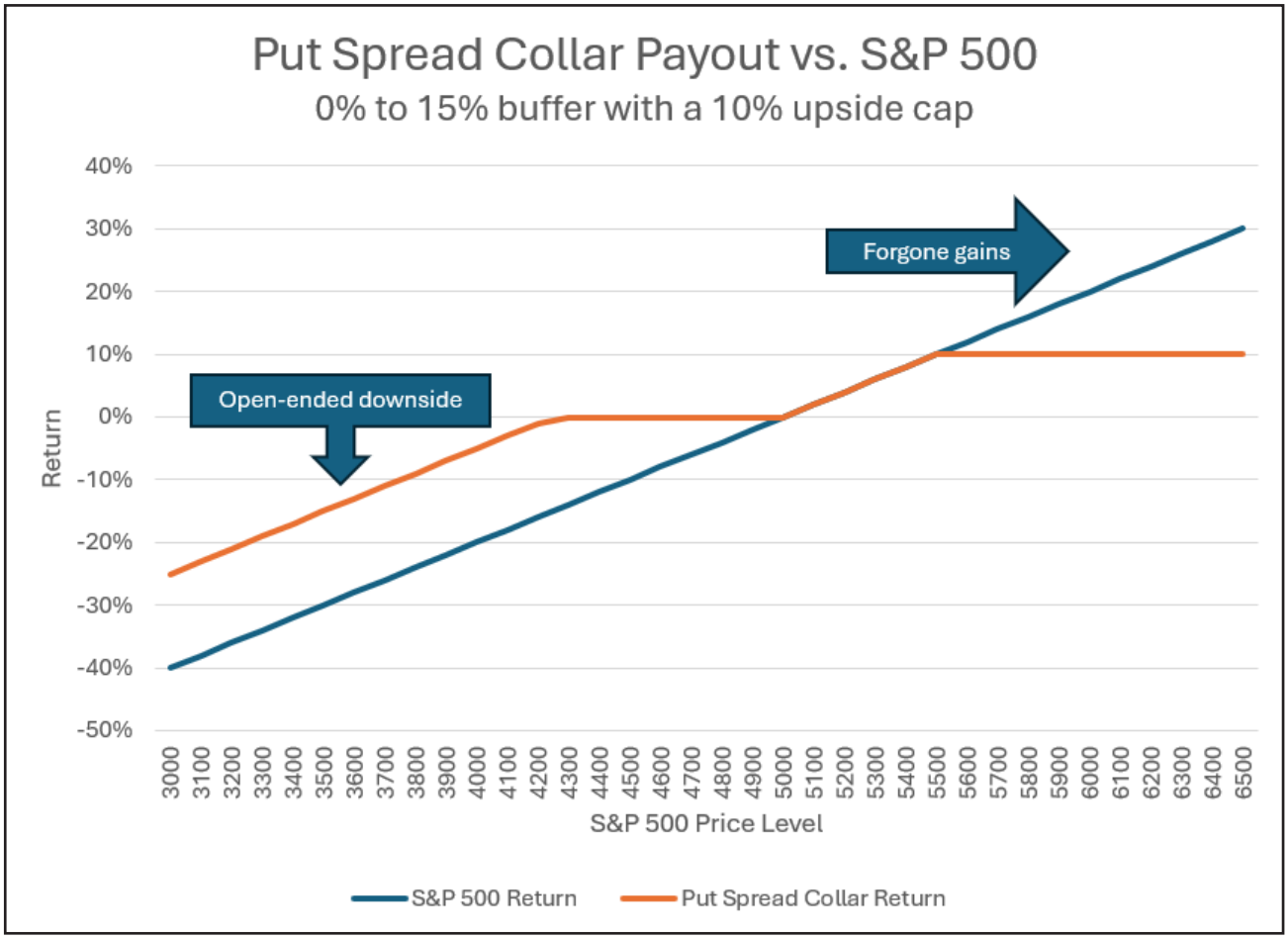
DEFINED OUTCOME

Primary Objective: the Defined Outcome category is closely related to the Equity Hedge category. Both utilize put options to hedge an underlying equity portfolio against potential losses in the market. The key difference is that funds in the Equity Hedge category are ***actively managed*** while funds in the Defined Outcome category are ***passively managed.***

Most of the funds in the Defined Outcome category are all employing variations of the same trade, known as a put spread collar. This trade typically has the following features:

- The put spread collar hedges some, but not all, of the downside risk.
- A put spread collar is designed to offer upside market participation up to, but not beyond, a certain point.
- The put spread collar is typically passively managed. It is set up once, and not altered until the options expire.

The put spread collar has a payout structure as illustrated below.



Source: Swan Global Investments

Once this trade is established, nothing else happens. It is a ***passively managed*** trade. Other than managing cash flows, the portfolio manager doesn't need to do anything until the options expire a quarter, six months, or a year later and the trades are reestablished.

Variations on the Theme: the primary difference between all the many buffered products that exist is the trade-off between the downside buffer zone and the potential return, as represented by the caps. Under normal conditions there is a trade-off between potential risk and potential return. Those Defined Outcome funds with the highest caps tend to have the meagerest buffers and conversely those funds with the deepest buffers tend to have less generous caps.

Another major difference is the underlying asset exposure. While most buffered outcome products are S&P 500-based, others exist on indices like the Russell 2000, the Nasdaq, and the MSCI EAFE. Because the outcome periods for a buffer are typically a year, there are often monthly or quarterly "vintages" or variants of the same strategy.

A more recent development has been "100% downside buffers" ETFs, which advertise full protection against market losses. The underlying option trade is simply a collar, where the purchase of the put option is subsidized entirely by the writing of a call option. There is no written or short put option that introduces the possibility of losses should the market drop beyond a certain point.

When It Works: The primary advantage of a Defined Outcome fund is its simplicity. Because it is passively managed, the potential outcomes are known with a high degree of certainty.

From a performance standpoint, the advantage of the put spread collar in a *down market* is that if the market losses are modest, the investor will participate in little or none of the downside. The advantage of this trade in an *up market* is that if the market gains are modest, the investor will participate in most of the upside.

Risks/When It Doesn't Work: However, the disadvantages to the put spread collar exist when the market is up or down by more than a modest amount.

- If the market gains exceed the cap there's nothing to be done. The portfolio manager can't and won't adapt to "stay in the game." The investor forgoes the gains beyond the cap.

- If the market drops past the point where the hedge runs out there's also nothing to be done. The investor is on the hook for losses beyond that point, which might be considerable.

It is true that the more conservative "100% downside buffer" funds don't have the risk of open-ended losses because there is no written out-of-the-money put option. However, the trade-off is that the caps available in the 100% downside buffer funds are much less generous. As the old saying goes, there is no free lunch.

The other concern facing put spread collars is simply the sheer number of strategies are essentially all doing a variation of the same trade. As of 10/31/2024 there were over 330 ETFs and $55bn within the Defined Outcome category. One might worry about this trade getting too crowded.

DERIVATIVE INCOME

Primary Objective: Income strategies typically have traditional, long holdings at the core of their portfolio. However, such strategies seek to supplement the returns of their portfolio by engaging in option writing. These trades typically involve the systematic writing of short-term calls and/or puts. The premiums collected from this option writing can be additive to the return of the core holdings and possibly distributed as "income."

Variations on the Theme: There are a few different types of approaches managers can take to generate income. Covered call strategies, also known as buy-write, are by far the most common and typically hold a portfolio of equities and write calls against them. Put-write strategies typically hold cash or fixed income securities and write puts using cash as collateral.

Another key difference within the Derivative Income space is the degree of active vs. passive management. There are three major axes upon which a fund can choose to be active or passive, namely:

- The underlying equities can be based on a passive index like the S&P 500 or the Nasdaq or can be a portfolio of actively chosen stocks
- The options written can be options on a broad market index or options upon individual stocks
- The options can be managed in a passive, "set it and forget it" manner or they can be actively traded

Each of these decision points will lead to variations in the strategies.

It is important to remember that income strategies do not explicitly hedge the market. While they might have lower overall volatility and can help diversify a portfolio in terms of correlation, they are not explicitly mitigating downside risk.

When It Works: Income strategies typically work best in a gently rising market. A covered call strategy does well if the value of the long portfolio edges upward, but not so much that the short calls go in the money and further gains are called away. A put write strategy does well if markets go up, since the cash position will earn interest and the written puts expire worthless, leaving the writer with all the premium. In benign markets, income-based strategies can make a lot of sense.

Risks/When It Doesn't Work: If income strategies do well in calm, benign markets, it stands to reason that they will do poorly in strongly trending markets, either up or down.

If markets are trending strongly upwards, a covered call strategy could see a good portion of its market gains disappear. If a call is written, say, 2% out of the money and the market goes up 6%, the strategy will not enjoy the full upward move in the market. The gains to the strategy will be capped. The strategy essentially sold off the unknown potential for gains for the known gain of the option premium. This should be viewed as an opportunity cost.

The bigger risk to most income strategies happens when markets sell off. A covered call strategy consists of two parts: a traditional long position and some short calls. If markets sell off significantly, the premium collection from the short calls might offset a bit of the downward move in the long portfolio. However, in the face of a significant sell-off the long portfolio is unhedged and premium from selling calls is unlikely to fully offset losses.

If covered call strategies struggle in big up moves or big down moves, what if they are faced with both in a short time span? What if they face not one but multiple big up and down moves? This kind of "whipsaw" environment with multiple big up and down moves is a worst-case scenario for a covered call strategy. The up market moves are continually under pressure or called away while the strategy is exposed to downside losses.

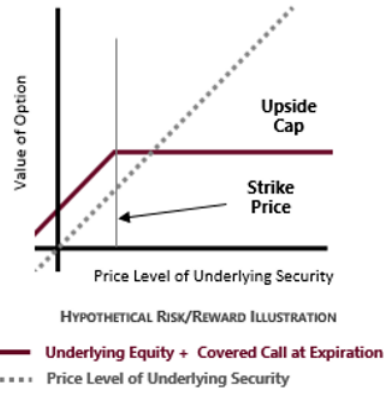
A put-write strategy has a similar risk-return profile. The cash position will help insulate against a market sell-off, but the short puts expose the strategy to losses the more the market goes down.

These risks are magnified if the manager is passive in their option writing. Some strategies follow a passive, "set it and forget it" approach where the option is written and nothing is done until the option expires. Swan believes a more robust, active approach is appropriate when writing calls or puts and may help mitigate the risk of being short an in-the-money option.

The left-hand chart below displays a risk-return chart of a basic, passively managed covered call strategy. All the elements are displayed: slight added value from the premium collection should the markets stay range bound, a limit to the upside potential, and the unhedged exposure to the downside.

Alternatively, the chart on the right illustrates how an actively managed call writing strategy can more robustly deal with upside risks and possibly mitigate opportunity costs in a rising market.

Passive Covered Call



- ✓ Passively write calls OTM at regular intervals.
- ✓ Adjust at expiry.
- ✓ Creates hard upside cap.

Swan's Active Approach

- ✓ Actively manage short-term, Out-of-the-Money (OTM)* calls
- ✓ Seeking to avoid unduly capping upside and improve total return
- ✓ Rules-based, active position and risk management processes

ALPHA/TRADING STRATEGIES

One type of strategy that has faded into irrelevance is alpha or pure trading strategies. The goal of alpha or trading strategies is to generate returns primarily, if not solely, through the trading of options. The role that a core, long holding plays in the overall returns is secondary. In fact, there might not even be a core holding in an alpha strategy. It could be that the core holding is cash or cash equivalents, maybe with a few futures contracts mixed in for some market exposure. Some strategies incorporate higher degrees of leverage or trade in less liquid options. Suffice to say, an alpha strategy will live or die based upon the strength of its trading program.

Unfortunately, these strategies with higher degrees of leverage and/or those who trade in less liquid options have been responsible for a few spectacular "blow-ups" over the last decade. These strategies might have had extreme losses and saw most of their assets disappear during brief volatility spikes, like in early 2018's "Volmageddon" event. An increase in regulatory scrutiny and investor caution has driven most of these funds to extinction. While alpha strategies still exist in the less regulated hedge fund world, in the 1940 Act world of mutual funds and ETFs there are few funds currently engaged in pure trading or alpha strategies.

SWAN GLOBAL INVESTMENTS

Swan Global Investments has been managing the options-based Defined Risk Strategy since July 1997. As options strategies have proliferated, it is fair to say that Swan is a pioneer in bringing option strategies to the broad investing public.

Swan manages strategies across all three categories- Equity Hedge, Defined Outcome, and Derivative Income. A common thread throughout all of Swan's strategies is an emphasis on active management. Swan is a firm believer that in the realm of options, active management can offer tangible benefits above and beyond passively managed, "set it and forget" strategies.

EQUITY HEDGE

Swan's flagship strategy, the Defined Risk Strategy, is first and foremost a hedged equity strategy. The overall goal of the DRS is to directly address the risk of major market sell-offs. We believe the biggest risk any investor faces is systematic risk, also known as market risk. Moreover, we believe if markets sell off by 30%, 40%, 50% or more the traditional risk-mitigation techniques like market-timing and asset allocation offer inadequate protection.

If market risk cannot be diversified away, it should be hedged away. And that is what the DRS is designed to do.

The Defined Risk Strategy has several elements that make it unique amongst its peers.

First, the DRS relies primarily on put options with a long expiration cycle, typically extending two years. One of the reasons why the DRS uses long-term put options is to lock-in their purchase price before a bear market starts. Like most things, the cost of hedging is driven by supply and demand. After a market sell-off begins in earnest, the price of protection can become price-prohibitive. Swan never wants to have to purchase its protection while under duress.

In contrast, most hedging strategies tend to use short-term options. Some may think the lower upfront cost of short-term options justifies their use. However, in our opinion, the subsequent spike in hedging costs in the middle of a crisis outweighs the benefits. Swan regards strategies using short-term options as "penny wise and pound foolish." It is important to note, most of these strategies were launched after 2008 and have not experienced a protracted bear market, whereas Swan's flagship hedged equity strategy launched in 1997 has weathered two large bear markets and other market crises.

Second, the DRS does not hold these put options until expiration. The "time decay" that negatively impacts a put option's value happens as the option nears its expiration date. The DRS avoids the worst of the time decay by actively selling the put option and re-hedging the portfolio halfway through the put option's life cycle.

Because the DRS rolls its hedges rather than allowing the put options to expire, this allows for the "transfer of value" during times of heightened volatility. If the DRS performs its annual rehedge during a time of heightened volatility, one might suspect that the cost of hedging will be higher. This is true; hedging is usually more expensive during periods of market uncertainty. But one needs to remember that the DRS will still own its existing hedge in such an environment, and that the hedge will have a significant amount of time left before expiration. If the cost of hedging goes up, so does the value of the existing hedge on the DRS's books. This allows the DRS to offset the cost, or transfer the increased value, if the rehedge is done during a more volatile environment.
In such a scenario, the DRS will be both a buyer and seller of volatility. In contrast, a strategy using short-term hedges that either expired or were exercised will only be a buyer of volatility.

In addition, the long-term put options give the DRS the opportunity to rehedge the portfolio during a large sell off. If the put options go deep-in-the-money, two things can be inferred: one, the market will have sold off significantly and two, the put options become very valuable. In such a scenario the DRS will rebalance the DRS back to target by liquidating the deep-in-the-money hedge, purchasing a new hedge around current market levels, and then re-investing the remaining proceeds in the market when the market is at a low point. By design, the DRS re-hedge process is "buy low, sell high."

These characteristics make the DRS rather unique.

While the traditional, flagship DRS is primarily a hedged equity solution, there is also an element of additional, supplementary "Derivative Income" trades intended to help offset the cost of hedging. The DRS will engage in the writing of calls and/or puts to generate income.

It is important to remember the role of the income trades in the DRS. The income trades are meant to offset the carrying cost of the hedge in flat markets, help with upside capture in rising markets, and potentially profit from heightened volatility in down markets. It is important to remember that while the income trades are separate from the core equity holdings and the hedge, the role the income trades play is to complement those holdings. We often describe the income trades as "the hedge on our hedge."

Swan Global Investment also manages variations of its actively managed equity hedge strategy that does not engage in short volatility trading. These variations tend to be more conservative, with a reduced risk/return profile. These variations are available in both ETF and separate account format.

It is worth noting that the Defined Risk Strategy has been battle-tested by not one but two major bear markets: the Dot-Com crash of 2000-02 and the Global Financial Crisis of 2007-09. These two bear markets were the largest sell-offs since World War II, and the DRS track record through those events speaks for itself.

DEFINED OUTCOME

Since December 2020, Swan Global Investments has subadvised a family of defined outcome ETFs, all based upon the S&P 500. There are three different risk profiles available—Conservative, Moderate, and an innovative series called "Flex" which has historically offered higher caps than a basic put spread collar structure. These three risk profiles are available in quarterly vintages, resulting in a family of a dozen funds.

Swan recognized early the growth potential of defined outcome funds, and anticipated some of the challenges that investors and financial advisors would face managing a portfolio of defined outcome ETFs. In conjunction with the 12 individual buffered ETFs, Swan brings its decades of active management experience in the creation of a "fund of funds" solution that combines exposure to all 12 individual ETFs in a single fund.

DERIVATIVE INCOME

The latest addition to the Swan family is the Swan Enhanced Dividend Income Strategy. Swan follows an "active-active" approach where both the equity and option positions are actively managed.

Underlying Equity Portfolio- Swan uses a focused index consisting of about 50 equities as the starting point for the strategy. These stocks have been selected for their quality growth metrics and have a history of growing their dividend distributions. Another factor driving the equity index is the option-writing potential of the stocks. All positions must have a healthy options chain so that Swan can write calls on those positions.

Options Written- Swan writes call options on the individual equities within the portfolio, not a broad-based index like the S&P 500 or the Nasdaq 100. While it is certainly more work to manage a portfolio of short calls on individual rather than single calls on an index, Swan believes the profit potential of individual equity call options more than justifies the effort.

Management of the Options- Swan actively manages the short call positions. This is done to optimize the upside potential of the stocks held in the strategy.

This active management could mean:

- At any given point in time, there might be some positions without calls written against them.
- The strike prices will be of varying distance from the current prices.
- The time to expiration of the short calls will vary.
- The time that the trade is open will vary. Swan might close out a position quickly for either profit-taking or loss-mitigation purposes.

Swan fully acknowledges that no trading strategy, active or passive, will work best in every single environment. There will be periods when one will do better than the other. Also, a "set it and forget it" passive strategy is certainly easier to manage. However, Swan built the Swan Enhanced Dividend Income Strategy upon the belief that the active management of equities and options better position investors for total return, sustainable income, and capital appreciation.

SUMMARY

Swan Global Investments has a history of managing options-based strategies that few can match. For many years options were suspiciously viewed as a niche or exotic asset class. However, Swan saw the potential for options to address the shortcomings of traditional asset allocation and Modern Portfolio Theory. Swan's distinct flagship approach, launched in July 1997, weathered two of the largest bear markets in U.S.history as well as a period of historically low interest rates.

The need for hedging strategies and alternative forms of income is as pressing today as it ever was. Thankfully the investing public has come to realize the transforming power options can have on portfolio management. Swan continues to bring its expertise to this space as options-based strategies grow and evolve.

DISCLOSURES

Swan Global Investments, LLC is a SEC registered Investment Advisor that specializes in managing money using the proprietary Defined Risk Strategy ("DRS"). SEC registration does not denote any special training or qualification conferred by the SEC. Swan offers and manages the DRS for investors including individuals, institutions and other investment advisor firms.

All data used herein; including the statistical information, verification and performance reports are available upon request. The S&P 500 Index is a market cap weighted index of 500 widely held stocks often used as a proxy for the overall U.S. equity market. Indexes are unmanaged and have no fees or expenses. An investment cannot be made directly in an index.

All Swan products utilize the Defined Risk Strategy ("DRS"), but may vary by asset class, regulatory offering type, etc. Accordingly, all Swan DRS product offerings will have different performance results due to offering differences and comparing results among the Swan products and composites may be of limited use.

Swan's investments may consist of securities which vary significantly from those in the benchmark indexes listed above and performance calculation methods may not be entirely comparable. Accordingly, comparing results shown to those of such indexes may be of limited use. The adviser's dependence on its DRS process and judgments about the attractiveness, value and potential appreciation of particular ETFs and options in which the adviser invests or writes may prove to be incorrect and may not produce the desired results.

There is no guarantee any investment or the DRS will meet its objectives. All investments involve the risk of potential investment losses as well as the potential for investment gains. Hypothetical performance analysis is not actual performance history. Actual results may materially vary and differ significantly from the suggested hypothetical analysis performance data. This analysis is not a guarantee or indication of future performance. Prior performance is not a guarantee of future results and there can be no assurance, and investors should not assume, that future performance will be comparable to past performance. Further information is available upon request by contacting the company directly at 970.382.8901 or visit swanglobalinvestments.com.

GLOBAL INVESTMENT PERFORMANCE STANDARDS (GIPS®) REPORT

Swan Global Investments, LLC DRS U.S. Large Cap Composite													S&P 500 ("The Benchmark")				
Year	Net-Of-Fee Return	Net-Of-Fee Cumulative Return	Net-Of-Fee Annualized Return	Gross-Of-Fee Return	Gross-Of-Fee Cumulative Return	Gross-Of-Fee Annualized Return	Beta (Net-Of-Fees)	Standard Deviation (External) Net-Of-Fees	Sharpe Ratio (Net-Of-Fees)	# of Accts / Assets in Millions	Total Firm Assets ($MM)	Dispersion (Internal) Gross-Of-Fees	Return	Cumulative Return	Annualized Return	Standard Deviation (External)	Sharpe Ratio
2014	6.11%	333.67%	8.74%	6.74%	416.60%	9.84%	0.28	4.75%	0.65	599 / 434.3	1,810.04	0.65%	13.69%	220.92%	6.89%	8.97%	0.29
2015	-2.23%	323.99%	8.12%	-1.64%	408.14%	9.18%	0.29	5.79%	0.61	766 / 473.21	2,446.11	1.36%	1.38%	225.36%	6.58%	10.47%	0.28
2016	8.90%	361.71%	8.16%	9.55%	456.68%	9.20%	0.29	5.38%	0.64	1,207 / 675.64	3,620.08	0.90%	11.96%	264.27%	6.85%	10.59%	0.31
2017	11.29%	413.84%	8.31%	11.96%	523.26%	9.34%	0.29	4.98%	0.67	1,630 / 982.45	4,975.33	0.78%	21.83%	343.79%	7.54%	9.92%	0.37
2018	-7.01%	377.83%	7.55%	-6.45%	483.07%	8.55%	0.31	6.23%	0.59	1,292 / 756.36	4,063.88	1.13%	-4.38%	324.34%	6.95%	10.80%	0.33
2019	14.69%	448.01%	7.85%	15.38%	572.73%	8.84%	0.31	7.01%	0.63	1,144 / 638.36	3,065.24	1.15%	31.49%	457.95%	7.94%	11.93%	0.40
2020	2.82%	463.45%	7.63%	3.44%	595.85%	8.61%	0.32	9.17%	0.61	893 / 501.09	2,236.86	1.75%	18.40%	560.60%	8.37%	18.53%	0.41
2021	15.38%	550.10%	7.94%	16.07%	707.68%	8.90%	0.33	8.07%	0.66	1,026 / 546.44	2,571.77	0.24%	28.71%	750.23%	9.13%	17.17%	0.47
2022	-10.98%	478.71%	7.13%	-10.45%	623.32%	8.07%	0.33	8.76%	0.57	818 / 414.59	2,202.24	0.40%	-18.11%	596.25%	7.91%	20.87%	0.38
2023	11.96%	547.94%	7.31%	12.64%	714.72%	8.24%	0.33	7.68%	0.58	736 / 403.99	2,105.95	0.42%	26.29%	779.27%	8.55%	17.29%	0.42

Annualized As Of 12/31/2023	Composite Gross Return	Composite Net Return	Benchmark
Since Inception	8.24%	7.31%	8.55%
10 Year	5.35%	4.72%	12.03%
5 Year	6.92%	6.28%	15.69%
3 Year	5.40%	4.77%	10.00%
1 Year	12.64%	11.96%	26.29%

Compliance Statement: Swan Global Investments, LLC ("Swan") claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Swan has been independently verified by The Spaulding Group for the periods July 1, 1997 through December 31, 2023. The verification report is available upon request.

A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. Verification does not provide assurance on the accuracy of any specific performance report. To receive copies please call 970-382-8901 or email operations@swanglobalinvestments.com.

GLOBAL INVESTMENT PERFORMANCE STANDARDS (GIPS®) REPORT (CONTINUED)

Definition of the Firm: Swan Global Investments, LLC is an SEC registered investment advisor providing asset management services utilizing the Swan Defined Risk Strategy ("DRS"), allowing its clients to grow wealth while protecting capital. Please note that registration of the adviser does not imply a certain level of skill or training. Swan Global Investments, LLC is affiliated with Swan Capital Management, LLC, Swan Global Management, LLC and Swan Wealth Management, LLC.

Firm Redefinition: Previously Swan offered and managed The Defined Risk Strategy for its clients which were individual investors. Swan redefined itself to include all client types, including individuals, institutions and sub-advised clients, as of January 1, 2010. This redefinition resulted in a change to Swan's 2009 performance numbers, due to adding all sub-advised clients beginning on June 30, 2009. Additionally, Swan created affiliated entity Swan Capital Management, Inc. on April 13, 2012 to be an advisor and distributor of the Swan Defined Risk Fund launched in July 2012. In December 2014, Swan Capital Management, Inc. converted to Swan Capital Management, LLC. Swan created affiliated entity Swan Wealth Management, LLC to serve as the portfolio manager of the DRS in 2014, and subsequently created affiliated entity Swan Global Management, LLC to serve as the portfolio manager of the DRS starting in 2015.

Name Changes: Swan Consulting, Inc. changed its name to Swan Wealth Advisors, Inc. on April 8, 2011 to better reflect that the Company is a money management firm. Investment consulting firms generally do not manage money. Swan Wealth Advisors, Inc. changed its name to Swan Global Investments, LLC on December 5, 2014 to better reflect that the Company is a money management firm rather than an advisor. Advisors are the Company's clients, and it does not want to give the impression that the Company is competing with other advisors. Instead, Swan Global Investments, LLC offers investment products and manages money for sub-advised clients and the mutual funds of its affiliate Swan Capital Management, LLC.

Composite Inception Date: The inception of the DRS U.S. Large Cap Composite was July 1, 1997.

Composite Creation Date: The DRS U.S. Large Cap Composite was defined on January 1, 2010.

Composite Description: The DRS U.S. Large Cap Composite demonstrates the performance of qualified and non-qualified assets invested in DRS U.S. Large Cap strategies managed by Swan Global Investments, LLC since inception. It includes discretionary individual accounts whose account holders seek the upside potential of owning stock, and the desire to minimize the downside risk associated with owning stock. The Composite relies on LEAPS and other options to manage this risk. Individual accounts own S&P 500 exchange traded funds and LEAPS associated with the exchange traded funds as well as multiple other option trades that represent other indices that are widely traded. The Defined Risk Strategy was designed to protect investors from substantial market declines, provide income in flat or choppy markets, and to benefit from market appreciation. Stock and options are the primary components of the strategy. Portfolios in the composite may include non-DRS securities (securities that are not part of the Swan Defined Risk Strategy) that are excluded from composite performance.

GLOBAL INVESTMENT PERFORMANCE STANDARDS (GIPS®) REPORT (CONTINUED)

Returns: Performance results reflect the reinvestment of dividend and other earnings and are expressed in U.S. dollars. Gross-of-fee performance results do not reflect the deduction of the firm's investment management fees or custodial fees but are net of all transaction costs and withholding taxes (if applicable). Net-of-fees returns are calculated by deducting the higher of either actual management fees or a model management fee equal to the highest tier of the fee schedule (0.60% annual, or 0.05% monthly) from the monthly gross-of-fee composite return. The composite includes portfolios that pay zero commissions on certain securities in the portfolio (e.g., exchange traded funds (ETFs)).

Fee Schedule: The investment management fee schedule for sub-advised clients is as follows. Rate breaks are applied to total aggregate assets under management under the sub-advisory agreement:

Annual fees are 60 basis points (0.60%) on the first $10 Million; 50 basis points (0.50%) on the next $190 Million; 45 basis points (0.45%) on the next $300 Million; 40 basis points (0.40%) on the next $500 Million; and 35 basis points (0.35%) over $1 Billion. Actual investment management fees incurred by clients may vary.

Benchmark: The benchmarks used for The DRS U.S. Large Cap Composite is the S&P 500 Index, which consists of approximately 500 large cap stocks and 60%/40% blended benchmark consisting of 60% S&P 500 Index and 40% Bloomberg US Aggregate Bond Index, a broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS and CMBS (agency and non-agency).

Policies: Policies for valuing investments, calculating performance, and preparing GIPS reports, as well as a complete list and description of composites and broad distribution pooled funds are all available upon request.

Use of Derivatives: The purchase and sale of options are a component of The Defined Risk Strategy Composite. Options are traded on both long-term and short-term horizons to reduce the risk of owning stock and to generate income. Since inception of The Defined Risk Strategy, options have been responsible for a significant portion of total returns. The DRS uses little or no leverage (<2% of total portfolio value). Portfolios are generally balanced annually with approximately 85-90% stock, 10-15% options. Please contact Swan Global Investments, LLC for more detailed information on the use of options in The DRS.

Leverage and Short Positions: The DRS U.S. Large Cap Composite uses a combination of ETFs (long) and options, both long (portfolio has bought a position in a call or put option) and short (the portfolio holds a written call or put option) positions which constitute approximately 85-90% and 10-15% of the portfolio, respectively. The Defined Risk Strategy does not typically borrow money to buy stock on margin and as a result does not use leverage in the traditional sense. However, the DRS uses options as a material part of the strategy and by definition may constitute use of leverage since options typically control a large amount of the underlying security. This does not imply that The DRS portfolio is leveraged. The short option positions that are used to generate income are offset in whole or in part by the long stock and long options positions contained in the portfolio. Regardless, a margin account could be required.

GLOBAL INVESTMENT PERFORMANCE STANDARDS (GIPS®) REPORT (CONTINUED)

Minimum account size: Before January 1, 2013, there was no minimum account size required for inclusion in Defined Risk Strategy Composite. Starting January 1, 2013, the minimum account size required for inclusion in the DRS U.S. Large Cap Composite is $250,000.

Beta: Beta for the Composites has been calculated using the standard formula of: covariance of portfolio and benchmark returns divided by the variance in benchmark returns. The period used in calculations is July 1, 1997 through the end of the period and the frequency of returns used is monthly. Beta is based on returns that are net of Swan fees only. A beta greater than 1.0 indicates that the investment is more volatile than the index, whereas a beta between 0 and 1.0 indicates that the investment is less volatile than the market index. A negative beta indicates the investment performance is counter-cyclical to the market. Values are excluded for the first 3.5 years of Composite implementation (i.e., 1997-2000) to ensure sufficient measurement points for meaningful statistical analysis.

Standard Deviation (External): Standard deviation measures the variability of the Composite's monthly returns, and states that variability on an annualized basis. Annualized standard deviations of monthly returns for both the Composite and benchmark have been calculated using the following method: Standard Deviation of 36 monthly returns multiplied by the Square Root of 12 (which annualizes it). This measure is based on returns that are net of Swan fees only.

Measure of Dispersion (Internal Standard Deviation): The Composite dispersion is measured using standard deviation of returns as stated above. However, from inception to December 31, 2012, the dispersion represented the variability of Net-of-Fees returns within the Composite. After December 31, 2012, the dispersion represents the variability of Gross-of-Fees returns within the Composite to remove the variance in fees per account. Dispersion is measured using only portfolios that were included in the Composite the entire calendar year.

Sharpe Ratio: Sharpe Ratios for both the Composite and the benchmark have been calculated using the standard formula of (Annualized Return – Risk Free Annualized) / Standard Deviation. The period used in calculations is July 1, 1997 through the end of the period and the frequency of returns used is annually. Annualized Returns in this calculation are net of Swan fees only. Risk Free Return values used in calculations are based on 91 Day Treasury Bill returns for the same period. Values are excluded for the first 3.5 years of Composite implementation (i.e., 1997-2000) to ensure sufficient measurement points for meaningful statistical analysis.

Currency: All valuations are computed, and performance reported in US dollars. Past results do not guarantee future performance.

Portfolios in the composite may include non-DRS securities (securities that are not part of the Swan Defined Risk Strategy) that are excluded from composite performance.

GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein.

037-SGI-021125

1099 Main Ave., Suite 206
Durango, CO 81301