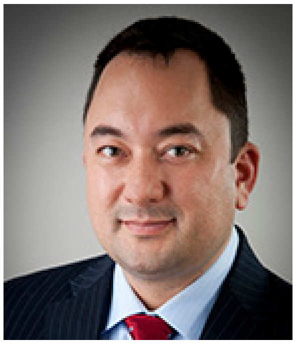
SWAN GLOBAL INVESTMENTS

THE RETIREMENT MULTIPLIER EFFECT

Addressing the combination of withdrawals, inflation, & timing



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RETIREMENT PLANNING CURVEBALLS

Curveball One: Timing

The first curveball is the impact of timing. The success or failure of an investment plan is due in large part to when an initial investment was made, a seemingly random variable. Over the time horizon analyzed in the post "Timing Is Everything?", the ending value of a $100,000 investment in the S&P 500 after ten years could have been as high as $356,657 or as low as $87,006, based solely upon which January 1st the individual opted to make the initial investment.

Curveball Two: Withdrawals

The second curveball is the impact of taking withdrawals from an investment plan, discussed in "Suffering from Withdrawals?" As investors shift from the accumulation to distribution stages of their life cycle, the negative consequences of large bear markets become much more pronounced. Market drawdowns are no longer opportunities to "buy on a low." Instead, retirees are forced to liquidate their holdings during times of market weakness.

TAKEAWAYS

Timing

If you can't predict it, it makes it very difficult to plan for it.

Withdrawals

Withdrawing funds from a sinking market makes it more difficult to recover losses.

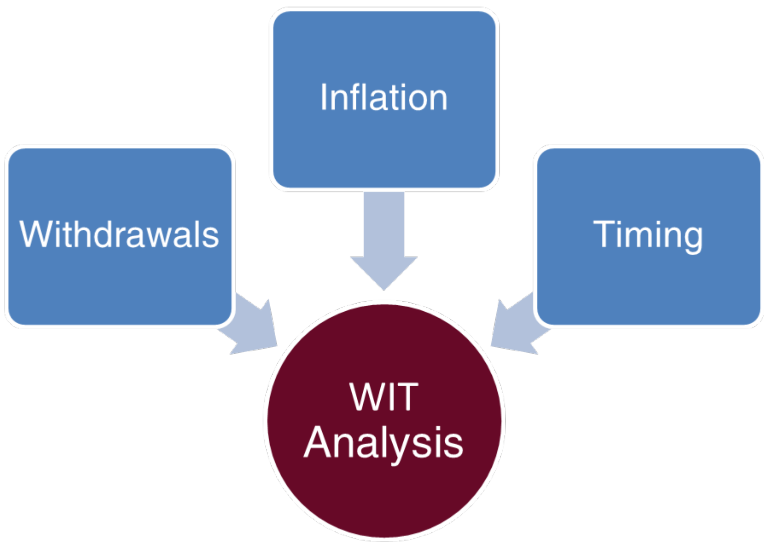
COMBINING WITHDRAWALS, INFLATION, & TIMING

We combine these curveballs with inflation and end up with what we call a "WIT Analysis."

This explores the combined impact of withdrawals, inflation, and timing on an investment.

The intent in using a WIT analysis is to examine how an investment plan might look after a decade in the real world if a retiree is forced to take withdrawals and had the bad luck of investing at the wrong time.

In the following pages we apply this to the S&P 500, the 60/40 portfolio, and the Defined Risk Strategy to showcase



Source: Zephyr StyleADVISOR

why it's important to tackle timing risk for retirees in their the distribution phases.

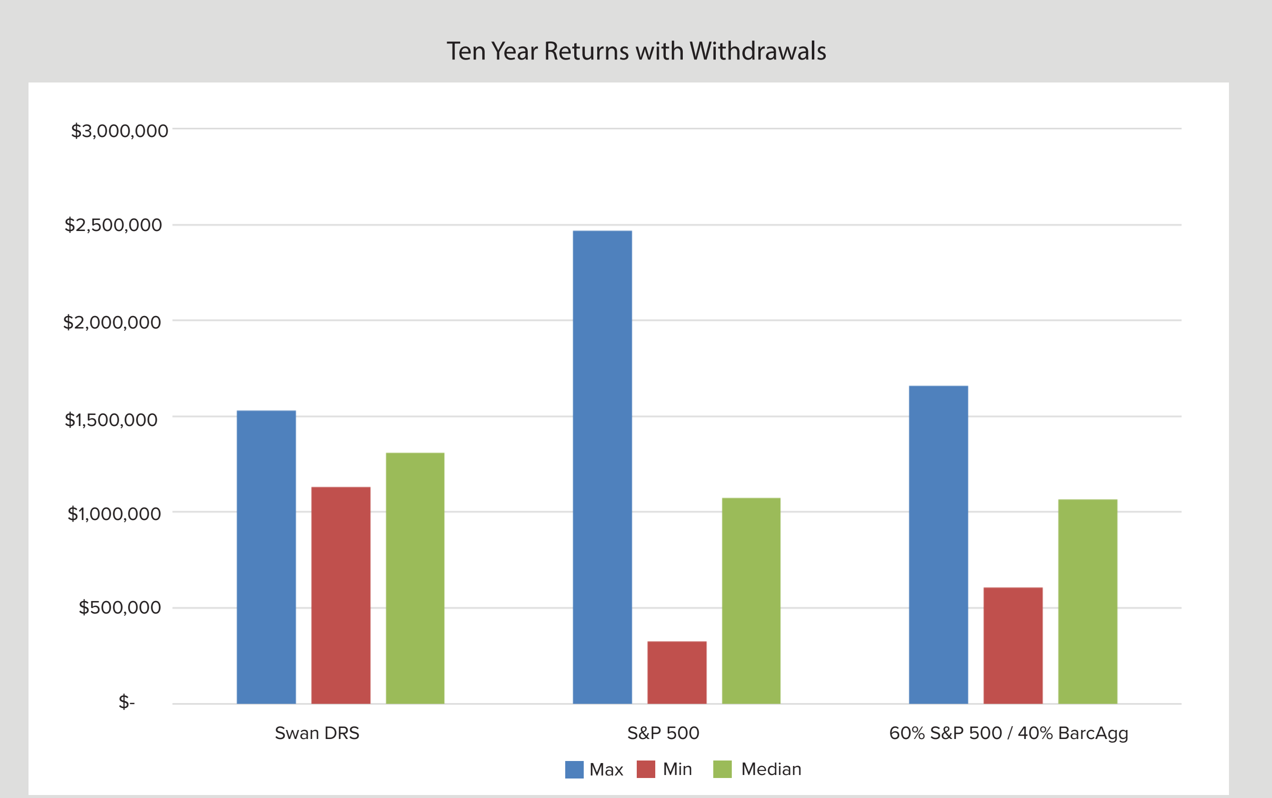
THE WIT ANALYSIS & THE DEFINED RISK STRATEGY

We assume an initial investment of $1,000,000 in one of three options:

- S&P 500
- Swan DRS Select Composite
- Traditional 60/40 Portfolio

Each investment is made for ten years, starting on January 1st. The results are "rolled forward" yearly, meaning the first investment period extended from 1/1/98 to 12/31/07, the second investment period was from 1/1/99 to 12/31/08, and so forth.

However, rather than assuming a simple buy-and-hold for each of those decades, we introduce the idea



Source: Zephyr StyleADVISOR. The Barclays U.S. Aggregate Bond Index and the S&P 500 Index are unmanaged indices and cannot be invested into directly. Past performance is no guarantee of future results. DRS results are from the Select Composite, net of fees, as of 12/31/2019.

of taking out withdrawals, adjusted for inflation.

At the end of each year, we take out $50,000, adjusted for a 2% inflation rate.

How Do Our Three Investment Options Stack Up?

After ten years and $547,486 of withdrawals, the median investment in the S&P 500 still had a remaining value of $1,109,827. However, that average masks a lot of variability:

- The "best case" scenario was an investment made on January 1st, 2010 with an ending value of $2,471,369.
- The "worst case" scenario was an investment made on January 1st, 2000 with an ending value of $324,201.

That unlucky investor was subject to not one but two major bear markets. Forced to take withdrawals in the down years of 2000, 2001, 2002, and 2008. The pool of capital remaining was only $324,201 at the end of 2009.

The traditional 60/40 portfolio had similar ending values as the S&P 500 but with less variability between best and worst.

Ending Values after 10 Years of Withdrawals			
Investment Period	**Swan DRS**	**S&P 500**	**60/40**
Jan-98 to Dec-07	$1,527,319	$1,037,175	$1,098,425
Jan-99 to Dec-08	$1,288,106	$416,610	$631,374
Jan-00 to Dec-09	$1,394,492	$324,201	$608,037
Jan-01 to Dec-10	$1,500,736	$476,519	$713,769
Jan-02 to Dec-11	$1,329,409	$663,175	$833,611
Jan-03 to Dec-12	$1,262,365	$1,249,573	$1,158,001
Jan-04 to Dec-13	$1,531,771	$1,136,545	$1,068,014
Jan-05 to Dec-14	$1,425,969	$1,131,099	$1,076,227
Jan-06 to Dec-15	$1,293,182	$1,109,827	$1,066,546
Jan-07 to Dec-16	$1,130,967	$993,503	$1,002,328
Jan-08 to Dec-17	$1,136,909	$1,154,842	$1,075,558
Jan-09 to Dec-18	$1,177,535	$2,468,462	$1,657,700
Jan-10 to Dec-19	$967,418	$2,471,369	$1,653,998
Median	*$1,293,182*	*$1,109,827*	*$ 1,068,014*

Assumptions	
Starting Value	$1,000,000
WD Rate	$50,000
Cuml WD	$547,486
Inflation	2%
Withdrawal Timing	Annual

Source: Zephyr StyleADVISOR. The Barclays U.S. Aggregate Bond Index and the S&P 500 Index are unmanaged indices and cannot be invested into directly. Past performance is no guarantee of future results. DRS results are from the Select Composite, net of fees, as of 12/31/2019.

The Swan DRS Select Composite posted the best results of the three. The median ending value after a decade, taking out the same $547,486 of withdrawals, was $1,293,182. There was little dispersion between the best decade and the worst decade with values of $1,531,771 and $967,418, respectively.

Full results are below:

TACKLING SEQUENCE RISK

These results illustrate the prime objective of the Defined Risk Strategy: to strike the right balance between upside participation during bull markets and downside protection during bear markets. In doing so, we have typically been able to mitigate the sequence risk that plagues many retiree investors as they are in the distribution phase.

Since its inception in July 1997, the DRS Select Composite has successfully navigated through three bull markets and two bear markets.

IMPORTANT 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. Any historical numbers, awards and recognitions presented are based on the performance of a (GIPS®) composite, Swan's DRS Select Composite, which includes nonqualified discretionary accounts invested in since inception, July 1997, and are net of fees and expenses. The Swan Defined Risk Strategy Select Composite demonstrates the performance of non-qualified assets 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 eliminate most of the 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 spreads 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. Swan claims compliance with the Global Investment Performance Standards (GIPS®). 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. 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.

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 and comparing results among the Swan products and composites may be of limited use. Economic factors, market conditions, and investment strategies will affect the performance of any portfolio and there are no assurances that it will match or outperform any benchmark. Therefore, 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 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. 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. All investment strategies have the potential for profit or loss. Further information is available upon request by contacting the company directly at 970.382.8901 or visit swanglobalinvestments.com. 080-SGI-022620

ABOUT SWAN GLOBAL INVESTMENTS

Investing Redefined

Our mission is to support independent, growth-oriented advisors to be more successful in serving their clients and growing their businesses.

Since 1997, our hedging and options strategies have been redefining investing to directly address the biggest threat long-term investors face: market risk.

Market risk is too big a threat to investors to be dealt with passively. So we hedge it.

Our simple, yet innovative investment philosophy is the foundation of our Defined Risk Strategy, a rules-based, multi-asset hedged equity strategy, with a track record of seeking to generate consistent returns while defining, or limiting, downside risk to improve investment outcomes and managing risk for irreplaceable capital through full market cycles (bull and bear).

Swan Global Investments is an asset manager headquartered in Durango, Colorado, with offices in Puerto Rico and Tampa, Florida.

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