Retirement Portfolio Design for a Changing Economy

Going beyond conventional wisdom to create a better retirement outcome

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EXECUTIVE SUMMARY

Planning for retirement can be confusing and a bit scary. How do you manage your money now so you can be well-prepared financially for retirement? And how do you ensure that your retirement income will last throughout your life? With increased life expectancies, it's critical that you weigh all your options and plan carefully. This paper will discuss traditional retirement strategies, as well as introduce you to a less conventional, but potentially more effective and efficient approach to help you reach your retirement goals.

The Problem

Often, "the way we've always done it" is no longer the best way to achieve something. In retirement planning, a traditional portfolio uses only conventional stock and bond investments. In this paper, we refer to this as the *Traditional Asset Allocation 6040 Portfolio* (TRAA 6040). The problem? Traditional stocks and bonds *on their own* are not efficient for 100% of a retirement income portfolio. They expose a retiree to lower return potential and higher risk.

The Solution

Historically, stocks and bonds have been the mainstay of a typical retirement portfolio. The *Hybrid Income Portfolio* (HIP) offers a change in product allocation to reduce portfolio risk and increase the rate of return potential. The HIP strategy uses a combination of Traditional Investments (stocks & bonds), Structured Investment Products (SIPs) and Fixed Indexed Annuities (FIAs).

In addition to adding SIPs and FIAs, other strategies should be incorporated to lead to a more efficient retirement outcome, including:

- **Social Security Timing:** Using the proper strategy to maximize this guaranteed income source
- **Tax Planning:** Reducing taxes in retirement to increase the net after-tax income annually
- **Prudent Use of Home Equity:** Incorporating HECM loans as a tax-free income source or portfolio safety net
- **Alpha Portfolio Management:** Using active and passive portfolio management in the proper asset classes to add Manager Alpha to potentially increase returns. Manager Alpha is the rate of return an investment manager creates above or below the respective benchmark or index.

Definitions

The following definitions explain some of the concepts and terms used in this paper:

Safe Withdrawal Rate (SWR) is one of the most important factors when creating an efficient retirement income strategy. The SWR is the amount of annual income that can be distributed "safely" from a retirement portfolio under all market conditions (negative markets, average markets or positive markets) with a high probability (typically 90% probability or higher) the income will last a lifetime.

Historically, a traditional stock and bond retirement portfolio could yield a 4% SWR from a portfolio, but recent studies have lowered the SWR to around 2.5%. This reduction in SWR equates to a lower income level realized from a traditional stock/bond portfolio. It is essential to employ strategies that potentially can increase the SWR and create the most efficient retirement income possible.

Multi-Disciplined Retirement Strategies (MDRS)™ is the integration of various financial disciplines such as traditional investments, income distribution, taxes, annuities, Social Security, insurance, home equity, estate planning to create an efficient retirement strategy to maximize a retiree's outcome. Most advisors are biased toward their own financial discipline (stocks & bonds, insurance & annuities, taxes or banking products) and this traditional siloed approach offers retiree's an inefficient retirement strategy. The proper integration of MDRS can dramatically increase the SWR from a retirement portfolio to ultimately increase retirement income. Tax-efficient distributions, reduced portfolio volatility, prudent use of home equity, positive alpha-portfolio management and proper Social Security timing can increase SWR by 1 to 4% by applying all strategies in aggregate.

The Hybrid Income Portfolio (HIP) typically can add 1% or more SWR to a retirement portfolio. Integrating traditional stocks (aggressive risk), structured investment products (moderate risk) and Fixed Indexed Annuities (conservative risk) can increase portfolio return and dramatically decrease portfolio volatility versus using a traditional stock/bond portfolio approach employed by most traditional investment advisors.

Investment Volatility can harm a retiree when withdrawals are taken from a portfolio systematically. Mathematics prove that the portfolio with the lower volatility or risk level will last longer when taking withdrawals, all other factors being equal.

INTRODUCTION

In 1964, Bob Dylan released an anthem called *The Times They Are A-Changin'* and while Dylan's message was about his views on social injustices, the message of change is relevant to our economy today and to the 78 million baby boomers who are preparing for or already in retirement.

Our economy has experienced many changes over the last decade, and we're currently seeing more changes with interest rates at all-time lows and volatility on the rise. Our boomer population faces changes and risks unprecedented in history. In response, retirement-savvy boomers are embracing a new investment approach to secure and protect an income that will last a lifetime. Investments and portfolio design strategies *prior* to retirement are very different from those *after* retirement.

Ten years prior to retirement, the focus is on maximizing portfolio returns with a conventional investment approach. Meanwhile, five to ten years prior to retirement, the approach should be shifting from maximizing your portfolio growth to transitioning the portfolio to an efficient income-producing strategy. Endeavoring to solve the income-for-life equation within ten years to retirement requires a completely unconventional approach.

UNDERSTANDING RETIREMENT RISKS

A recent survey by The American College of Financial Services identified 18 distinct risks[1] that retirees face—any one of which, if not addressed with careful planning and portfolio design, could irreparably damage a retirement nest egg. Below, we explain the major risks or The Big Five that, if identified and controlled in advance of retirement, will reduce or eliminate many other risks.

The Big Five

These major risks—longevity, inflation, volatility, sequence of return, and bonds and interest rate risk—must be addressed in order to give a retiree a much higher probability of success.

LONGEVITY RISK & INFLATION RISK

With life expectancy continuing to rise and many retirees living well into their 90s and beyond, the risk of outliving retirement income sources is a real possibility (see Life Expectancy chart below). Coupled with the effect inflation will have on a retirement potentially spanning 20, 30 or more years makes it essential to account and plan for this possibility. Yet many investors plan for a shorter retirement after exiting the workforce**.** After all, they figure they did their job by saving money in their 401(k) and building a nice nest egg. With the population living longer, that short-sightedness could come at a cost. Both longevity risk and inflation risk are real, and without proper planning, many retirees will face a big shortfall between the amount they save and how much they need.

[1] David Little, "Retirement Risk Solutions," The American College, accessed November 11, 2019, http://retirement.theamericancollege.edu/sites/retirement/files/Retirement_Risk_Solutions.pdf.

For example, let's say that a retiree begins retirement on a total income of $3,000 per month. That same retiree would need $5,432 per month in 20 years at a 3% inflation rate just to maintain their same standard of income. To put it another way, a loaf of bread that costs $3.00 today would cost $5.00 at a 3% inflationary increase over a 20-year period.

"It's imperative to account for longevity and inflation risk in a retirement strategy since many retirees will be funding a retirement that spans longer than they were employed."

What's a retiree to do with this unenviable predicament? The only asset that has historically outpaced inflation has been stocks. However, the downside to stocks is that they are typically extremely volatile and risky on a year-by-year basis. Therefore, any long-term retirement planning strategy must include a diversified portfolio of stocks to help reduce the effects of inflation and the effect of longevity risk. The portfolio must also have some type of risk-control measures to reduce risk and volatility.

Life Expectancy [2]

	65-Year-Old Man	65-Year-Old Woman
50% Chance of reaching age	87	90
25% Chance of reaching age	92	96

VOLATILITY RISK

When in retirement and withdrawing income from a portfolio, it's imperative to reduce portfolio volatility. Recent studies have proven that when withdrawing income from a portfolio, the portfolio with lower volatility will experience a longer lifespan than one with higher volatility. A recent study

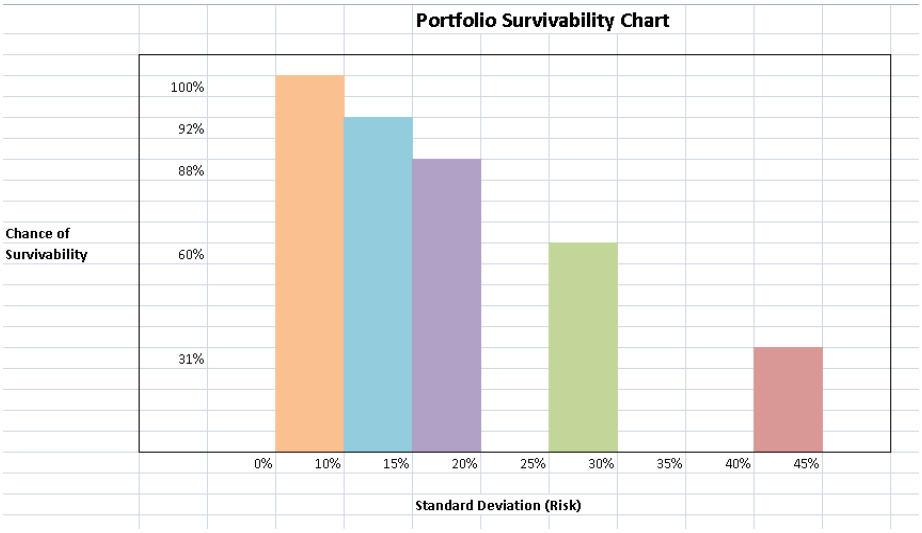
[2] "Longevity and Retirement," Fidelity Viewpoints, March 16, 2018, https://www.fidelity.com/viewpoints/retirement/longevity.

completed by Sure Dividend titled *Why You Must Care About Volatility in Retirement* concluded that "simply put, the greater the volatility of your portfolio, the greater chance you have of outliving your money all other things being equal. By its nature, higher volatility means greater swings in the value of your portfolio."[3]

Standard deviation is a statistical measurement that can be applied to assess a portfolio's volatility or risk level. It is used to determine how much the returns of a portfolio will deviate from the mean or average rate of return from year to year. ***The higher the standard deviation number, the higher the volatility or risk in a portfolio.***

The higher the standard deviation or risk, the shorter a portfolio will survive when taking withdrawals. The math proves that the portfolio with the lower standard deviation or risk will last longer when taking withdrawals for income in retirement, all other factors being equal, as shown in the following chart.

Sure Dividend Study Results



"Simply put, the greater the volatility of your portfolio, the greater chance you have of outliving your money all other things being equal."

–Sure Dividend Research Study

[3] "Why You Must Care About Volatility in Retirement," Sure Dividend, October 14, 2014, https://seekingalpha.com/article/2560525-why-you-must-care-about-volatility-in-retirement?page=2).

The Sure Dividend study assumed the following:

- **Retirement portfolio value:** $1,000,000
- **Withdrawal amount:** $3,333 per month or $40,000 annually (4% withdrawal rate)
- **Inflation factor:** 3% increase per year
- **Rate of return:** 9%
- **Retirement duration goal:** 30 years (age 65–95)

The results of the study concluded that the higher the standard deviation or volatility in a portfolio, the greater chance of portfolio failure or financial ruin. As standard deviation or volatility was lowered, portfolio failure rate was decreased and a higher degree of success (or portfolio survival) was realized.

Sequence of Return Risk

Sequence of return risk is a major risk that must be mitigated by retirees when beginning to take withdrawals from their retirement portfolio. Sequence of return risk is defined by Investopedia as, "the risk of receiving lower or negative returns early in a period when withdrawals are made from an individual's underlying investments." Dramatic portfolio losses early in retirement will reduce the lifespan of the portfolio. Understanding this requires a different way of thinking than when money is invested while accumulating for retirement (without any withdrawals). In the accumulation phase, the sequence of return makes no difference; at the end you wind up in the same place with the same dollar value.

While sequence of return risk cannot be controlled any more than market volatility, its effect can be mitigated. Having a safe money bucket of funds to draw income from in the event of a dramatic downturn in the stock market can be an effective strategy to protect the portfolio from negative sequence of return risk. Research studies have concluded that having this buffer to draw from when market losses occur can have a positive effect on the long-term survivability of the overall portfolio. A major psychological benefit of the income buffer strategy is that it will enable a retiree to withstand the temptation to exit the stock market with their retirement funds during a period of market losses, which might put the retiree in a market timing guessing game. Such an approach often leads to selling at the market low and buying at the market high and dramatically underperforming a long-term buy-and-hold strategy. Numerous studies have shown that the average investor has dramatically underperformed the market returns due to irrational selling and buying decisions.

As an example, during the 2007–2009 stock market downturn, having a safe money buffer or reserve account to withdraw income from (until the stock portion of the portfolio rebounded) would have been a positive step to protect against negative sequence of return risk. As a reference, in an article dated February 2015 by Wealthfront's Andy Rachleff and Duncan Gilchrist, PhD, the 2007–2009 market loss was 56.39% and took the market 1,485 days or 4.06 years to recover. Since 1911, the

average recovery time after a stock market downturn has been 684 days or 1.87 years![4] Based on this fact, it's prudent to have a buffer in place three to five years before retirement begins, and it should cover approximately four to five years of retirement income. A proper buffer can consist of life insurance cash values, a reverse mortgage reserve account, cash or CDs, a guaranteed annuity, or any other account that will have a limited negative effect when there is a stock market downturn.

In conclusion, portfolio losses just prior to retirement or early in retirement can have a dramatic effect on portfolio survival rates and having a safe money buffer[5] in place can have a substantial effect on reducing potential negative sequence of return risk.

Bonds and Interest Rate Risk

Bond Overview

When interest rates rise, traditional bonds lose value. For example, an interest rate rise of 1% will cause a 10-year duration bond to decline by approximately 10% in value. From a historical perspective, current interest rates are at the lowest levels we've seen in more than 50 years. Historically, high-quality US government and corporate bonds have had a 5–6% rate of return, which in today's low-interest-rate environment may be hard to find. In addition, our safe bonds are susceptible to substantial losses when interest rates potentially rise.

Most retirees do not invest directly in bonds, but rather through bond mutual funds or exchange-traded funds (ETFs) that offer professional bond management and immediate diversification. Using bond funds or ETFs in the portfolio can complicate whether the portfolio is truly a lower-risk, high-quality bond fund or a high-quality bond fund integrated with lower-quality bond issues to potentially add yield or return. Many bond funds blur the lines by attempting to add yield or return by purchasing lower-quality bonds or use longer-duration bonds to attempt to add yield to the portfolio. This practice of trying to "juice the portfolio" or add additional short-term return can cause a bond fund to be more aggressive and be more susceptible to risk than is deemed appropriate in a retirement portfolio. It is imperative to understand the type of bond holdings within the portfolio to assess the risk within the bond component of the retirement portfolio.

While a direct buyer of bonds may be able to control the quality of the holdings within the portfolio, they may lack the necessary skill or management expertise to properly diversify the portfolio. Another pitfall of managing individual bond holdings is the lack of diversification and flexibility, since bond funds typically purchase hundreds of bonds within the portfolio while an individual bond investor may have only enough capital to purchase minimal bond holdings.

Historical Bond Returns

It is important to understand the long-term historical returns that have been generated by bonds to evaluate what the current and immediate future holds for these investments for retirement investors.

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[4] "Celine Sun and Andy Rachleff, "Stock Market Corrections: Not as Scary as You Think." Industry Insights, accessed January 11, 2017, https://blog.wealthfront.com/stock-market-corrections-not-as-scary-as-you-think/.

[5] Wade Pfau, "4 Ways to Manage Sequence of Returns Risk in Retirement," Retirement Researcher, accessed November 11, 2019, https://retirementresearcher.com/4-approaches-managing-sequence-returns-risk-retirement/.

The chart below shows the 10-year treasury rate at 4.08% on January 8, 1962 and moving up to a peak of 14.94% on October 12, 1981. During this dramatic rise in interest rates, bonds produced a return well below the historical average. As previously discussed, bonds have an inverse relationship to interest rates; as interest rates rise, bonds lose value and returns are reduced. As interest rates decrease, bonds will gain value and their returns will increase. Additionally, the bar chart shows that from October 12, 1981 to December 31, 2018 interest rates declined from 14.94% to 2.69%, which caused bonds to generate returns well above their historical returns.

10-Year Treasury Rate—54-Year Historical Chart (1962–2018)

Current Market Environment—Low Bond Yields

In our current historically low-interest-rate environment, since January 1, 2012 to December 31, 2018, the 10-year US Government Treasury Bond generated an average rate of return of 1.043%, dramatically underperforming the return from January 1, 1962 to December 31, 2018 of 6.042%.

US Treasury Bonds Returns

	Average Rate of Return
Full Interest Rates Cycle (01-01-1962 to 12-31-2018)	6.042%
Last 8 Years (01-01-2012 to 12-31-2018)	1.043%
Last 10 Years (01-01-2009 to 12-31-2018)	3.179%

Source: https://www.staern.nyu.edu/~adammodar/.pc/datasets/histretSP.xls

In conclusion, investors expecting bond funds to perform as well in the next ten years as they have in the past could be disappointed. As previously discussed, bonds can play an important role in retirement portfolios, reducing volatility and increasing the predictability of returns.

With the current low-interest-rate environment (10-year treasury yield of 1.61% as of February 4, 2020), it's imperative to find a safe alternative or accept much lower overall portfolio returns. Another alternative is to use a more aggressive portfolio mix and accept greater volatility. This more aggressive strategy could be detrimental to the survivability of a portfolio when taking withdrawals, as previously discussed.

CHANGES TO THE RETIREMENT PORTFOLIO

The Safe Withdrawal Rule

The safe withdrawal rule is the percentage of a portfolio that can be safely withdrawn annually (adjusted for inflation), keeping the portfolio intact for a retiree's lifetime. The widely accepted 4% withdrawal rule was established by William Bengen's research in 1994. Bengen based his findings on historical data dating back to 1926 and a portfolio that was invested 50% in S&P 500 stocks and 50% in intermediate term government bonds. Based on today's low-interest-rate environment, many recent studies have refuted the 4% rule and Bengen's findings. A 2013 landmark research report conducted by Morningstar Investment Research entitled *Low Bond Yields and Safe Portfolio Withdrawal Rates* belies the 4% rule and adjusts the safe withdrawal rate down to 2.4% when investing in a portfolio comprised of 60% equities and 40% treasury bonds with a 30-year retirement time horizon.[6]

The Morningstar executive summary states the following:

> Yields on government bonds are well below historical averages. These low yields will have a significant impact for retirees who tend to invest heavily in bonds. This is because portfolio returns in the earliest years of retirement have a larger impact on the likelihood that a retirement income strategy will succeed than returns later in retirement; this is known as sequence risk.[7]

The executive summary continues, "We find a significant reduction in 'safe' initial withdrawal rates, with a 4% initial real withdrawal rate having approximately a 50% probability of success over a 30-year period."

In today's low-interest-rate environment and with the high probability of increasing interest rates (interest rate risk), where do we find a viable alternative to safe money bonds.

[6] David Blanchett, Michael Finke, and Wade D. Pfau, "Low Bond Yields and Safe Portfolio Withdrawal Rates," Morningstar Investment Management, January 21, 2013, https://news.morningstar.com/pdfs/blanchett_lowbondyield_1301291.pdf.
[7] Ibid.

The Traditional 60/40 Portfolio Doesn't Work in Retirement

Using the conventional 60/40 portfolio (60% stock for growth/40% high quality bonds for safe money) reduces the probability for success for today's retiree. Research studies prove that today's markets are more volatile than ever and using a traditional stock and bond portfolio is not the most efficient method to reduce the volatility and sustain portfolio life. As previously discussed, the portfolio with lower volatility, when taking withdrawals, will survive longer in retirement.

As we all witnessed during both the 2001–2002 and 2007–2008 economic downturns, a portfolio of stocks and bonds lost more than 30% value. A Morningstar analysis indicated that a portfolio consisting of 60% global stocks and 40% high quality bonds experienced a 30.12% loss in value from March of 2008 to February of 2009.[8] A traditional 60/40 retirement portfolio employed by most advisors or individual retirees yields potentially higher volatility and dramatically reduced bond returns. This conventional portfolio does not bode well for today's retirees.

A New "Safe Money" Strategy

Considering the current interest rate environment, many individual investors and advisors are looking for a "safe money" alternative to traditional treasury bonds. It's imperative to understand that there are many different types of bonds and each has its own unique risk and return characteristics. Many advisors and individuals use high yield bonds, convertible bonds, and floating-rate loans as a replacement for the safe treasury bonds to increase the yield and total return potential. These aggressive bonds do offer much higher yield and growth potential than traditional "conservative" treasury bonds. However, as evidenced in the 2008 market downturn (see chart below), they expose investors to much higher volatility and loss potential.

Historical Return Chart: Morningstar Data as of Release Date 06-30-2017

Asset Class	2008 Return
Aggressive Stocks	
S&P 500 Index	**-37.00%**
Aggressive Bonds	
High Yield Bond Index (HYBs)	**-26.13%**
LSTA Leveraged Loan Trust (FRLs)	**-29.10%**
Bank of Am Convertible Bond Index (CBs)	**-29.44%**
Conservative Government Bonds	
Barclays Govt Bond Index - 1–5 Yr. Trust	**8.41%**

Like stocks, high yield bonds (HYBs), convertible bonds (CBs) and floating-rate loans (FRLs) are susceptible to high volatility. In the market downturn of 2008, HYBs lost 26.13%, CBs lost 29.44% and FRLs were down 29.10% respectively. During that same year, low-risk government treasuries

[8] Morningstar® Advisor Workstation℠, Morningstar Analysis Snapshot Report, June 23, 2017.

gained 8.41%. It's important to understand that there are many different types of bonds, and each has its place in a retirement strategy. However, these aggressive bonds are better used for the aggressive portion of the portfolio to diversify within the stock component, rather than as safe money alternative. Trying to obtain extra return from these aggressive bonds adds additional risk of loss and increased volatility, which is never good for a retirement portfolio. On the surface these bonds may look attractive, but after further review they are not suitable as a replacement for the safe portion of a retirement portfolio.

In today's low-interest-rate environment and with the potential for rising interest rates, the traditional solution should be to use ultra-short duration, high-quality corporate or government bonds. These ultra-short duration bonds will offer less return potential but will have much less negative effect in a rising-interest-rate environment. The consequence of low bond yields is the need for larger amounts of retirement savings to generate the desired retirement income.

Enter a New Asset Class: Fixed Indexed Annuities Offer a Viable Alternative

Fixed Indexed Annuities (FIAs) can be an exceptional non-traditional bond alternative because they offer principle protection with reasonable returns and work well as a safe money alternative.

A 2009 University of Pennsylvania Wharton School of Economics study suggested that "the fixed indexed annuity may be considered a separate asset class, when compared to taxable bond funds and fixed annuities."[9]

The study concluded that

- FIAs are designed to have limited downside returns associated with declining markets while achieving respectable returns in more robust equity markets,
- the returns of real-world fixed index annuities analyzed in this paper outperformed the S&P 500 Index over 67% of the time, and
- the FIAs studied outperformed a 50/50 mix of 1-year Treasury bills and the S&P 500 Index 79% of the time.

FIAs are a type of fixed annuity that is backed by some of the largest and most financially solid life insurance companies in the world. FIA's interest is tied or plugged into an external index like the S&P 500, the EAFE international stock index, or a combination stock and bond index. An FIA credits interest as a percentage of the index return that they are plugged into. Typically, the more aggressive the index, the lower the participation rate or percentage of gains in the selected index.

[9] Wharton Financial Institutions Center, accessed October 5, 2009, https://fic.wharton.upenn.edu/search/#q=fixed%20index%20annuity&t=All

Conversely, the lower the volatility of the index plugged into, the higher the participation rate or percentage of gain the FIA will credit to the account.

In an article entitled "The Tortoise and the Hare, Consistency Pays Off," Wealthvest wrote, "The Fixed Indexed Annuity (FIA) product design is unique. Using FIAs, retirees have the potential to receive a percentage of the index return as interest credits with no risk of loss due to market declines (guaranteed principle). Returns from FIAs have been steady since 1999. Fixed indexed annuities averaged a 4.63% annualized return for all five-year holding periods from 1999–2015."[10]

It's very important to understand that FIAs are a safe money alternative to bonds offering absolute principle guarantees. This means that if the index loses value, the FIA will receive a 0% interest credit in that year but will not suffer a loss to the original principle value. They are designed to offer competitive returns commensurate with bonds and are *not* an alternative to the stock market. FIAs calculate interest based on the insurance companies' hedging strategy used to protect the principle value of the investment. Ultimately, the cost of the hedging strategy to protect against loss from the index selected will determine the crediting rate paid to the FIA owner. Various forms of crediting strategies exist from the FIA contract universe such as participation rates, caps and spreads. High-quality, low cost FIAs designed for accumulation can offer highly competitive interest rates with absolute guarantees.

A recent research report (January 2018) written by Roger Ibbotson, PhD from Yale University entitled *Fixed Index Annuities: Consider the Alternative*[11] concluded that

- FIAs help control financial market risk and mitigate longevity risk,
- in simulation, using dynamic participation rates and uncapped index crediting designs, a generic large cap equity FIA using a large cap equity index outperformed long term bonds with similar risk characteristics and better downside protection over the period 1927–2016, and
- an FIA may be an attractive alternative to traditional fixed income options like bonds to accumulate financial assets (tax-deferred) prior to retirement.

NOT MANY FIAS MAKE THE GRADE

FIAs can offer growth, but it's important to know what you're purchasing. As with any product, insurance companies price annuities to make a profit. Expenses, including commissions, are included in that pricing. The higher the commission for a product with the same contract provisions, the less money is left over to credit interest on the policy or provide other policy benefits. Therefore, it's imperative to use high-quality, low-cost FIAs. Many FIAs pay high commissions, which ultimately reduce the effectiveness and the return potential. Additionally, it's important to use high-quality, low-

[10] Rethinking Retirement: The Tortoise and the Hare, Consistency Pays Off, Wealthvest, 04/16.
[11] Roger G. Ibbotson, PhD Chairman & Chief Investment Officer, Zebra Capital Management, LLC Professor Emeritus of Finance, Yale School of Management Email: ZebraEdge@Zebracapital.com, Fixed Indexed Annuities: Consider the Alternative, January 2018.

cost FIAs that are consumer friendly. FIAs have many moving parts and are complex. It's extremely important to understand the nuances between the many contracts and company products available. As with any investment (stocks, bonds, mutual funds, ETFs or annuities) there are the good, the bad and the ugly, and proper due-diligence and analysis is essential for optimal performance.

Liquidity

Typically, FIAs have contract terms ranging from 5 to 15 years in duration. Most FIAs have a penalty for withdrawing money made during the initial contract term. Although, during this contract term most have a liquidity feature allowing for a 10% penalty-free withdrawal annually that can be used for income needs. After the initial contract term, 100% of the funds in the FIA are accessible.

Bonds have no such liquidity feature guaranteed. A bond investor can realize a capital gain (if interest rates are decreased) or suffer a capital loss (if interest rates are increased) if the bond is sold prior to the maturity date of the bond.

THE OPTIMIZED RETIREMENT PORTFOLIO

A recent research study commissioned by Nationwide Financial and completed by Morningstar Investment Management LLC, compared a traditional 60/40 stock and bond portfolio to a portfolio consisting of stocks, bonds and FIAs. The study concluded that by repositioning a traditional retirement portfolio consisting of 60% equities and 40% bonds to a portfolio consisting of 36% equities, 24% bonds and 40% FIAs offers virtually the same return, but with a 40% reduction in potential portfolio risk and volatility, both of which are the number one objectives for your portfolio as you head into retirement. The study used Nationwide's New Heights fixed indexed annuity in combination with stock and bond indexes to compile the results.[12]

This new, unconventional portfolio design integrating traditional investments (stocks and bonds) with an allocation to FIAs (for portfolio volatility reduction) offers the optimum blend of growth and risk reduction for maximum retirement portfolio sustainability.

Additionally, this alternative portfolio addresses the challenges of the economy and the myriad of risk retirees will face as they enter a new phase of life. This combination approach of turbo charging a portion of the portfolio through stocks, while providing for safe money through bonds and insurance (FIAs), strikes the proper balance between risk and return to provide a reliable and sustainable income stream for life.

[12] Shift Away from Potential Risk and Toward Potential Return, Nationwide (Morningstar), June 2016.

FIAs Versus High-Quality Government Bonds

Interest Rate Effect

Bonds have an inverse relationship to interest rate movements. As interest rates rise, bonds will lose value. Conversely, as interest rates decrease, bonds will typically go up in value and benefit from an increasing-interest-rate environment.

An FIA's interest crediting strategy will typically increase as interest rates rise, while the FIA's interest crediting strategy will be reduced in a declining-interest-rate environment.

Relationship to interest rate movements:

- Bonds have an inverse relationship to interest rates.
  - As interest rates rise, bonds generally lose value.
  - As interest rates decline, bonds generally gain capital appreciation.

- FIAs typically have a positive relationship to interest rate movements.
  - As interest rates rise, FIA interest crediting rates will generally increase.
  - As interest rates decline, FIA interest crediting rates will generally decline.

In summary, if interest rates hold at the current 1.79% level (as of 12/11/19) or increase over the foreseeable future, FIAs will offer additional value over high-quality bonds. If interest rates decline, bonds will pick up capital appreciation and will be a viable safe money alternative again. In this historically low-interest-rate environment and with the high probability of increasing rates, FIAs are a viable safe money alternative to bonds for the foreseeable future.

Another Alternative to Consider: Structured Investment Products

What Are Structured Investment Products?

> Structured investment products, or SIPs, are types of investments that meet specific investor needs with a customized product mix. SIPs typically include the use of derivatives. They are often created by investment banks for hedge funds, organizations, or the retail client mass market. –Investopedia, May 14, 2019

Understanding Structured Investment Products

Structured Investment Products are created by investment banks and insurance companies and often combine two or more assets, and sometimes multiple asset classes to create a product that pays out based on the performance of those underlying investable indices. There is no single structure in Structured Products and they all have different rules and functions. There are no uniform set of

standards in these packages. SIPs can be designed to be aggressive and leverage returns or conservative to reduce risk or volatility in a portfolio.

SIPs can be designed to reduce investment losses while participating in a percentage of the investment gains on an investable index. Using a conservative or moderate SIP program in a retirement income portfolio offers reasonable growth potential while reducing overall portfolio volatility. When taking withdrawals from a retirement portfolio, integrating a conservatively structured SIP can reduce overall portfolio volatility increasing the probability of portfolio survival.

It is extremely important to understand that SIPs are complex vehicles and should be purchased with reputable companies that offer contractual guarantees and have the breadth of operations to back those guarantees.

THE UNCONVENTIONAL, MORE EFFECTIVE PORTFOLIO SOLUTION…LESS IS MORE

When in retirement and taking withdrawals, LESS is MORE., that is, LESS risk brings MORE portfolio value. The truth is in the research that backs the Optimized Retirement Portfolio to create an unconventional 36/24/40 portfolio design as validated in the Nationwide/Morningstar study. This multi-discipline approach (traditional investments, structured products and annuities) includes both guarantees for safety and security (FIAs and structured products and globally diversified stocks for growth and inflation protection). Rational retirement solutions backed by research and retirement analysis are what retirees need, *not* fear.

As concluded in the research, a combination of stocks, bonds and FIAs can potentially offer better risk-adjusted returns than a traditional stock and bond portfolio alone. Reduced portfolio volatility leads to longer portfolio life expectancy when taking income from the portfolio, which in turn could offer retirees a better retirement outcome.

Adding conservative/moderate SIPs to the optimized portfolio will further reduce risk and enhance return potential and, as discussed previously, lower portfolio risk will increase portfolio survivability. It's important to understand that the combination of global stocks/bonds, FIAs and SIPs is not a one-size-fits-all proposition. Depending on the retiree's income requirements, risk tolerance and other variables, the combination will vary to determine the optimal mix.

Additional Income Guarantees

Some individuals require more guaranteed income sources within the income distribution strategy developed and would like to incorporate either Single Premium Immediate Annuities (SPIAs) or Guaranteed Minimum Income Riders (GMIBs) to accommodate this requirement. Others are more aggressive and would like to use more traditional investments that can offer more growth potential, but with less guaranteed income. Regardless of the strategy used, it's imperative to "stress test" the strategy, using sophisticated retirement planning technology to assess the effect different economic

conditions will have on the retirement outcome. This process is designed to test each retirement strategy to assure the portfolio, and ultimately the income stream, will last a lifetime under all circumstances.

Proponents of the Unconventional Optimized Retirement Portfolio

So, who are the proponents of the Optimized Retirement Portfolio? Certainly not insurance agents and certainly not investment advisors. Why? Two possible reasons: they aren't properly licensed and/or they don't understand the interrelationship of traditional investments, SIPs and FIAs in retirement planning and the intricacies of each discipline.

We believe that any advisor or company that discounts or dismisses an entire discipline or industry as "bad for you" is either ignorant to the research or just simply biased to one extreme or the other. The empirical research as discussed in this whitepaper (and a myriad of additional academic retirement studies) indicates that a strategy that employs both insurance-based products and traditional investments will offer the best retirement outcome in almost all retirement situations. It's a travesty when an investment professional proclaims that "annuities are bad" or when an insurance agent claims that "the stock market is too risky." These false, biased claims have *no* independently backed research and ultimately harm retirees trying to find the proper retirement solutions.

Retirement Stress Testing

Significant portfolio losses or lower portfolio returns early in retirement can have a detrimental effect on the long-term outcome of a retirement. This phenomenon is known as negative sequence or return risk. For example, a retiree who retired in 2008 and experienced a 20%, 30% or even 40% portfolio loss in a traditional portfolio will be hard pressed to recover, and portfolio failure is a real possibility regardless of the market returns moving forward.

Conversely, a retiree who was fortunate to retire in 2009 and experience one of the longest "bull markets in US history has an extremely high probability of enjoying a very prosperous retirement for the remainder of his or her life. This is known as positive sequence of return.

Sequence risk, also called sequence of return risk is the risk of receiving lower or negative return early in a period when withdrawals are taken from individual's underlying investments. The order of the sequence of the investments returns is a primary concern for retirees who are living off the income and capital of their investments. It's not just the long-term average returns that impact your financial wealth, but the timing of those returns. When retirees begin withdrawing money from their investments, the returns during the first few years can have a major impact on their wealth.[13]

[13] https://www.investopedia.com/terms/s/sequence-risk.asp

The advisors in our network have used a sequence of return stress test analysis to analyze a retiree's personal retirement situation in many different market environments.

A previously discussed, a Negative Sequence of Return market environment is one that experiences very negative returns in the first ten years of retirement. This potentially is the worst-case scenario a retiree can retire into, and stress testing in this negative market environment will offer the ability to see how the retirement plan would fare in such a market environment. An example of a negative market environment would be retiring into the 2000–2002 market downturn that had experienced over a 50% total market loss during this timeframe. Another recent example would be retiring into the 2007–2008 market environment when the S&P 500 Index lost more than 40% of its value during this timeframe. These dramatic losses would have a lifelong impact of the withdrawal rate that could be realized by a retiree.

On the opposite side of the equation is a Positive Sequence of Return market environment. In this market environment, the retiree would enjoy a much higher than average rate of return on investments early in retirement. An example of a Positive Sequence of Return environment would be retiring into the latest bull market from 2009 to the present. The stock market, during this timeframe, has experienced one of the best market environments in our nation's history with the S&P 500 exhibiting more than a 13% average rate of return with very little volatility until recently. These dramatic gains would have a very positive effect and offer a much higher probability of retirement success (not running out of money) than someone who retired in a negative market environment.

We cannot control the market environment we retire into, but we can mitigate sequence of return risk by employing buffer strategies, proper asset allocation and product allocation. Retirement stress testing can be conducted using sophisticated technology to assess what strategies offer the highest SWR based upon a retiree's specific variables, asset levels and income needs.

A retirement stress test will help a retiree understand what initial withdrawal rate can be taken from the portfolio without running out of money in each market environment. Balance is of the utmost importance when developing a retirement income portfolio. An ultra-aggressive all-stock strategy may be best in a positive market environment but will offer no protection in a negative market environment. On the other end of the spectrum is the ultra-conservative portfolio that will protect in the negative market but offer no growth potential. It is this delicate balance between aggressive stocks for growth integrated with principle protected investments for portfolio risk reduction that offers the best outcome across all market environments (negative, average and positive sequence markets).

In Retirement Safe Withdrawal Rate Is the New Rate of Return

When approaching retirement or in retirement, Safe Withdrawal Rate (SWR) is more important than Rate of Return (ROR). We see many pre-retirees and retirees attempting to create the highest ROR in their portfolio by trying to get the last gasp out of the stock market with little or no concern about the risk they are exposed to. Approximately five years prior to retirement, it is important to shift this paradigm from creating the maximum ROR to creating the maximum SWR from the retirement portfolio. As we have discussed in this paper, market volatility is a portfolio killer in retirement when

taking withdrawals. That's why it is imperative to be concerned with how much income your portfolio can safely create in all market environments versus with getting the maximum return at the expense of market risk.

The Hybrid Income Portfolio Strategy

A Hybrid Income Portfolio (HIP) strategy is a retirement portfolio solution that offers growth potential and volatility reduction for those nearing or recently retired. Following the research (as highlighted in this paper), our HIP integrates FIAs, Structured Investments, SPIAs and globally diversified stocks in combination to offer the lowest potential risk, highest potential return and highest probability of retirement success.

HIP Strategy Highlights

- Combined traditional stocks/bonds, SIPs & FIAs to reduce risk & potentially increase returns
- Use Alpha generating strategies to add positive manager effect to a portfolio
- Combination can increase Safe Withdrawal Rate by 1–2% over a traditional 6040 stock/bond strategy

A Case Study

Introduction

To illustrate the impact the HIP Strategy can have on a retirement outcome, the following case study was completed. This case study uses the ***Retirement Stress Testing technology***[14] used by Her Retirement affiliated advisors to assess what is the best portfolio design to use in retirement for each client. This study will compare the outcome of using the HIP 402040 strategy versus the Traditional Asset Allocation (TRAA) 6040 strategy.

The combination of global stocks/bonds, FIAs and SIPs is different for each retiree based upon the variables, income needs and asset levels to create the most efficient retirement outcome. In this Case Study, the HIP 402040 retirement model incorporates 40% global stocks, 20% Structured Investment Products (SIPs) and 40% Fixed Indexed Annuities (FIAs).

[14] Case Study Technology: RetireUp Classic Edition, https://www.retireup.com/classic.

Case Study:

TRAA 6040 Vs HIP 402040

Retirement Stress Test Variables

Current Ages
Mr. Smart – 60
Mrs. Smart – 61

Retirement Age
Mr. Smart – 65
Mrs. Smart – 65

Total Assets
Current Investable Assets: $1,950,194
Home Value: $357,902

Required Income Target
Net Income: $13,500/Monthly (net after tax)

Rate of Return Assumptions Used
Global stocks @ 8.0% net
Bonds @ 2.0% net
Equity Index Annuities @ 4.5%
Structured Index Products (linked stock market indices) @ 8.0%

Inflation Assumption Used
Inflation @ 2% annually

Additional Expenses
Health care $18,000/annually per couple @ 3.6% inflation

Retirement Scenario Overview

Below you will find a summary of each retirement scenario. The Income Stability Ratio is the amount of retirement income that will not be affected by the stock market volatility.

Plan A: Current Scenario - TRAA 6040

- Retirement income generated: $13,500 Monthly (net after tax)
- Retirement income inflated @ 2% annually

- Current plan with traditional 60% stocks & 40% bonds
- Social Security filing — both on own benefit at age 65
- Rate of Return estimate = 5.50%

Plan B: Hybrid Income Portfolio (HIP) 402040

- Retirement income generated: $13,500 Monthly (net after tax)
- Retirement income inflated @ 2% annually
- HIP plan with 40% global stocks, 20% Structured Investments & 40% FIAs
- Social Security filing — both on own benefit at age 65
- Rate of Return estimate = 6.50%

Optimized Retirement Income Grid

Optimized Income Level = The ***maximum net monthly income*** (inflation adjusted @ 2%) that can be generated by the scenario, leaving a minimal portfolio balance at the end of the projection (Mr. Retiree's age 95)

	Negative Sequence	*Average Sequence*	*Positive Sequence*	***Safe Withdrawal Rate***
PLAN A **TRAA 6040**	$9,450	$10,800	$14,850	**4.11%**
PLAN B **HIP 402040**	$12,825	$15,525	$20,925	**5.70%**

CHANGING THE VARIABLES

The Safe Withdrawal Rate can be affected by changing variables, which is a very important fact to understand. For instance, in this case study Mr. & Mrs. Smart wanted to assume a 2% inflation adjustment instead of a 3% adjustment, as was used in the Morningstar and Bengen studies. This changes the entire dynamics of the SWR calculation offering a higher SWR with both scenarios.

In conclusion, the safe withdrawal rate for the Traditional Asset Allocation Portfolio (TRAA 6040) is 4.11% versus 5.70% for the Hybrid Income Portfolio (HIP 402040).

Change in Product Allocation

A change in product allocation can have a dramatic impact on reducing portfolio risk and enhancing portfolio returns. It is important to optimize product selection to maximize returns for the risk assumed in the retirement income portfolio.

- **Traditional Asset Allocation 6040 Portfolio**

  In this scenario, the Traditional Asset Allocation 6040 (TRAA 6040) uses only traditional stock and bond investments. Traditional stocks and bonds on their own are not efficient for 100% of a retirement income portfolio. They expose a retiree to lower return potential and higher risk, which will reduce the SWR to 4.11%.

  - **SWR:** 4.11%
    - **Assumed aggregate Rate of Return:** 5.50%
    - **Assumed Risk (with a hypothetical 40% stock market loss):** -28%

- **Hybrid Income Portfolio (HIP) 402040**

  The Hybrid Income Portfolio offers a change in product allocation to reduce portfolio risk and increase the rate of return potential. The HIP strategy uses a combination of traditional investments (stocks & bonds), structured investments and Fixed Indexed Annuities (FIAs).

  This reallocation to the HIP 402040 offers a more efficient portfolio with higher expected returns and lower risk or portfolio volatility than a traditional stock and bond portfolio.

  - **SWR:** 5.70%
    - **Assumed aggregate Rate of Return:** 6.50%
    - **Assumed risk (with a hypothetical 40% stock market loss):** -18%

Other Considerations to Raise Safe Withdrawal Rate

In addition to changing variables and product allocation there are additional strategies that should be incorporated to dramatically increase a retiree's Safe Withdrawal Rate. We have identified four additional strategies that can be a major factor in raising a retiree's Safe Withdrawal Rate. These additional items should be addressed and potentially included in your retirement plan to lead to a more efficient retirement outcome:

- **Social Security Timing:** Using the proper strategy to maximize this guaranteed income source
- **Tax Planning:** Reducing taxes in retirement to increase the net after-tax income annually
- **Prudent Use of Home Equity:** Incorporating home equity as a tax-free income source or portfolio safety net
- **Alpha Portfolio Management:** Using active and passive portfolio management to potentially increase portfolio returns

Conclusion

Understanding your personal Safe Withdrawal Rate is paramount to creating an efficient retirement strategy that will last a lifetime. Using a retirement stress test technology can help identify how much you can withdraw safely and identify how different strategies can affect your overall outcome in various market environments (negative, average or positive).

Efficiency in retirement and increasing your Safe Withdrawal Rate is accomplished through proper product allocation (not just stocks and bonds), tax planning, prudent use of home equity and creating a portfolio with alpha generating managers. This combination can have a dramatic impact on your portfolio survivability creating the maximum income with what you have.

How to Implement the Hybrid Income Portfolio Strategy

How can you implement this progressive, unconventional, research-based portfolio design? You can try to do it yourself (which is quite complex and requires a deep understanding of the many financial disciplines) or you can work with a qualified retirement advisor who understands how each discipline integrates together. It's important to make sure that he or she is experienced not only with this type of portfolio strategy, but also in retirement planning and in the use of sophisticated retirement and investment planning technology. Few advisors have the knowledge in both insurance and investment disciplines to offer this truly objective retirement solution.

Our mission at Her Retirement is to help you better prepare for and prosper in retirement through education and coaching. We can also connect you with a network of experts we have vetted for your benefit. A retirement advisor in our network is available at any time for a complimentary income and portfolio assessment.

We also encourage you to use our retirement readiness platform and coaching services to know more & have more (however you define more).

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