HB RETIREMENT®

MARKET STRATEGY VIEWPOINT

The Sequence of Returns and Your Retirement

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The timing of a market drawdown and the compounding of returns can have significant effects on your financial asset trajectory in retirement.

Sequence Risk - Risk associated with the order or sequence of investment returns as individuals approach or begin retirement.

The Mathematics Behind Your Savings Longevity

Many individual investors work for years to steadfastly build their nest-egg for retirement. An early start to retirement saving, systematic investing, and a prudent investment plan are variables that can help ensure you do not outlive your retirement reserves. And a working lifetime of healthy portfolio returns no doubt aids in building those retirement stores. Perhaps mistakenly, many investors tend to focus more on strategies that emphasize upside investment potential and may ignore the meaningful mathematics of losing money. One important factor that often gets overlooked as investors prepare for their retirement is something called the sequence of returns. That is, the order of investment returns as you near or begin your retirement can have a material impact on the longevity of your nest-egg.

The mathematical reasoning behind the sequence of returns is driven by compounding. When materially negative returns occur as one approaches retirement, or at the onset of retirement, the investor is left with a smaller base on which future positive returns can compound. This negative effect can be exacerbated during the early retirement years as you erode your portfolio's dollar value with periodic withdrawals. Thus, materially negative returns near or in early retirement could result in savings that run out much sooner than expected.

Retirement Paths Illustrated

Perhaps the best way to explain the potential impact of the sequence of returns (sequence risk) is through scenario analysis. For illustration we have drawn up two hypothetical paths of a retirement nest-egg to shed a bit of light on potential retirement outcomes.

Scenario 1: In the first scenario we will chart a retirement savings course using real historical returns of a blended portfolio and annual withdrawal assumptions.

Scenario 2: In the second scenario, we use the same annual pattern of withdrawals and we will incorporate nearly the same historical returns. The one adjustment that differs from Scenario 1 is we will assume 2008's financial asset returns occur in the first year of retirement.

HB Retirement - We specialize in the investment design assistance and function of corporate retirement plans and wealth management for individuals. We provide insight and specialized support to assist you in managing your fiduciary obligations, and assist your employees with retirement planning.

For the purposes of this analysis we will assume each investor (scenario) has $1,000,000 for retirement and each will be withdrawing $90,000 annually during retirement. For Scenario 1 we will use the 1989 –2017 time period to define the asset return stream through the hypothetical period. Scenario 2 will be defined by the same historical returns except equity and bond return for 2008 will be swapped for 1989. This helps illustrate the impact of a material asset price drawdown. These factors are detailed in Table 1.

Table 1: Scenario Variables

	Portfolio at Retirement	Annual Withdrawal	Period Returns	Portfolio Allocation*
Scenario 1	$ 1,000,000	$ 90,000	1989-2017	60% Equity/ 40% Bond
Scenario 2	$ 1,000,000	$ 90,000	2008, 1990-2017	60% Equity/ 40% Bond

Equity = S&P 500 Index; Bond = Bloomberg Barclays U.S. Aggregate Bond Index

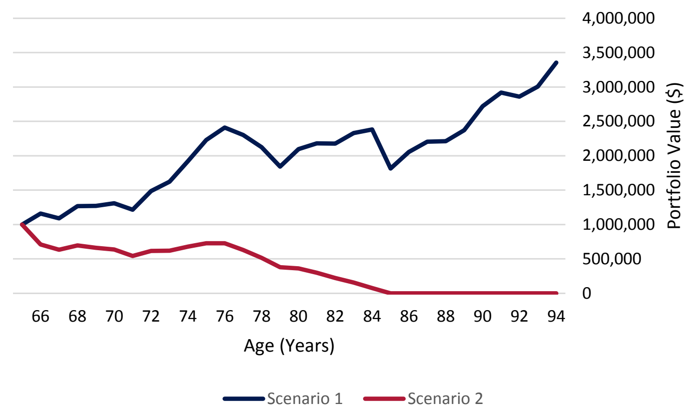
**For illustration purposes only and not a recommended allocation*

Figure 1: Scenario Dynamics: The Potential Impact of Sequence Risk

The scenarios presented in Figure 1 are hypothetical and are for illustrative purposes only. Past performance does not guarantee future results

Source: Bloomberg Barclays, S&P, and Bloomberg, HB Retirement

Starting retirement with an early-year, material drawdown changes the probability of retirement success.



While the variation of return patterns above may not be replicated in the real world, the analysis does provide a meaningful illustration of the mathematics behind sequence risk. The risk is manifested by a materially negative market event that occurs just as investors are beginning to take annual retirement withdrawals from the investment portfolio. As detailed in Scenario 2, a negative market event mathematically impacts the compounding base upon which the portfolio accrues future returns over ones retired life. And the deteriorating effect on the portfolio is exacerbated by regular withdrawals; which act as a further anchor on the portfolio's compounding base. Thus, realization of a substantial portfolio drawdown as retirement commences can have a significant impact on overall wealth

and potentially necessitate a reduction in annual withdrawals to preserve the life of the asset base. Or, a material drawdown as one approaches retirement could force individuals to work longer than desired.

Want To Reduce Sequence Risk? - Things To Think About

Strategically, we believe investors approaching retirement may be better-served by turning their focus to risk mitigation rather than attempting to reach for excess return. The same goes for investors in retirement.

We believe this becomes especially important after a long bull market run.

The first, basic element is to familiarize yourself with the risks in your portfolio. Revisit your exposures with your financial advisor, especially as you approach retirement. Understand where your portfolio weaknesses may be and how extremes in market conditions may effect your retirement nest-egg.

Secondly, think about actively positioning your portfolio to reduce the effects of market volatility on your asset base. We understand this is made more difficult by fewer attractive portfolio options available today and low expected returns in fixed-income. However, the alternative of a high-risk, high-yielding portfolio may be worse than subjecting yourself to more modest near-term returns. Today's market environment is a fast-moving one. Make sure your portfolio can cope.

Finally, have an allocation plan now and decide how that may change in retirement. Dial-in your portfolio well-ahead of your retirement date. Ensure your portfolio is risk-adjusted to the current point in your lifecycle and/or install a dynamic allocation plan that modifies portfolio risk in accordance with market conditions.

Questions?

Please contact us should you need further detail on this analysis and/or our general market view. We will be glad to have a discussion as to how these and other circumstances may effect your asset allocation or portfolio strategy.

Risks

Investors should be aware of the risks associated with all portfolio strategies, and variable market conditions. Monetary policy changes, military activity abroad, the level and change in market interest rates, corporate earnings, domestic and foreign governmental policies, global economic data, and other geopolitical events can have a substantial effect on portfolio performance, our macroeconomic theories, and the effectiveness of strategic and tactical portfolio approaches.

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All opinions and views mentioned in this report constitute our judgments as of the date of writing and are subject to change at any time. We will not advise you as to any change in figures or views found in this report.

Our judgement or recommendations may differ materially from what may be presented in a long-term investment plan. Investors should consult with an investment advisor to determine the appropriate investment strategy and investment vehicle. Investment decisions should be made based on the investor's specific financial needs and objectives, goals, time horizon and risk tolerance.

There is no guarantee that a diversified portfolio will enhance overall returns or outperform a non-diversified portfolio. Diversification does not ensure against market risk.

Stock investing involves risk including loss of principle.

The fast price swings in commodities and currencies will result in significant volatility in an investor's holdings.

Precious metal investing involves greater fluctuation and potential for losses.

Government bonds and Treasury bills are guaranteed by the US government as to the timely payment of principal and interest and, if held to maturity, offer a fixed rate of return and fixed principal value.

Bonds are subject to market and interest rate risk if sold prior to maturity. Bond values will decline as interest rates rise and bonds are subject to availability and change in price.

Except for the historical information contained in this report, certain matters are forward-looking statements or projections that are dependent upon risks and uncertainties, including but not limited to such factors and considerations such as general market volatility, global economic risk, geopolitical risk, currency risk and other country-specific factors, fiscal and monetary policy, the level of interest rates, security-specific risks, and historical market segment or sector performance relationships as they relate to the business and economic cycle.

Economic and other investment forecasts set forth may not develop as predicted and there can be no guarantee that strategies mentioned will be successful.

The S&P 500 Index is a capitalization weighted index of 500 stocks designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing the major sectors of the U.S. economy.

The Bloomberg Barclays U.S. Aggregate Bond Index is an index of the U.S. investment grade fixed-rate bond market, including both government and corporate bonds.

All indices are unmanaged and may not be invested into directly.

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