LOW-VOLATILITY EQUITY PORTFOLIOS:

HELPING DEFINED CONTRIBUTION PLAN PARTICIPANTS MEET THEIR RETIREMENT GOALS

December 2015
Revised March 2017

UNCORRELATED ANSWERS™

John F. Brown
Executive Vice President,
Head of Global Client Development

James McHugh
Senior Managing Director

Executive Summary

Ten thousand American baby boomers are turning 65-years old every day. Unfortunately, many of them are faced with challenges that could reach crisis level including:

- not having saved enough during their working years to live comfortably during their retirement years;
- the real possibility of outliving what they have saved; and
- Social Security not providing much relief.

So what lessons can be gleaned from the experiences of these "boomers" that could potentially help future retirees avoid these same pitfalls? This paper will answer this important question while addressing some of the challenges facing today's investors saving for their retirement. One solution for their consideration: allocate a portion of their retirement plan to equities, in general, and a low-volatility equity strategy, more specifically. Why? Because, historically, investing in stocks has provided the growth potential investors need to keep pace with rising costs and a low-volatility equity strategy will provide downside protection, should the stock market experience another severe sell-off.

This page is intentionally left blank.

The shortcomings of Social Security and defined benefit plans

FDR's vision for Social Security of the 1940s, where contributions from active workers would support the benefits paid to current retirees, did not foresee the dramatic shifts in demographics and mortality. Further, the paternalistic approach of Defined Benefit (DB) plans of yesteryear proved too costly and too volatile for most plan sponsors. As a result of these shortcomings, over the past 40-plus years, a shift has occurred, placing the burden of funding a worker's retirement plan, and thus their long-term retirement income security, solely on the individual. This is most often accomplished through their employers Defined Contribution (DC) plan, typically a 401(k) or similar type plan.

Defined contribution plans: putting control in the hands of the employee

The well-documented effects of the shift from DB to DC plans include:

- The risk of meeting the retirement objective has been transferred from the plan sponsor (employer) to the employee; and
- The pressure to identify and implement a viable asset allocation program for the individual DC plan participant is paramount to them achieving the security of long-term retirement income.

Over the past decade, scores of solutions have been introduced to address and alleviate these risks. Target date funds and their proprietary glide paths have become standard in most DC plans. These funds are designed to eliminate the confusion associated with dynamically allocating amongst asset classes by linking:

- the participant's age;
- their anticipated retirement date; and
- expectations for returns from the capital markets.

The objective is to manage the portfolio's asset allocation to provide the highest probability of meeting the participant's long-run return objectives.

However, historically low interest rates, along with increased equity-market volatility over the past 10 years, has forced many DC plan sponsors to consider ways to maintain portfolio exposure to equity securities while concurrently mitigating the portfolio's downside risk. The introduction of low-volatility equity allocations to the existing target date or asset allocation offerings is proving to be a viable option for meeting these goals.

The onset of the 2008 global financial crisis brought a renewed focus on risk management in the eyes of investors. This is no surprise given the 37.06% decline in the Russell 1000 Index for the 12 months ended December 2008. This decline necessitated a return of 58.88% to get back to pre-crisis levels. Historically, Modern Portfolio Theory promoted diversification as the best means to offset risks. This seems like a sound philosophy as long as correlations among asset classes remain low through the cycle. Unfortunately for most investors, the global financial crisis saw asset-class correlations converge toward one as declines were experienced concurrently in many asset classes. When diversification was needed most, it wasn't there to provide risk protection. The long-held belief that diversification was the only means of providing severe downside protection proved to be false. Unfortunately, too many plan sponsors, and the individual plan participants, learned this valuable lesson at a severe cost to the value of their investment portfolios.

Low-volatility equity strategies: growth potential plus downside risk protection

Unlike more-sophisticated investors or high-net worth individuals, most DC plan participants did not have the resources or access to hedging strategies to protect against the effects of the 2008 crisis. As a result, the newest dilemma facing DC plan sponsors was identifying a viable investment solution that could be seamlessly integrated into their platform while providing the required (and desired) equity exposure and some downside protection to guard against the next severe market decline. Recent search and consultant activity suggests that adding a low-volatility equity option to the target date fund, white label fund, or as a stand-alone option may be an effective and efficient solution.

The Callan Associates 2012 Capital-Market Assumptions study showed that a 35% public equity and 10% private equity asset-class allocation contributed 94% of the total portfolio's active risk. One way to reduce that active risk is to reduce the exposure to equities. However, as fixed-income yields remain low, a reduction in the commitment to equities will have a corresponding reduction in the total portfolio's expected return. The goal would be to try and reduce the active risk of the portfolio, while maintaining the portfolio's equity allocation and thus, sustain the total portfolio's expected return. Exposure to a low-volatility equity portfolio allows for continued equity-market participation while significantly reducing the total portfolio active risk. Low-volatility equity portfolios experience less volatility than the equity market itself without sacrificing the potential return.

So how should an individual consider using a low-volatility equity strategy within their defined contribution structure? Figure 1 below shows the long-term results of a hypothetical low-volatility equity portfolio compared to the Russell 1000 Index. The chart considers monthly returns from 1979 to 2016 and the percentage of positive and negative absolute returns over various rolling time frames. For example, on a rolling one-year basis, the low-volatility portfolio delivered positive absolute returns approximately 80% of the time. For the Russell 1000 Index, the percentage of positive returns was somewhat less. However, look what happens when we go forward in time. On a rolling five-year basis, 100% of the returns for the low-volatility equity portfolio were positive. *There were no five-year rolling periods when the return of the low-volatility portfolio was less than 0%.* Focus now on the Russell 1000 Index. It takes more than 15 years for the returns of the Russell 1000 Index to only show positive results. This has significant relevance for a DC plan and provides for a possible asset allocation framework. Ostensibly, during the early years of participation in a DC plan, an individual should focus on a significant allocation of equities and beta risk. The rationale is the plan participant is early in the accumulation and growth phase of their DC plan participation and time is on their side. More simply, a younger participant experiencing a negative market event has more time to replenish their account balance. This thesis is generally accepted and has proved to be valid.

Conversely, older participants – those, perhaps, within 10 years of retirement – do not have the benefit of as much time on their side and, therefore, need to protect their portfolio against a major negative market event. An active low-volatility equity allocation strategy could be an ideal solution for this demographic. Commencing 10 years from expected retirement, and for each year the participant has to retirement, a 20% allocation per year away from pure beta exposure to low-volatility equity exposure generates some compelling results (see Figure 2 below). For example, at five years to retirement, 100% of the portfolio's equity exposure becomes low volatility and it remains so through retirement. What is the significance of five years until retirement? As the hypothetical illustration shows in the previous chart, there were no negative five-year returns from 1979 through 2016. This confidence in the five years prior to retirement allows the near-retirement participant to maintain the needed equity asset class exposure, while providing downside protection to that exposure.

FIGURE 1

ABSOLUTE PERFORMANCE VS. TIME HORIZON HYPOTHETICAL LOW-VOLATILITY EQUITY PORTFOLIO VS. RUSSELL 1000 INDEX 1979 - 2016*

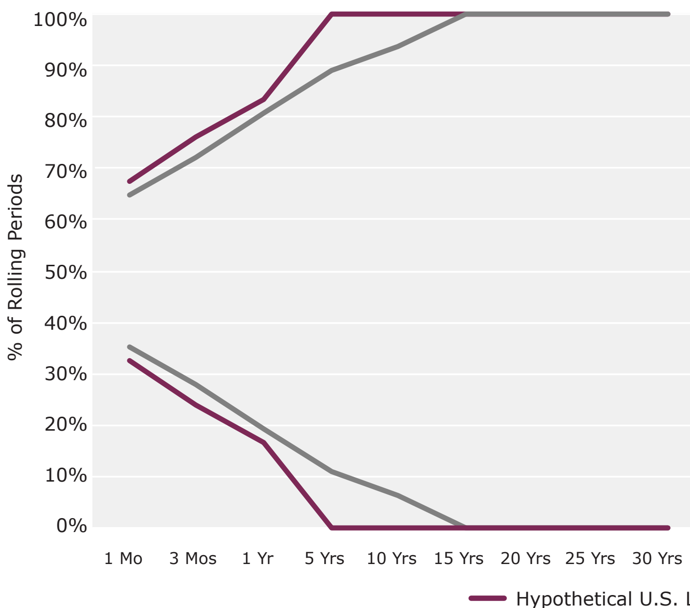
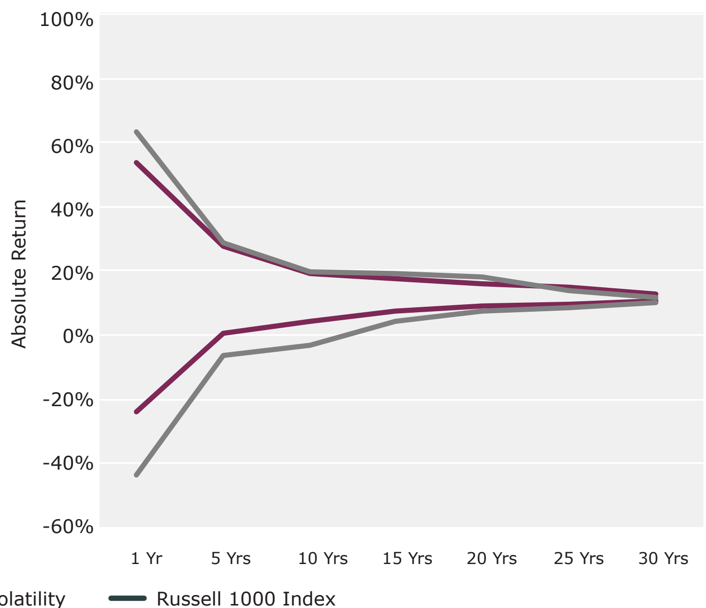


FIGURE 2

BEST/WORST ABSOLUTE PERFORMANCE HYPOTHETICAL LOW-VOLATILITY EQUITY PORTFOLIO VS. RUSSELL 1000 INDEX 1979 - 2016*



Hypothetical U.S. Low Volatility   Russell 1000 Index

* Hypothetical illustrations. Rolling periods are calculated monthly. Results are annualized. See Disclaimer at the end of this paper for additional information.

The hypothetical illustration does not reflect the results or risks associated with actual trading or the actual performance of any account. There is no guarantee that an actual account would have achieved the results shown. No current or prospective investor should assume that future performance will be profitable, or equal to either the hypothetical performance results shown or to any corresponding historical index. In no circumstances should returns be regarded as a representation, warranty, or prediction that investors will achieve or are likely to achieve the performance results displayed, or that investors will be able to avoid losses. There are numerous other factors related to the markets in general or to the implementation of any specific trading strategy, which cannot be fully accounted for in the preparation of hypothetical performance results, all of which can adversely affect actual trading results. A low-volatility strategy may underperform its benchmark during certain periods of up markets and may not achieve the desired level of protection in down markets. Past performance is no guarantee of future results. Investing involves risk including the loss of principal and fluctuation of value.

Conclusion

The secular shift away from Defined Benefit to Defined Contribution plans has put the risk of retirement security squarely in the hands of the plan participant. This is happening at a time when people are living longer and fixed income yields remain historically low. With history as a guide, and the current landscape as a backdrop, the DC plan participant should consider allocating a portion of their investment portfolio to equities for the growth potential that stocks provide. Low-volatility strategies offer that much-needed opportunity for growth during normal market conditions and protection from downside risk during periods of market stress, without sacrificing expected return. As individuals are expected to live longer into retirement, low-volatility equity strategies may allow them to do it more comfortably while helping to reduce the possibility of outliving their money or having to rely on Social Security.

This material is for general informational purposes only and is not intended as investment advice, as an offer or solicitation of an offer to sell or buy, or as an endorsement, recommendation, or sponsorship of any company, security, advisory service, or product. This information should not be used as the sole basis for investment decisions.

Intech® is a specialized global asset management firm that harnesses stock price volatility as a source of excess return and a key to risk control. Founded in 1987 in Princeton, NJ by pioneering mathematician Dr. E. Robert Fernholz, Intech® serves institutional investors across five continents, delivering relative return, low volatility, adaptive volatility and absolute return investment solutions.

525 Okeechobee Boulevard, Suite 1800
West Palm Beach, FL 33401
(561) 775-1100
intechinvestments.com

C-0318-1932 03-31-19

FOR INSTITUTIONAL INVESTOR USE ONLY