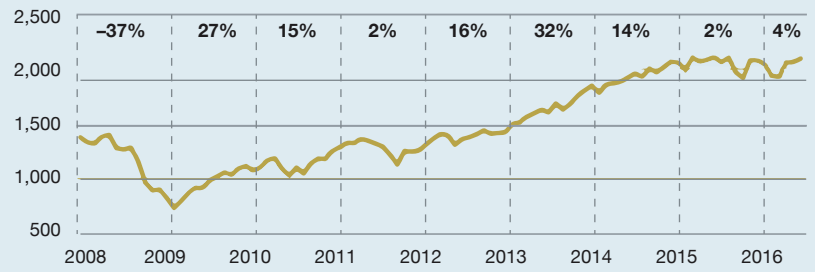
Nearing Retirement? Assess Downside Risk, Upside Potential

By Rob Williams, CFP®, CRPC®

Now may be a good time to focus on a portfolio's downside risk management, especially for investors who are nearing retirement but looking for growth potential. U.S. stock and bond markets have risen in value sharply. Investors who are transitioning into retirement don't have time to recover from a prolonged dip in the market. Traditional asset allocation is one way to limit risk. A slightly different approach combines diversification with lower-volatility investments, creating a floor for a portfolio. Purchasing insurance products, such as annuities, can bolster the defense also.

Figure 1: S&P 500® Returns



Source: Schwab Center for Financial Research. The bolded numbers show annual total return for the S&P Index.

Curbing Downside Risk

U.S. stock and bond markets have risen sharply in value since the 2008 recession. We believe the positive trend, for most asset classes, will continue. However, volatility has increased recently, and we expect that trend to continue, as central banks' monetary policy in the United States and elsewhere shifts. The goal for most advisors is to help investors reduce volatility on the downside for money that's needed for retirement without reducing growth potential. How can investors do this at a reasonable cost?

After select markets perform well for a sustained period, the time may be right to consider downside risk management to protect money needed to support basic needs or for spending in the short term. This may allow the investor to take risk more comfortably in the rest of the portfolio.

One way to limit risk is through traditional asset allocation. In this article, we propose that advisors and investors continue to think about diversification as a source of risk management, but that they also use lower-volatility investments (not just lower correlations) or investments with protections to create a floor for the portfolio. In addition, insurance products such as certain types of annuities can add protection to portfolios. This is particularly true—and important—for investors who are nearing or in retirement.

Who Benefits?

Downside risk is relevant for all investors, but it is most relevant for investors who are in pre-retirement (ages 55–70) or are receiving distributions from retirement portfolios. If an investor has a longer time horizon, doesn't need money from the portfolio soon, or has higher risk capacity and risk tolerance, the advisor may still want to review the asset allocation and investments. But the risk of volatility or downside may be less relevant because the client has time to manage volatility and potentially recover and may be more focused on growth than downside protection.

Why Now?

We remain generally bullish on the current cycle for U.S. equities and on a well-diversified portfolio invested for the long term. However, the following factors are worth considering for those with less stomach for volatility or a desire to take advantage of recent gains to build in downside protection:

- The Standard & Poor's Index is up more than 230 percent (more than 17.5 percent annualized) with dividends reinvested from the market bottom in March 2009 to the end of August 2016, though it dipped sharply after the end of quantitative easing and the first rate hike, and growth has slowed since (see figure 1).
- Yields in all fixed income sectors are close to record lows, limiting potential for capital appreciation and income generation in bonds. The U.S. Federal Reserve's quantitative easing program ended in October 2014, and we believe that the Fed is ready to shift from loose to tightening monetary policy by increasing the federal funds rate for the first time since lowering it to zero in December 2008.
- More Americans are nearing the point where accumulation is not the only

Table 1: Average Time to Recovery for the S&P 500

Period	Peak-to-Trough Decline of the S&P 500	Recovery Date	Time to Recovery
February 1966 to October 1966	–22%	May 1967	1 year, 3 months
November 1968 to May 1970	–36%	March 1972	3 years, 6 months
January 1973 to October 1974	–48%	July 1980	7 years, 7 months
November 1980 to August 1982	–27%	November 1982	2 years
August 1987 to December 1987	–34%	July 1989	1 year, 11 months
July 1990 to October 1990	–20%	February 1991	7 months
March 2000 to October 2002	–49%	June 2007	7 years, 3 months
October 2007 to March 2009	–57%	March 2013	5 years, 5 months
Average	**–34%**		**3 years, 2 months**

Source: Schwab Center for Financial Research with data provided by Bloomberg. The periods show where the S&P 500 fell 20 percent or more over a period of at least three months. The time to recovery is the amount of time it took the S&P 500 Index to rise to its prior peak after it fell 20 percent or more over at least three months. Past performance does not guarantee future results.

investment objective. Protecting parts of the portfolio to prepare for distribution without giving up growth potential is an important consideration for the transition to, and life in, retirement.

At Schwab, we expect increased volatility in many markets as the Fed tightens monetary policy and uncertainty continues about global growth.

The Retirement Connection

When saving for retirement, we know the mantra: Time is on the investor's side. If investors save regularly, a falling market helps, provided the portfolio has time to recover. A disciplined investor purchases more shares with the same dollar amount and the share prices likely eventually rise. Dollar-cost-averaging generally works over time. Younger investors most likely have time to recover from a down market. Over the past five decades, it took the S&P 500 an average of just more than three years to recover from a downturn (see table 1). Even in the 2000–2002 and 2008 downturns, markets recovered, as did investors who were diversified and stayed on course.

Withdrawals from a portfolio—or the possibility of the need to take money out of a portfolio soon—have the opposite effect. To withdraw money from a portfolio in a down market, or to change course because of a correction, is dollar-cost-averaging backward. The investor sells more shares to support spending and has fewer left for recovery.

Sequence-of-Returns Risk

Sequence-of-returns risk is the risk that markets don't perform well when an investor is taking withdrawals from the portfolio. A period of sharply negative returns can have a more negative effect on the portfolio when the investor begins taking withdrawals. This is a critical—and increasingly discussed—issue to consider when managing portfolios. Modern portfolio theory (MPT) and other strategies that work well when saving and accumulating don't work as well when taking cash from portfolios.

When adding money to a portfolio, steadily, over time, dollar-cost-averaging works, as long as investors are not taking distributions from the portfolio. As long as you add money, a down market, or the order or returns—called sequence-of-returns risk—doesn't matter much. In the end, achieving average annual returns in line with the investors' returns are most important, even if there a few bad years in between, as long as they don't take distributions from the portfolio.

The story changes if withdrawals are taken from the portfolio. Table 2 illustrates sequence-of-returns risk with hypothetical examples. The illustration shows the impact of a $50,000 (5 percent of the initial portfolio) withdrawal, increased every year thereafter by 2 percent, to increase withdrawals with inflation. The ending balance in the poor early years and the poor late years portfolios are different. Both portfolios experience the same average annual returns over the time period. Both take the same withdrawals. The poor early years example runs out of money in year 18, when the poor late years ended year 18 with more than 2.4 times the beginning balance. The poor late years portfolio ends with more than $1.3 million—more than it started with. The impact of poor early years, in other words, can be significant.

Loss aversion is also generally greater as an investor nears retirement. The stakes simply are higher. Kahneman and Tversky (1979) found that average investors fear losses two times more than they appreciate gains. In short, losses hurt more than gains feel good. Other studies, however, sponsored by AARP and others find that retirees are even more averse to losses than are younger investors (Bajtelsmit and Bernasek 2001). The stakes—emotionally and quantitatively—are higher.

The stakes are also higher if an investor bails out of a well-laid plan because of an unanticipated market crisis. Think 2008. Investors with protections may have felt more comfortable sticking with their investment plans compared with those who did not have protections. The drop in markets in 2008–2009 was painful. But investors who abandoned their investments at market lows and didn't hold the investments when they recovered likely took the biggest hits.

This period—the years just before and in early retirement—is when asset allocation

Table 2: The Impact of Sequence-of-Returns Risks on Withdrawals

This table shows sequence-of-returns risks on a hypothetical portfolio with a starting value of $1 million.

Year	Withdrawal	Poor Early Years		Poor Late Years	
		Return	Ending Portfolio Balance	Return	Ending Portfolio Balance
0			$1,000,000		$1,000,000
1	$50,000	–15%	807,500	10%	1,045,000
2	51,250	–15%	642,813	10%	1,093,125
3	52,531	–15%	501,739	10%	1,144,653
4	53,845	10%	492,684	10%	1,199,889
5	55,191	10%	481,243	10%	1,259,169
6	56,570	10%	467,139	10%	1,322,858
7	57,985	10%	450,070	10%	1,391,361
8	59,434	10%	429,700	10%	1,465,119
9	60,920	10%	405,657	10%	1,544,619
10	62,443	10%	377,536	10%	1,630,393
11	64,004	10%	344,885	10%	1,723,028
12	65,604	10%	307,208	10%	1,823,166
13	67,244	10%	263,960	10%	1,931,514
14	68,926	10%	214,538	10%	2,048,847
15	70,649	10%	158,278	10%	2,176,018
16	72,415	10%	94,450	10%	2,313,964
17	74,225	10%	22,247	10%	2,463,712
18	76,081	10%	–59,217	–15%	2,029,487
19	77,983	10%	–150,920	–15%	1,658,778
20	$79,933	10%	–$253,938	–15%	$1,342,019
Average		**5.8%**		**5.8%**	

Source: Schwab Center for Financial Research

Figure 2: CBOE VIX Index

Source: Bloomberg

and risk management are most important. At this point, retirement portfolios must grow and also be available to fund withdrawals to support spending. Investors can seek to manage these risks on their own or they can add protections.

Watching the Downside

Asset allocation is the most traditional approach to managing investment risk. Modern portfolio theory was pioneered by Harry Markowitz with the publication of a seminal paper in 1952 and popularized by others, and it is the foundation of most attempts to balance potential risk and reward in portfolios today. MPT suggests risk management can be achieved through diversification. When one investment moves down in value, the idea is that others will move up, or stay stable, reducing risk in portfolios. This strategy has worked well, over time, and is the foundation of most portfolio management.

However, correlation among most asset classes often rises during periods of market stress. In 2008 and early 2009, for example, most asset classes fell in tandem. Among the few negatively correlated investments were long-term U.S. Treasury bonds, which can be quite volatile on their own, and cash investments. Investors can consider other strategies to manage downside risk, especially if time horizon and the ability to weather market volatility are major concerns.

Other Risk Management Strategies

One approach is to use protective option strategies and other hedging strategies. This can be expensive and complex, however, to apply and manage. Since early 2012, annual volatility has been averaging below its long-term average in the U.S. equity markets, as measured by the CBOE Volatility Index (VIX) (see figure 2).

However, even during periods of low volatility, put options on individual equity positions or broad-market indexes can be expensive, especially over longer time periods. Traditional insurance products are another alternative.

Insurance

Investments or products with insurance features can add protections. In more general terms, insurance could include over-the-counter or exchange-traded options, long-term Treasuries, or cash. It also can include true insurance products (e.g., annuities or other products that combine investments with insurance features). An investor may not need insurance per se. But if managing downside risk is critical to the health of the investor's portfolio and financial plans, as it is for savers nearing retire-

ment, there are situations for which insurance strategies make sense.

For investors nearing retirement, living benefit riders (e.g., guaranteed lifetime withdrawal benefits, or GLWBs) in variable annuities are one example of insurance protection added to traditional investments that provides protection for future income payments. Living benefit riders also provide protection, for an annual fee, if the investor needs and wants to stay invested in the market for growth potential and to keep up with inflation but may not do so as comfortably without some form of protection.

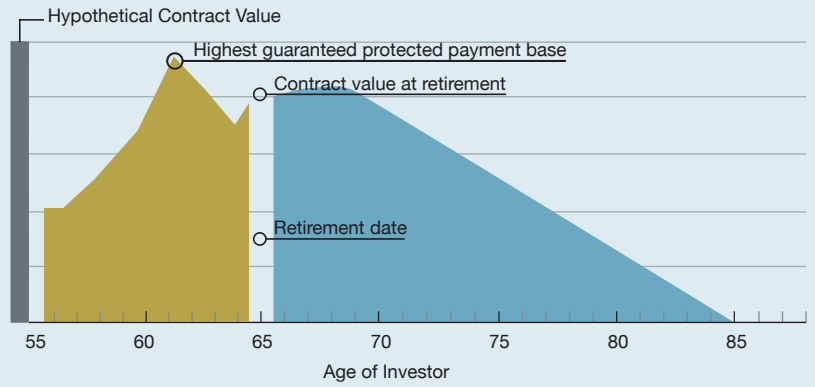
A GLWB rider for a variable annuity can be thought of as adding insurance to a portfolio of investments. The rider helps investors to pool risk with other investors and transfer some of the risk to an insurance company in exchange for the annual rider cost, e.g., 0.6-percent base annuity fee and between 0.8 percent (individual life) and 1.0 percent (joint life) for the GLWB rider for a representative solution on the Schwab platform.

Figures 3, 4, and 5 show how GLWB riders work on portfolios of funds held in a variable annuity, represented by the contract value. The contract value is equal to the value of the investments held in the annuity.

The investor holds underlying investment options, called subaccounts. The optional GLWB rider adds protection, guaranteeing a minimum level of annual withdrawals for life based on the protected payment base (PPB). If the value of the investments falls, the PPB is locked in at a high-water mark, determined (typically) on an annual anniversary date. If the value of the investment rises, the locked-in payment base can rise but cannot fall.

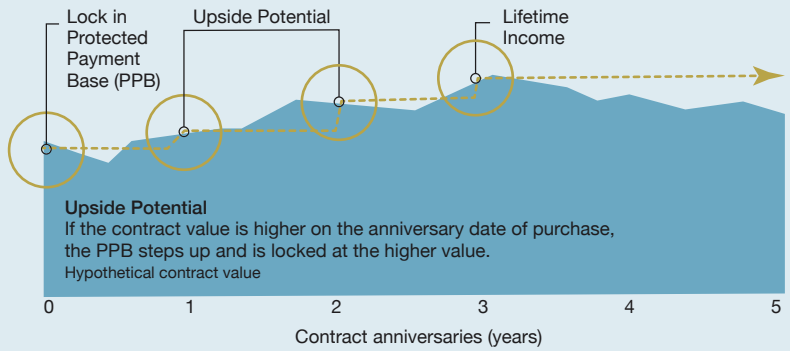
When the investor chooses to begin withdrawals, the guaranteed withdrawal amount is based on a percentage—typically between 4.5 percent and 5.5 percent, depending on the terms of the contract and age the investor begins taking withdrawals—of the guaranteed PPB.

Figure 3: Hypothetical Contract Value



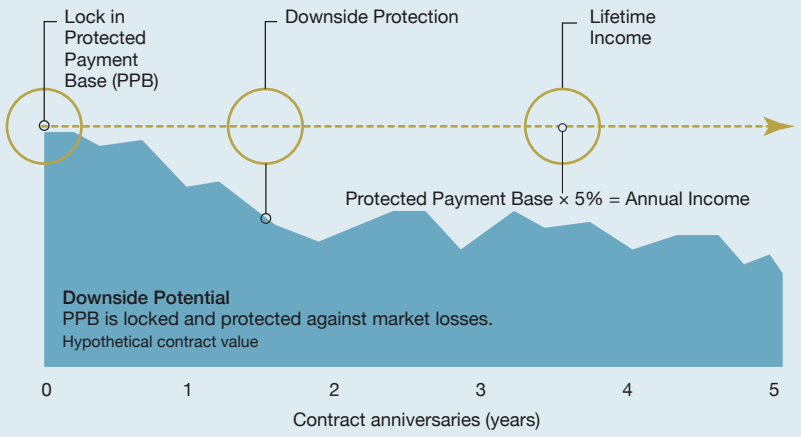
Source: Schwab Center for Financial Research

Figure 4: Upside Potential ...



Source: Schwab Center for Financial Research. Details will vary, depending on the product selected, so be sure to understand the details of the specific product before investing. Withdrawals prior to age 59½ may be subject to a 10-percent federal tax penalty. Withdrawals prior to age 59½ will reduce the protected payment base and future withdrawals.

Figure 5: ... with Downside Protection for Income in Down Markets



Source: Schwab Center for Financial Research. Details will vary, depending on the product selected, so be sure to understand the details of the specific product before investing.

The annual withdrawals are paid for life, as long as the rider is in place, even if the contract value falls to zero. It is important to note that the PPB under the GLWB is not a contract value and cannot be withdrawn like a cash value. The actual contract value will deplete with each withdrawal, though payments will continue for life even if the contract becomes fully depleted. Purchasers retain access to any remaining contract value and can take a lump-sum withdrawal at their option (tax penalties may apply before age 59½ and excess withdrawals will reduce future income). Like traditional insurance, there is an annual fee for the protection. Also, the investor may end up not needing the protection. But if the market falls, the owner has protection for future income rather than having to rely on markets only.

If the value of the assets rises and the contract value is equal to or exceeds the PPB, under more permissive contracts the purchaser may have an option to cancel and cash out of the annuity as he or she enters or moves through retirement. If the value of the assets falls, the purchaser has a value income stream and benefits from income protection. If the contract value is equal to or close to the PPB, the investor may choose to cancel the rider. The investor can cash out contract value and cancel the rider, depending on the contract.

Fixed immediate annuities (also known as single premium immediate annuities or SPIAs) mitigate investment risk for the purpose of generating future income by transferring the risk entirely to an insurer. In exchange, the investor may receive higher guaranteed income initially than from a variable annuity with a GLWB. But the investor also gives up access to the contract value, and, generally, unless the investor purchases a fixed immediate annuity with a cost of living adjustment, the potential for income to grow.

Why Annuities?

Annuities won't make sense for everyone. But they are, in our view, worth considering as one form of protection. A negative reputation and high fees are reasons annuities won't make sense for everyone.

When talking to clients, advisors should discuss how they are compensated as well as how an annuity may support the client's plan. These factors are important to consider before considering whether annuities add needed protection. Annuities are tools, and are best viewed as such. They are useful for adding what most investments don't—insurance to help manage market risk, for the purpose of delivering future income. Some tools do things that others do not. Variable annuities with GLWBs combine insurance with investments, generally to provide downside protection. Whether they make sense for an investor will depend on how comfortable, and able, the investor is at managing these risks without insurance.

Protection Cost

As mentioned above, to protect the value of an investment, an investor could use protective option strategies. One example is a protective long put option, where the investor purchases a put option for a specified expiration date and exercise price. A protective put can help protect a substantial portion of an investment's value if the market falls.

In a well-diversified equity portfolio that closely approximates the securities in a broad-based market index (let's call it XYZ), an example would be the purchase of an XYZ put option with an expiration date approximately one year in the future and a strike price close to or at the current index level. Consider the price of an exchange-traded put option on the XYZ index on December 19, 2014, expiring one year later. If the strike price was 2075 (notional value $207,500), and the current XYZ Index level was 2078, it would be very realistic that the price of the option was approximately $149.00.

Because standard exchange-traded options have a multiplier of 100, for $14,900 (excluding commission charges), the investor could get protection to a $207,500 equity portfolio that approximates the XYZ Index. The cost to do so is approximately 7.2 percent of the value of the investment ($14,900 divided by $207,500).

Let's compare this to a GLWB rider in a variable annuity, for the purpose of protecting future income, if future income is the main objective for the investments. Note, a GLWB rider does not generally protect the value of the portfolio, a significant difference from the example above. But, if the purpose for the portfolio is income, arguably, the protection of future cash flow can be compared to a put option—not exactly, but for the purpose of understanding the cost of protection.

To protect an income stream, use a variable annuity to invest in a mix of stocks and bonds held in a variable annuity with a living benefit insurance rider. The cost varies widely based on product and contract. Some may cost 3 percent or more, with all fees included. A lower-cost contract might cost between 1.4 percent and 2.0 percent. This includes a base annuity fee and typically 0.8 percent or more for the GLWB rider. There will be underlying investment expenses also, though purchased mutual funds or individual investments include an investment expense also, so we don't include that expense to price the cost of insurance only. This compares to the 7.2 percent for the protective index put option strategy example described above.

If option strategies were more cost-effective, that might be a more viable alternative to variable annuities with GLWBs. But it's worth comparing the cost of income protection in a GLWB contract, given the frequent complaints about the cost of annuities.

As noted, there are important differences between the put option strategy and the GLWB insurance rider. The put option strategy protects the value of the investment portfolio. The GLWB protects a minimum amount of future annual income. The rider guarantees that that income is based on the value of the original investment, and no less, if the market falls, or at higher value one year from the purchase of the contract if the market rises, and at every one-year anniversary date (typically) thereafter. The protection continues for as long as the investor owns the rider.

Other Actions for an Investor to Consider

Insurance is one choice, but there are others. Traditional asset allocation is one strategy. Adding lower-volatility assets, subject to the investor's personal needs, rather than a generic asset allocation model, is another.

In other words, focus on personal risk capacity, not just risk tolerance. Determine how much money is needed from the portfolio in the near term. Whatever that amount may be, allocate that sum to lower-risk, lower-volatility investments. Then, invest the rest based on risk tolerance.

Example

Fred and Nancy, ages 65 and 63, are preparing for retirement. They have $1 million in investable assets. They need $50,000 a year from their investments in retirement. They expect to receive $25,000 per year from Social Security. An advisor suggests that they allocate two to four years of assets dedicated to stable investments—short-term bonds and cash investments—before taking on more investment risk.

Fred and Nancy decide they want to have $150,000 in cash investments and either individual certificates of deposit, bonds, or short-term bond funds. This leaves $850,000 for other investments. After considering the reserve for liquidity and short-term needs, the portfolio might look like the one described in table 3.

This portfolio is roughly equivalent to a traditional 60/40 (moderate) portfolio, but it resulted from a discussion of the clients' short- and long-term objectives. Its goal is to make sure that Fred and Nancy have money when it is needed.

Table 3: Invest Based on Spending Need, Not Just Risk Tolerance

Investment	Amount ($)	Amount (%)
Cash	$50,000	5%
Short-term bonds	$100,000	10%
Intermediate-term bonds	$200,000	20%
High-yield bonds	$50,000	5%
U.S. stocks	$450,000	45%
International stocks	$150,000	15%
Total	**$1,000,000**	**100%**

Low Interest Rates and Downside Protection

Investors often ask, "Why would I include cash investments or short-term bonds in a portfolio with rates so low?"

Cash and short-term investments are a cushion for liquidity, not just a diversifier for a portfolio. Cash and short-term bond funds or bond ladders are investments and strategies to manage investments, and they are also planning and risk-management tools.

Short-term bonds and cash provide liquidity and help manage interest-rate risk. Intermediate-term bonds and nontraditional bonds (e.g., high-yield bonds, emerging market bonds, non-U.S. international developed bonds) serve different roles such as diversification, liquidity, and income for a known time horizon. Liquidity is important to fund spending or emergencies and to allow a higher level of risk-taking, potentially, in the rest of the portfolio that is intended for the longer term.

The idea isn't to reduce upside potential. It's to provide a floor to manage volatility or cash flows in the short term, which allows an appropriate level of investment risk among the remaining assets.

What Are the Risks?

One risk is the possibility that the portfolio may not need protections. If investments continue to rise without heightened volatility, dips in value, or temptations to change allocation, riskier (higher beta) assets typically will outperform strategies that include insurance or that include lower-volatility assets.

Investing isn't a race. But for an investor with a limited time horizon, the goal may be to stay on track and keep moving steadily in the right direction at the right speed for the circumstances. It may be worthwhile, however, to watch out for the investment downside. Few people who purchase insurance expect to need it. At the very least it may add comfort by helping to pool and protect against risks that are difficult or expensive to manage otherwise.

If markets continue to perform well, downside protection comes at the cost of fees for insurance products or lost opportunity. Insurance and protective investment strategies are designed to guard against unexpected and undesirable events. For these risks, it makes sense—under any conditions—to watch and consider the downside first, then invest for growth potential more confidently.

Rob Williams, CFP®, CRPC®, is managing director, income planning for the Schwab Center for Financial Research, where he focuses on fixed income and income-planning issues. He earned a BA from Princeton University and an MBA from the University of California, Berkeley. Contact him at robert.williams@schwab.com.

References

Bajtelsmit, Vickie L., and Alexandra Bernasek. 2001. Risk Preferences and the Investment Decisions of Older Americans. AARP, Public Policy Institute (June).

Kahneman, Daniel, and Amos Tversky. 1979. Prospect Theory: An Analysis of Decision under Risk. *Econometrica* 47, no. 2 (March): 263–291.

Markowitz, Harry. 1952. Portfolio Selection. *Journal of Finance* 7, no. 1: 77–91.