Strategies for Coping After Retiring Into a Bear Market

Retirees should have a plan for sustaining their income over a 30-year retirement. But the best-laid plans can be upset if they find they've retired into a bear market.

In general, if retirees limit their initial withdrawals to 4% of their investment portfolios—and then increase that amount by 3% a year for inflation—they should stand an almost nine-out-of-ten chance of being able to sustain that income stream over 30 years without running out of money, according to a T. Rowe Price Investment Analysis Tool using thousands of potential market simulations. But what if they happen to retire near the start of a bear market?

The short answer is that bear markets can be devastating for new retirees who do not take action to compensate. While their instinct may be to flee the risk of equity markets, a more effective strategy, as a new T. Rowe Price analysis shows, is to temporarily reduce annual withdrawals from their nest eggs.

"Our research shows that withdrawing too much in retirement—particularly early in retirement—is the most likely cause of running out of money," says Christine Fahlund, a senior financial planner with the firm. "That's what you need to adjust, and the sooner the better."

Bear markets—sometimes defined as a drop in the S&P 500 Index of at least 20%—are not infrequent. Over the last 80 years, one has occurred about every three years, with an average duration of about one year and an average decline of 35%, according to Ned Davis Research.

Recent retirees may be reviewing their investment and spending plans as a result of the sharp decline in the equity markets. The S&P 500 Index of large-cap stocks, for example, declined 17.9% from its peak last October to its low on March 10, while the Russell 2000 Index of small-cap stocks declined 24.1% from its peak last July to its low in March.

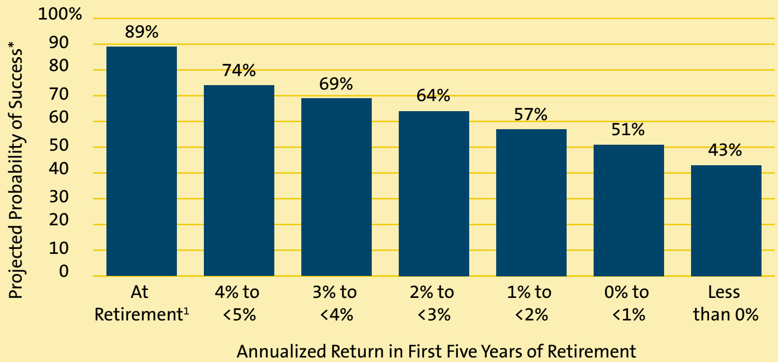
T. Rowe Price recently analyzed the impact of having retired into such poor market environments. The study shows that:

- **The first five years of retirement are critical:** Poor market performance or outright losses in the first five years significantly increase the chances of a retired person outliving his money during a 30-year retirement.

  "The reason for this is simple: Any money that retirees take out of their portfolios or that they lose in market declines in the first five years of retirement has a higher cost because it's money that won't be invested to earn returns in succeeding years when the markets recover," says James Tzitzouris, Jr., investment analyst on T. Rowe Price's asset allocation team, who conducted the simulation study. "And the less they have invested after a bear market, the less potential they have to benefit from the compounding of any earnings in subsequent years."
- **Cutting back on withdrawals may be necessary:** If retirees find that they have retired into a bear market, the most effective tactic to sustain a high chance of not outliving their assets is to cut back

For Retirement Success, the First Five Years Are Critical

Odds of Success Plummet if Withdrawal Amount Exceeds Portfolio Returns



This chart shows the probability of not running out of money over a 30-year retirement for an investor who withdraws 4% of his portfolio the first year and increases the annual withdrawal amount by 3% for inflation. If portfolio returns are weak in the first five years and the investor does not cut back on the amount withdrawn, the likelihood of not running out of money can drop sharply from the 89% probability of success at the start of retirement.

Assumptions: Analysis assumes a static portfolio composed of 55% stocks and 45% bonds.

[1]Assumed returns and fees: U.S. large-cap stocks, 10.0% with 1.211% fees; investment-grade bonds, 6.50% with 0.726% fees. The example does not take into account income taxes or required minimum distributions.

*Chances of not running out of money over a 30-year retirement period assuming different annualized rates of return in the first five years of retirement. These projections are based on 10,000 potential scenarios of market outcomes.

Source: T. Rowe Price Associates.

significantly on the amount of money they withdraw from their portfolios. Or, if that approach is too drastic, they can choose to keep their annual withdrawal amounts constant rather than increasing them each year for inflation as originally planned.

The T. Rowe Price analysis assumes that an investor retires with a $500,000 portfolio invested 55% in equities and 45% in bonds, takes 4% of his portfolio ($20,000) the first year, and increases that amount by 3% each year to keep up with inflation ($20,600 in the second year, $21,218 in the third year, etc.).

Based on a sophisticated methodology involving 10,000 simulated portfolio outcomes, this investor stands an 89% chance of having enough left in the portfolio to sustain this rate of withdrawals over a 30-year time span. (*See page 18 for a detailed description of this probability analysis.*)

The analysis showed that if the investor's portfolio had an average annualized return that ranged from less than 0% to less than 5% in the first five years of retirement and continued the original plan of withdrawals, the chance of success declined significantly. Instead of an 89% chance of success at the outset, the probability of being able to sustain withdrawals over the next 25 years declined to as low as 43%. (See chart on page 14.)

"If you are taking out more than you are earning from your portfolio in the early years of retirement, you are probably digging a big hole in your plan," Mr. Tzitzouris says.

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Options When Retiring Into Bear Markets

In Downturns, Retirees Can Sustain a High Probability of Success by Withdrawing Less or Holding Withdrawals Flat

The chart below outlines four options for handling a 30-year retirement account, starting January 1, 2000, with an account balance of $500,000 invested in a 55% equity/45% bond portfolio. In this hypothetical example, the retiree withdraws 4% (or $20,000) the first year and increases that withdrawal amount by 3% annually to keep up with inflation. Actual returns for stocks and bonds are used for the period January 1, 2000, through January 31, 2008, and projections thereafter are based on 10,000 simulations of possible future market scenarios.

The four options below assume the investor retired on January 1, 2000, just before the start of a severe bear market. By September 30, 2002, stocks (as measured by the S&P 500 Index) had declined 42.4% and the investor's diversified portfolio had declined by 15.3% (assuming that the 55%/45% asset allocation was maintained). The table reflects the impact of that bear market on the investor's chance of not running out of money over a 30-year retirement—as well as the impact of making certain adjustments to compensate for the misfortune of retiring into a bear market. *Past performance cannot guarantee future results.* This chart is for illustrative purposes only and does not represent the performance of any specific security.

Account Status	Portfolio Value	Monthly Withdrawal Amount	Odds of Success*	Monthly Withdrawal to Restore 89% Odds of Success
At retirement on January 1, 2000	$500,000	$1,667	89%	
At bear market bottom, September 30, 2002	374,096	1,768	57	$1,325
	Results as of January 31, 2008, Assuming Four Different Strategies:			
OPTION 1: *Continue withdrawals as planned*	$447,375	$2,111	78%	$1,883
OPTION 2: Best Outcome *Reduced withdrawal amount on September 30, 2002, by 25% to restore original 89% probability of success*	484,245	1,582	99	2,038
OPTION 3: *Take no annual inflation adjustments until January 1, 2004*	461,799	1,932	89	No action required
OPTION 4: Worst Outcome *Switched to 100% bond portfolio on January 1, 2003*	337,753	2,111	5	Not feasible

*Represents the percentage of total simulations in which the investor does not run out of money during a 30-year retirement period. The odds of success on January 1, 2000, reflect the initial investment and withdrawal assumptions. The odds of success at the various stages of the options reflect historical return data and any changes in the investment or withdrawal assumptions and projections thereafter. For historical returns, the S&P 500 Index is used for stocks and the Lehman Brothers U.S. Aggregate Index is used for bonds. For simulations, stocks are expected to return 10% overall with a standard deviation of 15% and fees of 1.211%; bonds are expected to return 6.5% with a standard deviation of 5% and fees of 0.726%. Portfolios are rebalanced monthly and withdrawals are made monthly. This example does not take into account taxes or required minimum distributions.

Source: T. Rowe Price.

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This analysis also looked at the impact of running into a bear market during the second five-year period—years six through 10 of a 30-year retirement—after a random set of market returns during the first five years. In that case, a bear market also had a negative impact on the investor's chances of not running out of money but to a significantly lesser degree.

Options in Bear Markets

So what can new retirees do if equity markets suddenly turn sour just as they begin to withdraw income from their portfolio? Plenty. Retirees in this situation can still have sufficient retirement funds if they are willing to confront two things they really can control: how much they withdraw from their portfolios and their overall asset allocation.

To examine how a retiree might cope with an actual bear market and how effective different strategies might be, the analysis assumes retirement on January 1, 2000, with the same portfolio strategy and initial withdrawal amount cited earlier.

This analysis uses historical market returns from January 1, 2000, through January 31, 2008, a period that included a deep bear market that ended September 30, 2002, followed by a healthy recovery into late 2007. Returns over the remaining 22 years of the 30-year retirement period (starting January 2008) are projected based on a range of simulated outcomes. (Assumptions about varying asset class returns and expenses are included in the note for the chart on page 15.)

During the period studied, the S&P 500 Index of large-cap stocks fell from January 1, 2000, to September 30, 2002, by 42.5%, but from then to January 31, 2008, it recovered with an 86.4% gain. For the entire period, the hypothetical diversified portfolio of 55% equities/45% bonds achieved an overall gain of 34.6% net of expenses.

At the bottom of this three-year bear market in 2002, the retiree's portfolio had declined 15.3% due to investment performance, and the original $500,000 balance (after that decline and three years of withdrawals) stood at about $374,000. At this point, the analysis shows that the chances of continuing the original withdrawal strategy throughout the remaining 27 years in retirement without running out of money had declined from 89% to only 57%.

As shown in the chart on page 15, this analysis examined the consequences of four options for coping with the bear market:

(1) Continuing to take withdrawals as planned and then lowering the withdrawal amount on January 31, 2008, to that required to regain an 89% chance of not running out of money during the balance of the 30-year retirement period.

(2) Lowering the withdrawal amount by 25% on September 30, 2002—right after the bear market ended—to regain an 89% chance of success. Then raising the withdrawal amount five years later on January 31, 2008, because the likelihood of not running out of money over the next 22 years had greatly improved due to the lower withdrawals and the stock market recovery.

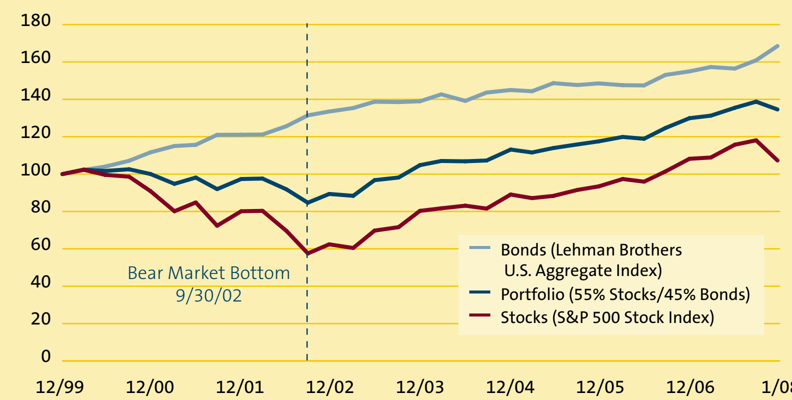
(3) Taking a conservative approach by holding the withdrawal amount constant for the first four years until the bear market had apparently passed and then, starting in 2004, increasing the withdrawal amount by 3% annually for inflation.

(4) At the start of 2003, right after the bear market had ended, fleeing equities altogether by switching from a 55%/45% portfolio to a 100% bond portfolio.

The most favorable outcome in terms of both monthly income and

Performance of Stocks, Bonds, and Retirement Portfolio

Total Return Indexed to 100 as of December 31, 1999, Through January 31, 2008



Annualized Return	Bonds	Stocks	Portfolio
January 1, 2000–September 30, 2002	10.5%	-18.2%	-5.9%
September 30, 2002–January 31, 2008	4.8	12.4	9.1
January 1, 2000–January 31, 2008	6.7	0.9	3.7

Source: T. Rowe Price.

the projected median portfolio value at the end of the 30-year retirement was the second option: reducing the monthly withdrawal amount after the bear market ended in September 2002 (but continuing the annual inflation adjustment).

With the strong market recovery that followed, by January 2008 the investor had an almost 99% chance of not running out of money, enabling a significant increase in the monthly withdrawal amount at that time and still ensuring an 89% likelihood of success, as originally desired.

Among the four options, this strategy ultimately provided, as of January 2008, the highest withdrawal amount ($2,111) and the highest portfolio value ($482,245).

This strategy proved more successful than waiting until January 2008 to cut back the withdrawal amount (Option 1) or holding the withdrawal amount constant until 2004 (Option 3).

Switching to a 100% bond portfolio (Option 4) proved unsuccessful, since this retiree would be virtually certain of running out of money before the end of retirement. With this tactic, the investor ended up with the highest monthly withdrawal amount ($2,111) in January 2008, but the lowest portfolio value ($337,753) and the lowest chance of success (5%).

"In this situation some investors naturally might want to eliminate their exposure to equities, but stocks have historically provided the best chance of outpacing inflation over the long run," Ms. Fahlund says. "In this study, the retiree who kept the asset allocation intact but reduced withdrawals for a few years did well, but the investor who panicked and switched to 100% bonds badly hurt the chance of having enough money for retirement by getting out of equities just as the equity market was poised to recover."

One other option that the retiree might consider if markets had already suffered a significant decline as retirement neared would be to delay retirement, if possible. A separate T. Rowe Price analysis shows that delaying retirement even a year or two can improve chances of having sufficient retirement funds and increase the level of withdrawals.

No Predicting

Investors should keep in mind that, while assumptions about average market returns and volatility can be made with some confidence over long periods, there is much less certainty over short periods. No one knows the depth or duration of any bear market or the strength of the recovery.

That, again, underscores the need for investors to control what is within their power: the amounts of annual withdrawals and long-term asset allocations. Starting with a conservative initial withdrawal amount and perhaps cutting back when encountering sustained periods of market decline can help mitigate the impact of such fluctuations on the retiree's long-term financial success. It may also enable investors to increase withdrawals later as markets recover.

Getting a Reality Check on Your Retirement Income Plan

Interested in figuring out how much income your nest egg may provide in retirement without exhausting your money? The free, online T. Rowe Price Retirement Income Calculator can help.

The calculator—which employs the same T. Rowe Price simulation tool used in the study of investors' options in bear markets (story on page 14)—can be accessed at troweprice.com/ric.

This interactive tool enables investors to estimate the odds of not running out of money depending on their rate of withdrawals and portfolio strategy.

The calculator asks investors for their expected retirement age, expected length of retirement, marital status, total retirement assets, monthly income goal, asset allocation strategy, and desired success rate (their desired odds of not outliving their assets over the designated retirement period).

It then advises investors if their income goal is reasonable given their desired success rate. It shows investors how their chances of success would change if they revise their income withdrawals. Investors can also see how their income might change if they revise their asset allocation.

For example, assume an investor plans to retire at 65 with a $500,000 nest egg; wants a 90% chance of being able to withdraw $1,800 a month (with inflation adjustments) over 30 years; and plans to invest 60% in stocks, 30% in bonds and 10% in cash.

The calculator shows that taking out $1,800 a month the first year, with annual increases of 3% for inflation, gives the investor only about an 85% chance of success. For 90%, the monthly withdrawal amount would have to decrease to $1,650.

The calculator also shows that the investor could withdraw more, $1,700 a month, with a more conservative asset allocation (40% stocks, 40% bonds, and 20% cash).

The Retirement Income Calculator is not a substitute for a comprehensive retirement income plan, but it can provide a quick reality check for many investors as they begin planning their retirement income strategy.

Explaining Monte Carlo Analysis Used in Retirement Study

Monte Carlo simulations model future uncertainty. In contrast to tools generating average outcomes, Monte Carlo analyses produce outcome ranges based on probability—thus incorporating future uncertainty. In this example, savings data are based on average outcomes and retirement income data on Monte Carlo analysis.

Material Assumptions Include:

- Underlying long-term expected annual returns for the asset classes are not based on historical returns, but estimates, which include reinvested dividends and capital gains.
- Expected returns—plus assumptions about asset class volatility and correlations with other classes—are used to generate random monthly returns for each class over specified time periods.
- These monthly returns are then used to generate 10,000 scenarios, representing a spectrum of possible performance for the modeled asset classes. Success rates are based on these scenarios.
- Taxes aren't taken into account, nor are early withdrawal penalties. But fees—average expense ratios for typical actively managed funds within each asset class—are subtracted from the expected annual returns.

Material Limitations Include:

- Extreme market movements may occur more often than in the model.
- Some asset classes have relatively short histories. Expected results for each asset class may differ from our assumptions—with those for classes with limited histories potentially diverging more.
- Market crises can cause asset classes to perform similarly, lowering the accuracy of projected portfolio volatility and returns. Correlation assumptions are less reliable for short periods.
- The model assumes no month-to-month correlations among asset class returns. It does not reflect the average periods of "bull" and "bear" markets, which can be longer than those modeled.
- Inflation is assumed to be constant, so variations are not reflected in our calculations.
- The analysis does not use all asset classes. Other asset classes may be similar or superior to those used.

Model Portfolio Construction

In this study, we used one hypothetical portfolio composed of 55% large-cap stocks and 45% investment-grade bonds. The initial withdrawal amount is the percentage of the initial value of the investments withdrawn on the first day of the first year. In subsequent years, the amount withdrawn grows by a 3% annual rate of inflation. Success rates are based on simulating 10,000 market scenarios and various asset allocation strategies. The underlying long-term expected annual return assumptions (without fees) are 10% for large-cap stocks and 6.5% for investment-grade bonds. Net-of-fee expected returns use these expense ratios: 1.211% for large-cap stocks and 0.726% for investment-grade bonds.

IMPORTANT: The projections and other information generated by the T. Rowe Price Investment Analysis Tool regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. The simulations are based on assumptions. There can be no assurance that the projected or simulated results will be achieved or sustained. The charts present only a range of possible outcomes. Actual results will vary with each use and over time, and such results may be better or worse than the simulated scenarios. Clients should be aware that the potential for loss (or gain) may be greater than demonstrated in the simulations.

The results are not predictions, but they should be viewed as reasonable estimates.