

# Retirement Income: Repairing the Damage to Assure the Flow

By Christine Fahlund

**H**aving suffered severe losses in their retirement nest eggs last year, many retirees living off of their savings are reviewing their investment and spending plans, searching for new plans of action to ensure their savings can sustain them throughout their lifetime.

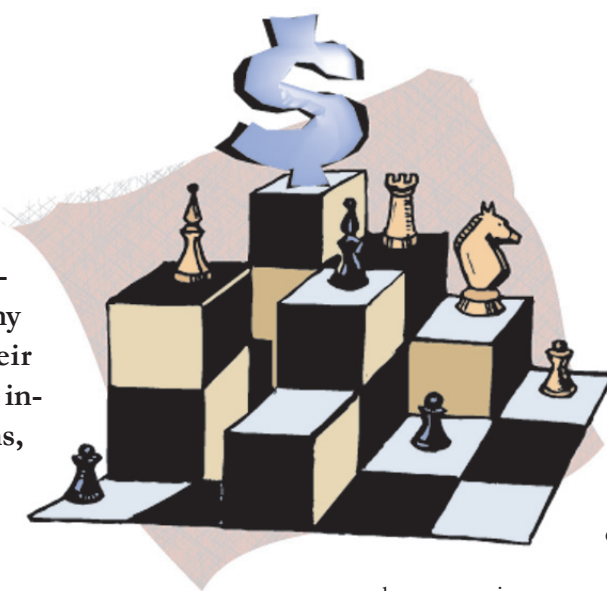
There is no question that bear markets can be devastating—particularly for new retirees—if action is not taken to compensate for the loss. The sooner you adjust, the better.

But what is your best course of action?

While the instinct may be to flee the risk of equity markets, postpone retirement or go back to work, an alternative strategy would be to consider temporarily reducing annual withdrawals from your nest egg.

A new T. Rowe Price retirement income study compared various withdrawal adjustment strategies for new retirees who suffered a 30% decline in their portfolios in their first year of retirement, under two different assumptions of future stock market performance, and compared to a switch to a 100% bond portfolio.

Our study found retirees can boost their chances of not outliving their assets over a full 30-year retirement period by simply holding their withdrawals constant for the next five years. In fact, simply holding withdrawals steady over the next five years provides a much more secure solution than switching to a 100% bond portfolio allocation in the



second year.

Moreover, if stock market returns in the wake of last year's crash follow the historical post-bear market pattern—and are much higher than longer-term averages—holding withdrawals constant for the next five years would provide retirees an even greater probability of not running out of assets.

And without this optimistic stock assumption, our study found retirees can boost their chances even further if they cut back on their withdrawals by various amounts.

## Assessing the Damage

Research shows that withdrawing too much in retirement—particularly early in retirement—is the most likely cause of running out of money. That's because any money that retirees take out of their portfolios or that they lose in market declines in the first five years is money that won't be invested to earn returns in succeeding years when the markets recover. And the less an investor has invested after poor market conditions, the less potential to benefit from compounding of earnings in subsequent years.

Last year, a T. Rowe Price analysis showed that portfolio returns for retirees in their first five years of withdrawals are particularly crucial.

The study showed that if annual cumulative returns average less than 5% for the first five years of retirement, it is much more likely that retirees may not be able to sustain their projected withdrawals for the duration of a 30-year

**Table 1. Likelihood That Retiree Will Not Run Out of Money After a 30% Portfolio Decline\***

**Initial Portfolio Value: \$1 million**  
**Initial Withdrawal Amount: \$40,000 with 3% annual inflation increases**  
**Portfolio Allocation: 55% stock/45% bonds**

	Projected Probability of Success					
	Stick to Original Plan (Increase Withdrawals 3% Annually) for Inflation	No Inflation Increases for Next 5 Years	Reduce Withdrawal Amount by 10%		Reduce Withdrawal Amount by 20%	
			3% Annual Increases for Inflation	No Inflation Increases for Next 5 Years	3% Annual Increases for Inflation	No Inflation Increases for Next 5 Years
Average Future Stock Return Assumption	40%	60%	56%	74%	73%	87%
5-Year Stock "Rebound" Assumption	57%	75%	72%	86%	85%	94%
Switch 100% to Bonds in Second Year	7%	29%	24%	58%	55%	85%

*\*Analysis assumes a static portfolio composed of 55% stocks and 45% bonds. The example does not take into account income taxes or required minimum distributions. The probability of sustaining withdrawals represents the percentage of 10,000 simulations in which the investor does not run out of money during a 30-year retirement. For simulations, a gross return of 10% is used for stocks with annual fees of 1.211%; in the "rebound" scenario, the gross return assumption for stocks in the second through sixth years only is 15%. A gross return of 6.5% is used for bonds, with annual fees of 0.726%.*

Source: T. Rowe Price Associates.

retirement. If the poor returns don't come until the second five years of retirement (in other words, the portfolio has average returns during the first five years, and then poor returns during years six through 10), the study showed that the probability of success also declines, but not as much.

[The results of this prior study are summarized in the accompanying sidebar on page 7.]

### Repairing the Damage

In light of last year's significant stock market losses, we examined the impact on new retirees who just suffered a 30% decline in their portfolios in their first year of retirement. We then looked at the effectiveness of strategies for restoring retirement security after that degree of market misfortune.

The results are based on a probability analysis simulating how the strategies performed under 10,000 potential market scenarios, assuming a 10% long-term average return for stocks (less annual fees of 1.2%) and a 6.5% return for bonds (less annual fees of 0.7%). (A detailed description of the study is provided in the on-line version

of this article at [AAII.com](http://AAII.com).)

The new study examined the case of a retiree with a \$1 million portfolio that is invested 55% in equities and 45% in bonds. This retiree initially plans to withdraw 4% of the balance (\$40,000) at the end of the first year of retirement, and then increase the annual withdrawal amount by 3% in each following year to adjust for inflation. This particular strategy when initially implemented would provide a 90% chance of not running out of assets over a 30-year period of retirement.

But what happens if losses occur in the first year?

The study showed that if new retirees suffer first-year losses of 10% to 20% overall, they may be able to stick with their original withdrawal strategy and sustain a relatively high likelihood of not running out of money over the long run.

However, the study found that coping with losses of 30% may require a change in withdrawal strategy. Those include holding withdrawals constant for at least five years, or cutting back the initial withdrawal amount from what had been planned—or perhaps a combination of both.

### Running Out of Money

Table 1 shows the impact of a market crash on retirement income prospects, and how changes in the withdrawal amount can improve the portfolio's chances for survival.

For example, if this investor's portfolio dropped by as much as 30% in the first year, and he or she stuck to the original withdrawal plan, making no changes, then the overall chance of not outliving assets falls from 90% to as low as 40%.

However, the chances increase under other withdrawal adjustment scenarios:

- If the investor does not take the 3% inflation adjustment for years two through six, the chance of not exhausting assets increases to about 60%.
- If the investor reduces the withdrawal amount by 10% (to \$36,000), the chance of not exhausting assets increases to 56% if 3% annual inflation increases are taken in the following five years, and to 74% if withdrawals are held constant for the next five years.

## Retirement Success Rates: The Crucial Early Years

A T. Rowe Price analysis last year showed that portfolio returns for retirees in their first five years of withdrawals are particularly crucial to ensure that their portfolio is able to sustain withdrawals for the remainder of their life.

How much do poor returns affect portfolio success?

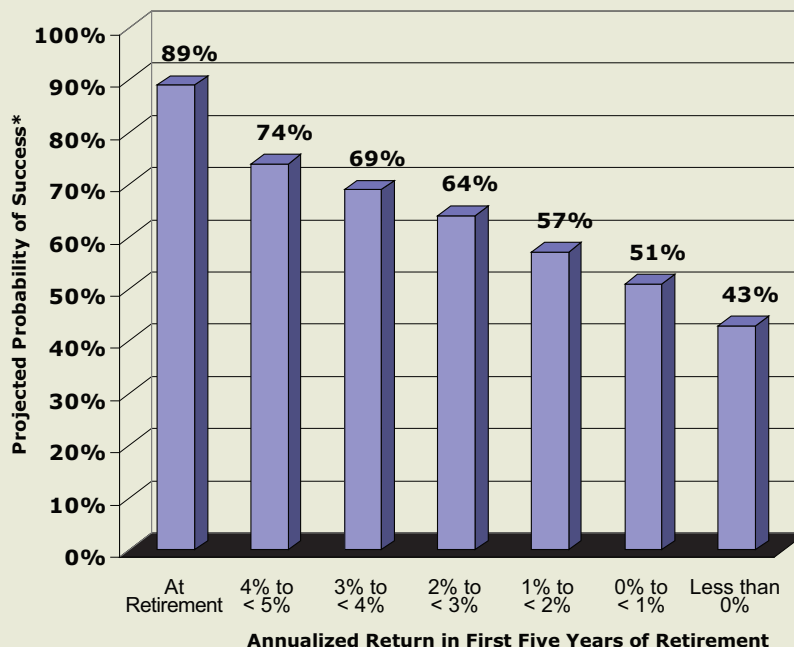
The results are shown in Figure 1. The chart shows the probability of not running out of money over a 30-year retirement for an investor who withdraws 4% of his portfolio in the first year and increases the annual withdrawal amount by 3% for inflation. It assumes a static portfolio composed of 55% stocks and 45% bonds.

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 over the next 25 years can drop sharply from the 89% probability of success at the start of retirement.

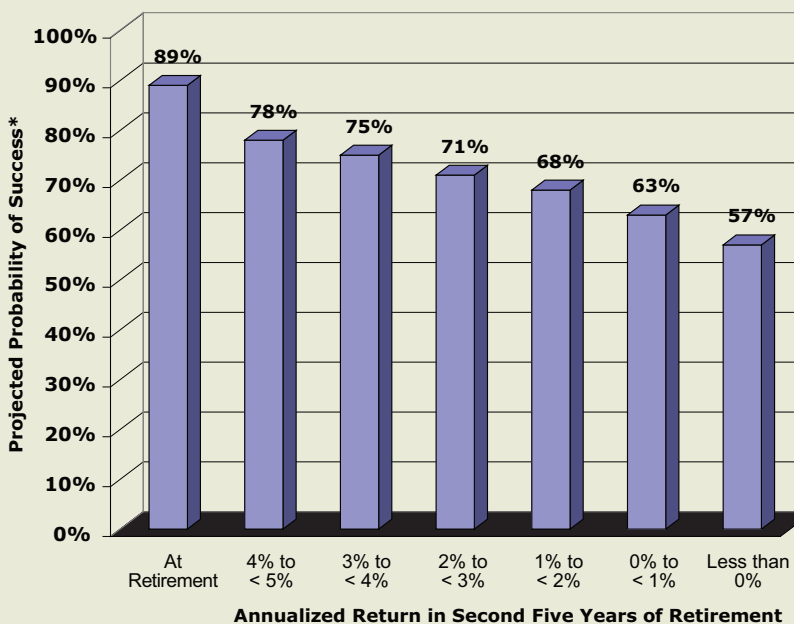
For example, if the investor's portfolio had an annualized return of between 4% and 5% in the first five years of retirement and the original plan of withdrawals was continued, the chance of success declined to 74%; if the portfolio had an annualized return of less than 0% in the first five years, the chance of success declined to 43%.

The analysis also showed that if the poor returns don't come until the second five years of retirement (in other words, the portfolio has average returns during the first five years, and then poor returns during years six through 10), the probability of success also declines, but not as much. These results are shown in Figure 2.

**Figure 1. The Impact on Retirement Success of Poor Performance in the First Five Years\***



**Figure 2. The Impact on Retirement Success of Poor Performance in the Second Five Years\***



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

Source: T. Rowe Price Associates.

**Table 2. Withdrawal Reductions Needed to Restore a 90% Chance of Sustaining Assets Over a 30-Year Retirement\***

Portfolio After One Year		Reduction in Withdrawal Amount to Restore 90% Probability of Sustaining Assets Over 30-Year Retirement Period					
Balance (\$)	Decline (%)	3% Annual Increases for Inflation			No Inflation Increases for Next 5 Years		
		Withdrawal (\$)	Reduction (%)	W/D as % of Balance (%)	Withdrawal (\$)	Reduction (%)	W/D as % of Balance (%)
<b>Average Stock Return Assumption</b>							
\$900,000	10%	\$34,000	15.0%	3.8%	\$39,000	2.5%	4.3%
\$800,000	20%	\$31,000	22.5%	3.9%	\$35,000	12.5%	4.4%
\$700,000	30%	\$27,000	32.5%	3.9%	\$30,000	25.0%	4.3%
<b>5-Year Stock "Rebound" Assumption</b>							
\$700,000	30%	\$29,800	25.5%	4.3%	\$34,000	15.0%	4.9%

*\*Analysis assumes a static portfolio composed of 55% stocks and 45% bonds. The example does not take into account income taxes or required minimum distributions. The probability of sustaining withdrawals represents the percentage of 10,000 simulations in which the investor does not run out of money during a 30-year retirement. For simulations, a gross return of 10% is used for stocks with annual fees of 1.211%; in the "rebound" scenario, the gross return assumption for stocks in the second through sixth years only is 15%. A gross return of 6.5% is used for bonds, with annual fees of 0.726%.*

Source: T. Rowe Price Associates.

- If the investor reduces the withdrawal amount by 20% (to \$32,000), the chance of not exhausting assets increases to 73% if 3% annual inflation increases are taken in the following five years, and to 87% if withdrawals are held constant for the next five years.

probability of not running out of assets increases to 57% even if the investor did absolutely nothing. But it increases to 75% if withdrawals are held constant for five years—a large step back toward the level of security of 90% at which this retiree started.

to equities. However, retirement planning is about trade-offs—finding the right balance between an investment allocation and an appropriate withdrawal strategy. Generally, most retirees in these situations would be much better served by sticking with some allocation to equities.

### Banking on History

No one can predict with any certainty potential market returns for 2009 and thereafter, but what if higher stock returns were to follow for the five years following the market crash?

Our study also looked at what would happen if stocks averaged 15% during the five-year period after the big loss. This was based on research by The Leuthold Group which showed that, when the stock market (represented by the S&P 500) is priced as cheaply as it was near the end of 2008, the average annual return over the following five-year period has been about 15% (based on valuation and normalized earnings patterns since 1957).

In this optimistic scenario, the

### Fleeing to Fixed Income

What would happen if our retiree decided to ditch stocks?

Our study found that abandoning stocks altogether for bonds after suffering through the first-year decline is counterproductive. Under this scenario, the chances of not exhausting assets would plummet to about 7%. And even if the investor takes no inflation adjustments for five years, the probability that an all-bond portfolio would not run out of assets would rise to only about 29%—in other words, a 70% chance that the investor would run out of money.

After suffering a major market crash in the first year of retirement, it is understandable why new retirees may be frightened about staying committed

### Getting Back to 90%

Having suffered a large portfolio loss in their first year of retirement, some retirees still may not be satisfied with only partially restoring their original 90% chance of sustaining withdrawals during a 30-year retirement, or with counting on a market rebound to do that for them.

What would it require to raise the probability back to the original 90%?

Table 2 shows the withdrawal adjustments that would be needed to restore a 90% chance of not outliving assets during retirement based on a 10%, 20% and 30% drop in total portfolio value after the first year.

The table indicates that:

- A new retiree who suffered a 30%

portfolio loss would have to drop his withdrawal in the second year from \$40,000 to \$27,000 (about 4% of the remaining \$700,000 portfolio value) if he planned on taking annual inflation increases thereafter.

- Alternatively, a slightly higher withdrawal amount could be taken in year two (\$30,000, or 4.3% of the remaining \$700,000) if he were to forgo annual inflation adjustments for five years.

This strategy involves essentially starting over in your retirement income planning based on a significantly lower nest egg value, and it simply may be unaffordable for many. Holding withdrawals constant offers a less costly and less disruptive approach that ought to be considered.

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### 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 any recovery.

That 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 cutting back when encountering sustained periods of market decline can help mitigate the impact of such fluctuations on your long-term financial success. Not taking an annual 3% inflation adjustment in your withdrawal may be a hardship, but it is relatively modest compared to substantially cutting back withdrawals after the first year. However, cutting back also significantly improves your long-term security.

With inflation expected to remain modest or even decline for much of 2009, and with Social Security benefits increasing 5.8% in 2009 as a cost-of-living adjustment, these strategies may not put retirees behind in meeting their living costs—at least in the immediate term.

T. Rowe Price has an interactive tool, the Retirement Income Calculator,

on its Web site that can help you evaluate your own portfolio's ability to sustain your planned withdrawals throughout your retirement period.

It also allows you to see the impact on retirement income of changing various factors, such as the amount being saved, retirement age, number of years in retirement, asset allocation strategy, and, for retirees, the monthly amount you expect to spend.

The tool calculates a projected monthly income stream throughout retirement, taking into account such factors as current and future savings, Social Security and other sources of income, your asset allocation, and the expected number of years in retirement. The results indicate the probability that income can be sustained throughout the retirement period based on a Monte Carlo probability analysis of 1,000 potential market simulations.

To find the Retirement Income Calculator, go to the Individual Investors section of T. Rowe Price Web site at [www.troweprice.com](http://www.troweprice.com), then go to the Tools & Resources section under Retirement Planning. ▲

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