RETIREMENT SPENDING RULES: WHAT CAN GO WRONG?

By Maria Crawford Scott

There are a number of approaches to determining how much savings a retiree can spend each year, but each has its pitfalls. Recognizing and minimizing the risks is an important step in making sure a portfolio can support you throughout your retirement.

Individuals living off of retirement savings live with financial risks that other investors aren't faced with, at least not yet. These unique risks include:

- Outliving existing savings.
- Price increases in essential products and services that eventually cause annual expenses to exceed annual income.
- Annual income that is unpredictable and highly variable.

How these risks are handled often dictates how much savings retirees feel comfortable withdrawing each year for spending, and that in turn has a major impact on the retiree's asset allocation decisions.

In general, there are three approaches to the spending decision:

- Spend the portfolio's annual income.
- Spend the annual total return.
- Spend an amount each year based on withdrawal rates that have been successful historically.

Unfortunately, none of these approaches eliminates all risks. However, there are steps you can take to minimize the risks of the approach you are using.

SPEND THE INCOME

Many retirees choose to spend only the income generated from investments, leaving the "principal" amount untouched. This addresses the fear of outliving savings.

However, many investors who use this approach try to maximize and stabilize income by putting savings into higher-yielding, lower-volatility vehicles such as bonds.

This de-emphasizes growth and exposes the portfolio over time to the possible erosion of real value—as well as real income—due to inflation.

In order to maintain a real level of income, a portfolio must grow enough to offset inflation. However, bonds have no growth element. Instead, that growth must come from stocks. And the less an investor invests in stocks, the greater the stock portion must grow to overcome inflation.

For example, the current dividend yield on the S&P 500 is 1.6%, while the current yield on intermediate-term (less than 10 years) bonds is 6.4%. A portfolio invested 50% in the S&P 500 and 50% in bonds would therefore have an annual income of 4.0%.

How can the income provided by this portfolio yield be maintained in real terms if inflation is 3%? The bond portion would not grow at all—it would remain a fixed percentage of a fixed amount. Dividends, however, increase. The dividend yield on stocks in the portfolio is a percentage of an increasing amount, so the actual dollars produced rise to help offset inflation. If inflation were 3%, the gain on the common stock portion would have to be at least 6% (3% divided by 50%) for the portfolio to provide a constant real portfolio income; the total return of the stock portfolio (income plus capital gains) would be 7.6% (1.6% + 6%).

If the portfolio had a lower percentage invested in stocks, the return required for the common stock portion would rise, eventually reaching unrealistic rates in light of historical stock returns. This is illustrated in Table 1,

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TABLE 1. COMMON STOCK RETURNS REQUIRED TO MAINTAIN PORTFOLIO YIELD

Portfolio Allocation			Stock Return Required to Maintain Portfolio Yield (%)		
% in Stocks	% in Bonds	Total Portfolio Yield (%)	3% Inflation	4% Inflation	5% Inflation
100	0	1.6	4.6	5.6	6.6
90	10	2.1	4.9	6.0	7.2
80	20	2.6	5.4	6.6	7.9
70	30	3.0	5.9	7.3	8.7
60	40	3.5	6.6	8.3	9.9
50	50	4.0	7.6	9.6	**11.6**
40	60	4.5	9.1	**11.6**	**14.1**
30	70	5.0	**11.6**	**14.9**	**18.3**
20	80	5.4	**16.6**	**21.6**	**26.6**
10	90	5.9	**31.6**	**41.6**	**51.6**
0	100	6.4	—	—	—

Returns underlined and in bold on the lower right represent unrealistic stock return assumptions. Table assumes a dividend yield of 1.6% and a bond yield of 6.4%.

which provides the approximate return on the common stock portion that would be required to maintain a constant total portfolio yield for various allocations and inflation rates. Returns in the table that are bold and underlined represent unrealistic stock return assumptions.

As an example, let's assume you have a $600,000 portfolio, with 20% invested in stocks and 80% invested in bonds. That would provide you with an income of 5.4%, or $32,400. But in order to maintain that level of real income (in purchasing power terms) if inflation were 4% annually, your stock portfolio would have to return 21.6% annually, an unrealistically high rate of return. Changing the asset allocation to 50% stocks and 50% bonds would provide an income of 4%, or $24,000. However, the return required for the stock portion is 9.6%, a more reasonable and likely long-term stock return, making it much more likely that that real level of income can be maintained over the long term.

If you use this spending rate approach, make sure to include an adequate amount of growth investments. Your annual withdrawal amount will be lower than if you try to maximize current income, particularly given today's low dividend yields, but you will not be sacrificing future portfolio income levels.

SPEND THE RETURN

Another approach is to spend the long-term average annual total return (income and capital gains) generated by your savings. Like the "spend the income" approach, it leaves the original investment amount untouched, but since it is based on total return rather than income, it encourages you to invest in more growth-oriented vehicles. The long-term average return is used because single-year returns of stocks are volatile, and it is difficult for many retirees to vary spending by such drastic amounts.

One risk with this approach is overestimating the long-term returns you will receive on your portfolio, and underestimating inflation.

To reduce this risk, make sure you use conservative and realistic estimates of rates of return, based on long-term historical averages that include all kinds of market environments. Don't rely on historical returns that comprise primarily boom years—for instance, the last 20 years. Table 2 presents conservative annual return estimates based on the past 50 years.

In addition, make sure that you are diversified within your asset categories to assure broad participation in the market's returns. For example, don't invest your entire stock portfolio in a sector fund, but rather a diversified portfolio of large-cap, small-cap, and international stocks.

Another major risk of this approach is that it does not allow for any growth in the original amount of the investment, since you are spending the entire return. That means that in purchasing power terms, the original investment amount would decline with inflation.

The solution to this is to allow the original principal amount to grow each year by the rate of inflation. Put another way, you would withdraw an amount equal to the expected long-term total rate of return less inflation—the "real" rate of return.

For example, let's continue with the $600,000 portfolio that is invested 50% in stocks and 50% in bonds. Using the conservative return assumptions from Table 2, your expected long-term total return would be 7.7% (50% × 0.10 + 50% × 0.055). If you expect inflation to be 4% over the time period, your real rate of return would be roughly 3.7% (7.7% less 4%). That means you could use a spending rate of 3.7%, or $22,200. If you assumed 3% inflation over the long term, a less-conservative assumption, you could use a spending rate of 4.7% (7.7% less 3%).

PORTFOLIO SUCCESS RATES

A third approach is to spend an annual amount based on historically successful withdrawal rates.

Under this approach, portfolios are constructed for various asset allocations based on historical year-to-year rates of return for the asset classes. Then, various withdrawal rates are applied to these historical portfolios

TABLE 2. CONSERVATIVE ANNUAL RETURN ESTIMATES BASED ON THE PAST 50 YEARS

Small-Company Stocks	12.0%
Large-Company Stocks	10.0%
Bonds	5.5%
Cash	3.5%
Inflation	4.0%

for various payout periods. For example, a 4% withdrawal rate is applied to a portfolio for 30 years, first for the time period covering 1926 to 1956, then for the next time period covering 1927 to 1957, and so on. The success rate is the percentage of all past payout periods in which savings were not exhausted despite the annual withdrawals, based on the sequence of actual historical returns over the period.

Examining all possible combinations would clearly be an onerous undertaking for an individual. However, portfolio success rates for various asset mixes over various time periods were reported in a recent article [see "Retirement Savings: Choosing a Withdrawal Rate That Is Sustainable," by Philip L. Cooley, Carl M. Hubbard and Daniel T. Walz, in the February 1998 *AAII Journal*; this article is also available on the AAII Web site (www.aaii.com) in the *Journal* archives section], and the most useful results are reprinted in Table 3. This table indicates the success rates for portfolios in which withdrawal rates are adjusted for inflation—in other words, the withdrawal rate applies to the first-year withdrawal, and in the following years that amount is increased by the rate of inflation. The table covers all historical periods from 1926 to 1995.

As an example, let's go back to our $600,000 portfolio that is invested 50% in stocks and 50% in bonds. And let's assume that you intend to withdraw from that portfolio over a 30-year time period, your assumed life expectancy. Table 3 indicates that if you withdrew 5% initially ($30,000)

TABLE 3. INFLATION-ADJUSTED PORTFOLIO SUCCESS RATES: 1926 TO 1995

(Percentage of all past payout periods supported by the portfolio after increasing withdrawals for inflation)

	Withdrawal Rate as a % of Initial Portfolio Value:									
Payout Period	**3%**	**4%**	**5%**	**6%**	**7%**	**8%**	**9%**	**10%**	**11%**	**12%**
100% Stocks										
15 Years	100	100	100	91	79	70	63	55	43	34
20 Years	100	100	88	75	63	53	43	33	29	24
25 Years	100	100	87	70	59	46	35	30	26	20
30 Years	100	95	85	68	59	41	34	34	27	15
75% Stocks/25% Bonds										
15 Years	100	100	100	95	82	68	64	46	36	27
20 Years	100	100	90	75	61	51	37	27	20	12
25 Years	100	100	85	65	50	37	30	22	7	2
30 Years	100	98	83	68	49	34	22	7	2	0
50% Stocks/50% Bonds										
15 Years	100	100	100	93	79	64	50	32	23	13
20 Years	100	100	90	75	55	33	22	10	0	0
25 Years	100	100	80	57	37	20	7	0	0	0
30 Years	100	95	76	51	17	5	0	0	0	0
25% Stocks/75% Bonds										
15 Years	100	100	100	89	70	50	32	18	13	7
20 Years	100	100	82	47	31	16	8	4	0	0
25 Years	100	93	48	24	15	4	2	0	0	0
30 Years	100	71	27	20	5	0	0	0	0	0
100% Bonds										
15 Years	100	100	100	71	39	21	18	16	14	9
20 Years	100	90	47	20	14	12	10	2	0	0
25 Years	100	46	17	15	11	2	0	0	0	0
30 Years	80	20	17	12	0	0	0	0	0	0

Note: Numbers rounded to the nearest whole percentage. The number of overlapping 15-year payout periods from 1926 to 1995, inclusively, is 56; 20-year periods, 51; 25-year periods, 46; 30-year periods, 41. Stocks are represented by Standard and Poor's 500 index, and bonds are represented by long-term, high-grade corporates, and inflation (deflation) rates are based on the Consumer Price Index (CPI). Data source: Calculations based on data from Ibbotson Associates.

Source: AAII Journal, February 1998

and increased the $30,000 in the following years by the rate of inflation, your portfolio would have supported you for the full payout period for 76% of the 30-year periods between 1926 and 1995; indeed, in many of those successful payout periods, you would have a sizeable amount remaining after the 30-years of withdrawals. However, if you had withdrawn at that rate during one of the unsuccessful 30-year time periods, which occurred 24% (100% – 76%) of the time, you would have prematurely exhausted your assets. A 4% initial withdrawal rate historically has been much more successful, supporting withdrawals for the full payout period for 95% of the 30-year periods, assuming a 50/50 stock-bond mix. That would provide you with an initial income of $24,000.

This approach encourages you to invest in more growth-oriented vehicles if you want higher withdrawal rates over long payout periods—for portfolios with less than 50% invested in stocks, success rates are lower at withdrawal rates above 3% over 30-year payout periods compared to portfolios with larger stock commitments. The approach also provides a relatively steady source of income that grows in real terms.

The risks to this approach?

One major risk is misjudging your payout period, presumably based on your life expectancy. If you assume a payout period that is too short, you run the risk of prematurely using up all of your resources.

Make sure you use a very long life expectancy; don't use the "average life expectancy" for your age. The average life expectancy is a median—half of those at the current age are expected to live beyond the average. If you use the average life expectancy for your current age, you run a 50-50 chance of outliving your savings, a risk that most would consider too high. Adding on 10 years or so, based on your current health and family history, is more conservative, and if you are married, you must consider the life expectancy of both you and your spouse.

CONCLUSION

All of the approaches have their pitfalls. But if you reduce risk under all of them, you end up with similar guidelines that apply to any of the spending plans you may adopt:

- Make sure you have a mixture of growth investments, such as stocks, and stable investments, such as bonds. Don't sacrifice stability for growth if you want to protect the real value of your portfolio.
- Be conservative with the amount you withdraw each year from your portfolio. Under all of the approaches discussed, when conservative rates of return and well-diversified (among stocks and bonds) asset allocations were assumed, the withdrawal rates were between 3% to 4%. A 5% annual withdrawal rate would be based on less conservative assumptions, while withdrawal rates of 6% to 7% would be aggressive and more risky.
- Use conservative (low) return assumptions and higher inflation assumptions no matter which approach you use. That doesn't mean that you need to invest conservatively, but don't assume you are actually going to attain high rates of return with volatile investments.
- Diversification across various investment classes that do well at different times—large company stocks, small company stocks, and international stocks—tends to smooth returns. Make sure that even in retirement your portfolio is diversified.
- Build in life expectancy assumptions that are well beyond what you really expect.
- One final point: All of these are do-it-yourself approaches. However, you could also buy a commercial immediate annuity from an insurance company. Immediate annuities provide periodic payments soon after you pay a premium to the insurer. The amount of these payments can be fixed or varied, and you can choose to have them continue until death. You do face certain risks: you run the risk that the payments may not keep up with inflation, and you run the risk that the insurer may become insolvent. In addition, you will not have anything left over for heirs when you die. The primary benefit, however, is that you, or you and your spouse, receive an income that you can't outlive. For more on immediate annuities, see "The Attractions and Pitfalls of Variable Immediate Annuities," by Glenn S. Daily, in the February 1994 *AAII Journal*; also available on the AAII Web site in the *Journal* archives section. ◆