PORTFOLIO STRATEGIES WORKSHOP

Assessing Your Portfolio Allocation From a Retiree's Point of View

By Maria Crawford Scott

Most retirees depend on personal savings for at least a part of their annual income. And as most retirees are well aware, portfolio allocation—the percentage that is invested in the major asset categories—plays a major role in determining the level of income that personal savings can sustain over a retiree's life.

How, then, do you assess your portfolio allocation when you are in retirement? A typical example illustrates one approach.

Louise

Louise is in her 60s and recently retired, with personal savings that total about $400,000, including $50,000 in an IRA. Currently, she lives on a pretax income of $30,000, which consists of about $10,000 a year in payments from Social Security and a pension plan, and $20,000 in withdrawals from her personal savings.

This income suits her lifestyle nicely, and she hopes to maintain its real value over the coming years. Fortunately, both her Social Security and pension plan payments increase with inflation. However, she will have to increase her withdrawals from her personal savings each year by the rate of inflation to maintain the real value of this income source.

Now that Louise has time to plan ahead, she has decided to re-evaluate her savings portfolio, which up until now had been invested roughly equally between large capitalization stocks (50%) and bonds (45%), with a small amount (5%) in a money market fund.

The question foremost in Louise's mind, quite naturally, is: Given the allocation of my savings portfolio, will it be able to provide me with a steady source of income in real terms for the remainder of my life?

Like most people, Louise has not accumulated so much that she can afford to simply live off of the income of her savings. Instead, she will be drawing down her savings. Since Louise does not feel the need to leave an estate to any relatives, this shouldn't pose any family problems. Nonetheless, Louise does not want to run into a timing problem—running out of savings before you run out of breath. For that reason, she assumes a life expectancy beyond the age she expects to live (somewhere in her 80s), and so she specifies 95 years of age, which is 35 years from now.

What is the rate of return Louise would need to earn on her personal savings to provide her with the inflation-adjusted equivalent of $20,000 in today's dollars each year for the next 35 years, with nothing remaining at the end of this period? That, of course, depends on the assumed rate of inflation.

Table 1 provides some guidelines to the returns Louise would need to achieve. The tables indicate the first-year spending amount—the percentage of personal savings that can be withdrawn or "spent" for income in the first year— for various time periods and rates of return on savings. In subsequent years, the inflation-adjusted equivalent of this amount is withdrawn to maintain a level income in real terms, and at the end of the period, no savings remain. Each table assumes a different inflation rate. However, the always-conservative Louise assumes inflation will average 4% for the remainder of her life.

Louise's spending amount this year is 5%: $20,000 divided by $400,000. Since she wants this real level of income for another 35 years, she looks at that row of figures in the 4% inflation table, and finds a spending amount that is close to 5%; she then moves up the column to find the rate of return that is associated with that spending amount. The answer: Her target rate of return is 8%.

Louise's next question: Will my savings portfolio produce this rate of return given its current allocation?

Using long-term historical averages, Louise makes an estimate of the likely average return on her portfolio. Table 2 presents Louise's current allocation and shows how she estimates its long-term average return. The long-term estimates used in the table are based on historical returns. Louise is well aware that there is no assurance that her portfolio will perform according to these historical averages, but the estimates at least

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Table 1.
First-Year Spending Amount If You Spend All Savings and Leave No Estate
(Assumes annual spending increases at the rate of inflation, with no savings left over at the end of the period)

3% Inflation

No. of Yrs.	Expected Annual Return on Savings: 4%	5%	6%	7%	8%	9%	10%	12%
	First-year spending as a % of savings:							
5	20.39	20.78	21.16	21.55	21.94	22.33	22.71	23.48
10	10.44	10.89	11.34	11.80	12.26	12.73	13.21	14.16
15	7.13	7.60	8.09	8.59	9.10	9.62	10.15	11.23
20	5.47	5.97	6.48	7.01	7.56	8.12	8.70	9.89
25	4.48	4.99	5.53	6.09	6.67	7.27	7.89	9.16
30	3.82	4.34	4.90	5.49	6.10	6.74	7.39	8.74
35	3.35	3.89	4.46	5.08	5.72	6.38	7.07	8.49
40	3.00	3.55	4.14	4.78	5.45	6.14	6.86	8.33
45	2.73	3.29	3.90	4.56	5.25	5.97	6.71	8.23
50	2.51	3.08	3.71	4.39	5.11	5.85	6.61	8.16

4% Inflation

No. of Yrs.	Expected Annual Return on Savings: 4%	5%	6%	7%	8%	9%	10%	12%
	First-year spending as a % of savings:							
5	20.00	20.38	20.77	21.15	21.54	21.92	22.30	23.07
10	10.00	10.44	10.88	11.33	11.78	12.24	12.71	13.65
15	6.67	7.12	7.59	8.07	8.57	9.07	9.59	10.65
20	5.00	5.47	5.96	6.46	6.99	7.53	8.09	9.24
25	4.00	4.48	4.98	5.51	6.06	6.64	7.23	8.47
30	3.33	3.82	4.33	4.89	5.47	6.07	6.70	8.01
35	2.86	3.35	3.88	4.45	5.05	5.69	6.35	7.72
40	2.50	2.99	3.54	4.13	4.75	5.41	6.10	7.53
45	2.22	2.72	3.28	3.88	4.53	5.22	5.93	7.41
50	2.00	2.50	3.07	3.70	4.37	5.07	5.81	7.32

5% Inflation

No. of Yrs.	Expected Annual Return on Savings: 4%	5%	6%	7%	8%	9%	10%	12%
	First-year spending as a % of savings:							
5	19.62	20.00	20.38	20.76	21.14	21.52	21.90	22.66
10	9.57	10.00	10.43	10.87	11.31	11.76	12.22	13.14
15	6.23	6.67	7.12	7.58	8.06	8.55	9.05	10.08
20	4.56	5.00	5.46	5.95	6.45	6.97	7.51	8.62
25	3.56	4.00	4.47	4.97	5.49	6.04	6.61	7.80
30	2.89	3.33	3.81	4.32	4.87	5.44	6.04	7.30
35	2.42	2.86	3.34	3.87	4.43	5.03	5.66	6.98
40	2.06	2.50	2.99	3.53	4.11	4.73	5.38	6.76
45	1.79	2.22	2.72	3.27	3.87	4.51	5.18	6.61
50	1.57	2.00	2.50	3.06	3.68	4.34	5.04	6.51

provide her with some allocation guidelines. And the estimate—7.7%—indicates that she could very well fall short of her goal.

Louise's estimated return of 7.7% is not that far off of the target rate of 8%. But she decides that it would be preferable to re-examine the allocation and see if she can't improve her position with an allocation that puts her closer to her goal, yet remains one that she is still comfortable with.

Louise realizes that in order to boost her return, she will have to re-allocate more to stocks. In addition, a small commitment to small-capitalization stocks would boost her stock returns further and would serve to diversify her stock holdings. On the other hand, Louise decides to increase her money market holdings to 10% for greater liquidity; this will also help temper some of the increased volatility in her portfolio.

Of course, there are many possible portfolio allocations, but Louise's chosen revision is presented in Table 2, which also shows its long-term return estimate—8.7%—comfortably above the level she would need to meet her goal.

The question for Louise now, however is: Am I now too heavily invested in the stock market?

If Louise considers the allocation of only her savings portfolio, she is clearly heavily weighted in stocks. However, this excludes from consideration the payments she is receiving from Social Security and her pension, which are real financial assets and should be included in the portfolio allocation decision.

How should these payments be considered? The current value of these income streams can be estimated using the approach illustrated in Table 3 (but keep in mind that this is only a very rough estimate), and they should be treated as a fixed-income asset.

Including these assets in Louise's revised portfolio produces an interesting result: Louise's new allocation is more evenly balanced than she realized (see Table 4 on p. 20), with 40% in bonds, 53% in stocks (including 7.5% in small-caps), and the remainder in cash.

This is an allocation she can live with.

Table 2.
Louise's Current and Revised Savings Portfolio

	Current Portfolio		Revised Portfolio	
	($)	(%)	($)	(%)
Large-Cap Stocks	200,000	50	240,000	60
Small-Cap Stocks	–	0	40,000	10
Bonds	180,000	45	80,000	20
Cash	20,000	5	40,000	10
Total	**400,000**	**100**	**400,000**	**100**

	Long-Term Asset Class Return Estimates*		Long-Term Portfolio Return Estimates: Current		Revised
Large-Cap Stocks	10.0%	×	50% = 5.0%		60% = 6.0%
Small-Cap Stocks	12.0%	×	0% = 0.0%		10% = 1.2%
Bonds	5.5%	×	45% = 2.5%		20% = 1.1%
Cash	3.5%	×	5% = 0.2%		10% = 0.4%
		Estimated Return:	7.7%		Estimated Return: 8.7%

**Based on long-term historical returns; significant year-to-year variations can be expected.*

Should Louise go back and revise her return estimates based on this broader portfolio definition? It isn't necessary. These return estimates were used to determine the level of payments that account for only part of Louise's current income, the part that must be sustained by her savings portfolio. Therefore, the relevant return is the one that is produced by those savings based on its allocation.

In the end, Louise decides to implement the revised allocation, but she does so gradually by selected withdrawals for income, so as to not increase her overall tax bill, and through changes in her IRA investments.

On Your Own

Of course, there are many alternative allocations Louise could have chosen, and most retirees will have many other considerations to take into account. However, here are some points to keep in mind when trying to determine whether your savings portfolio can sustain your long-term goal:

- Examine your current "spending amount" and from this determine the necessary return you need to maintain this amount in real terms over your life expectancy. This will also be a function of the size of the estate you want to leave, and your inflation assumption. [For more on spending rates, see "How Much of Your Savings Can You Afford to Spend During Retirement?" in the August 1995 *AAII Journal*; and "Retirement Spending Worksheet" in the September/October 1995 *Computerized Investing*.]
- Determine whether the current allocation of your savings portfolio can reasonably be expected to produce this target return.
- The effects of compounding over long time periods are substantial, and small changes in assumptions such as asset class returns or inflation, can produce big differences in outcome. By "playing with the numbers," you can produce a desired result relatively easily. However, you'll have to live off the real result, not the desired result, so resist the temptation to "make it work." Use assumptions that are both reasonable and conservative.
- You should also re-examine the allocation of your total portfolio, taking into consideration all financial assets including

Table 3.
Estimating the Present Value of a Stream of Payments

	Present Value Annuity Factor						
No. of Years	4%	5%	6%	7%	8%	9%	10%
5	4.45	4.33	4.21	4.10	3.99	3.89	3.79
10	8.11	7.72	7.36	7.02	6.71	6.42	6.14
15	11.12	10.38	9.71	9.11	8.56	8.06	7.61
20	13.59	12.46	11.47	10.59	9.82	9.13	8.51
25	15.62	14.09	12.78	11.65	10.67	9.82	9.08
30	17.29	15.37	13.76	12.41	11.26	10.27	9.43
35	18.66	16.37	14.50	12.95	11.65	10.57	9.64
40	19.79	17.16	15.05	13.33	11.92	10.76	9.78

To estimate the present value of a stream of future periodic payments, multiply the current annual payment by the present value annuity factor in the table. The annuity factor chosen should be the one that corresponds with:

- The expected number of years the payments will last—for instance, if the payments are to last for your life, use your current life expectancy, and
- An expected interest rate equal to the current rate paid by a Treasury bond with a maturity equal to the number of years the payments will last.

As an example, Louise's annual payments total about $10,000, and her remaining life expectancy is 35 years. The rate paid on a 35-year Treasury bond is roughly 7%, and the corresponding annuity factor is 12.95. Multiplying the $10,000 annual payment by the 12.95 annuity factor produces an estimated present value of $129,500. This $129,500 should be treated as if it were a fixed-income asset when making asset allocation decisions.

Table 4.
Louise's Total Portfolio, Including Fixed Payments, After Revised Allocations

	Revised Portfolio Including Fixed Payments	
	($)	(%)
Large-Cap Stocks	240,000	45.4
Small-Cap Stocks	40,000	7.5
Bonds*	209,500	39.6
Cash	40,000	7.5
Total	**529,500**	**100.0**

**Includes $129,500 estimated present value of pension and Social Security payments.*

pension payments. [See "Defining Your Investment Portfolio: What Should You Include?" in the November 1995 *AAII Journal*). You may be more heavily invested in fixed-income equivalents than you realize, and you may be comfortable moving more of your investable portfolio into asset classes with greater growth, such as stocks.

- No one can accurately predict the future, so monitor your portfolio frequently to make sure your assumptions remain reasonable and your goals are still within reach.

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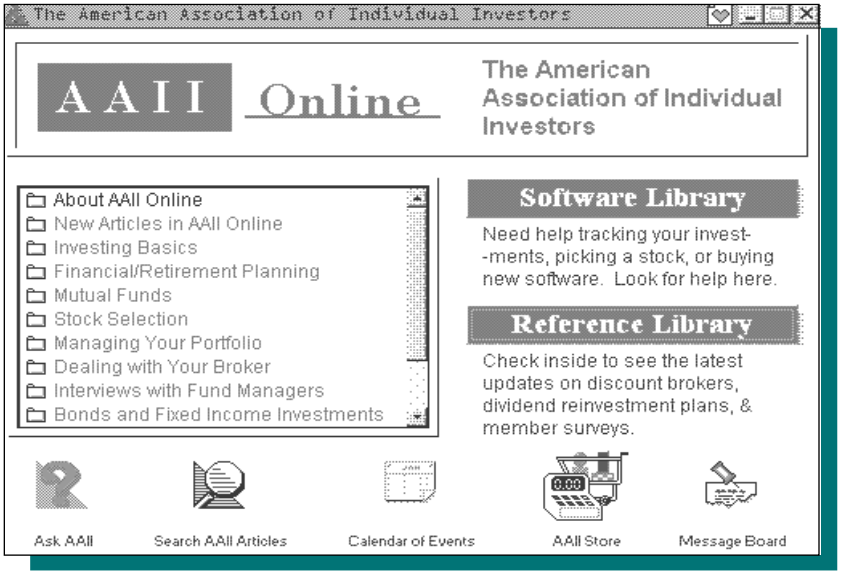

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