PORTFOLIO STRATEGIES WORKSHOP

Re-Examining Your Asset Allocation In Light of Vested Pension Payments

By Maria Crawford Scott

Peter and Eileen Myers are perplexed. The recently retired couple, both age 65, carefully planned their retirement, saving enough to supplement their pension payments so that they can maintain an annual "spending" amount, pretax, of around $65,000 in today's dollars.

The Myers' investment portfolio is currently valued at about $500,000. They are planning to "spend" about 5% of their investment portfolio—$25,000—during their first year of retirement, while in subsequent years they can increase this amount by the rate of inflation. [For more on how to determine a spending rate, see "How Much of Your Savings Can You Afford to Spend During Retirement?" by Maria Crawford Scott in the August 1995 *AAII Journal*.] This annual spending amount will supplement their pension income, which is about $40,000 annually.

In determining the asset allocation for their investment portfolio, the Myers recognized that they would need a healthy amount of equities to ensure that their supplemental payments would keep pace with inflation. For that reason, they decided to invest 65% of their portfolio in equities (45% in large-cap stocks and 20% in small-cap stocks), with 35% in fixed-income investments (25% in bonds, and 10% in money market funds for liquidity).

The Myers thought that they had everything settled. However, Eileen was recently catching up on her reading and found an article that discussed assets that should be included in one's investment portfolio. [See "Defining Your Investment Portfolio: What Should You Include?" by Maria Crawford Scott in the November 1995 *AAII Journal*.] The article stated that an investment portfolio "consists of financial assets that you would be willing to sell for spending money or that generate some form of spending money," and it noted that that would include vested pension payments, which would be considered a fixed-income asset. The article also provided a method for estimating the present value of those payments (see Table 1).

Using the table and assuming a 30-year life expectancy, Eileen estimated the present value of the pension payments to be roughly $496,000. She then recalculated their asset allocation, and found that, using this new definition of "investment portfolio," their allocation was the reverse of what they had intended—instead of being 65% in stocks and 35% in fixed-income-related investments, they were now approximately 35% invested in stocks and 65% in fixed-income related investments! Table 2 presents the Myers' two portfolio views, the first excluding the pension payments and the second including them.

Eileen showed the article, and her calculations, to Peter. Looking at the numbers, they realized that the only way to meet their original target would be to sell all their bonds and invest the proceeds in stocks.

"Is that what we really want to do?" Eileen asked. Peter was dubious—he was not sure he felt comfortable with all of the investments under their control in stocks.

After mulling the problem over for several weeks, the Myers decided that instead of simply adjusting their "expanded" investment portfolio to fulfill their asset allocation decision, they needed to re-think their original asset allocation decision, taking into consideration the total investment portfolio, including the pension payments.

Looking at their "expanded" investment portfolio, the Myers realized that the pension payments really do provide them with the kind of stability that a traditional bond investment would. But the payments—which are fixed and have no inflation adjustment—also leave them very vulnerable to inflation. Originally, they had realized that their stock holdings would have to provide the growth to allow their supplemental income to keep pace with inflation; now, they realized that their stock holdings would have to make up for the lack of real growth in the pension payments as well, which account for almost half of their

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Table 1.
Estimating the Present Value of a Stream of Payments

No. of Years	Present Value Annuity Factor 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, the Myers' annual pension payments total about $40,000, and their remaining life expectancy is 30 years. The rate paid on a 30-year Treasury bond is roughly 7%, and the corresponding annuity factor is 12.41. Multiplying the $40,000 annual payment by the 12.41 annuity factor produces an estimated present value of $496,400 (rounded down to $496,000), and should be treated as fixed income.

annual income

On the other hand, the Myers realize that they do need some form of liquidity as they sell assets from their stock holdings to use as supplemental income. For that reason, they decide that they will maintain their $50,000 commitment to cash in the form of a money market fund. The value of the pension payments account for roughly 50% of the total portfolio. Those assets plus the money market fund investment result in a total commitment to fixed-income of 55%. What about the remaining 45%?

The Myers decide that they will invest the remaining portion in stocks. That means that 90% of the assets that they directly control will be invested in stocks, but they have decided that they can live with the volatility in this portion of their portfolio. It also means, however, that they will have to sell their current bond holdings. They intend to do this in the most tax-efficient manner over the next several years, by withdrawing their supplemental spending income from these assets.

Thoughts to Consider

Here are some thoughts to keep in mind if you are taking an "expanded" portfolio view that includes a pension:

- If you find that the allocation of your "expanded" portfolio is quite different from your original allocation decision, do not simply readjust your portfolio to match your original allocation decision. Instead, you should go back to square one and re-examine your original decision, this time including the pension payments.
- The expanded portfolio view is an attempt to provide you with a general picture of your assets and the real risks that you face. However, the estimated present value of the pension payments are only that—estimates. Use the allocations derived from the valuations as general guidelines concerning the risks that your portfolio faces, rather than as a precise measure of your total worth. It is not useful for other purposes, such as estate planning, since pension payments end at death and have no worth to heirs.
- If you have large fixed-income payments coming in due to a pension, you may face the risk that inflation will diminish the annual income; equities provide a hedge against this, while other fixed-income assets do not.
- On the other hand, it is very important that you are comfortable with the allocation decisions that you make. If pension payments provide a large percentage of your annual income, a sizable portion of the assets under your own control would need to be invested in growth-generating investments such as stocks to offset inflation risks. Make sure that you are comfortable with that level of stock investments among the assets that you can control; you do not want to be in a situation where stock market volatility induces you to panic and sell at inopportune times.
- Social Security payments should be treated similarly to pension payments to the extent that you are sure you will receive future payments.
- If you do decide to shift assets as a result of your re-evaluation, do so gradually over time, and in a way that minimizes taxes and transaction costs—for instance by withdrawing spending income from the asset from which you wish to sell.

Table 2.
The Myers' Portfolio

	Current Portfolio ($)	Current Portfolio (%)	Expanded Portfolio* ($)	Expanded Portfolio* (%)	Revised Portfolio* ($)	Revised Portfolio* (%)
Large-Cap Stocks	225,000	45	225,000	23	330,500	33
Small-Cap Stocks	100,000	20	100,000	10	119,500	12
Fixed Income	125,000	25	621,000	62	496,000	50
Cash	50,000	10	50,000	5	50,000	5
	500,000	100	996,000	100	996,000	100

**Includes $496,000 estimated present value of pension payments.*