MPT Revisited

Do traditional views of portfolio management still apply in a retirement world?

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By Elayne Robertson Demby

Is modern portfolio theory relevant to the new dynamics of retirement? Detractors and proponents are arguing the soundness of slavishly adhering to MPT once a retired client actually b e gins to draw down assets. The problem, say naysayers , is that MPT does not consider longevity risk and the need to draw down assets even when the markets are down. “Allocating investments in retirement is a co m pletely different challenge,” says Chris O’Flinn , a principal in ELM Income Group, Inc. in Washin g ton, D.C.

There are others, of course, who disagree. MPT still provides retirees with good returns and less risk, argues Jordan Berlin, CEO of Weiser Capital Management in New York. “We think that modern por t folio theory is still relevant for retirement planning because it gives investors an inflationary hedge,” says Paul Bracaglia , a partner in charge of the investment advisory group at PricewaterhouseCoopers, LLC in Philadelphia.

No matter what the view on MPT is, one thing is certain: The old rule of simply putting 60 percent of a retiree’s assets into equities and 40 percent into bonds is fast becoming yesterday’s asset alloc a tion model. New and more elaborate retirement nest egg strategies are being developed. “We are now r e thinking about how to give individual investment advice throughout the client’s lifetime, including retirement,” says Peng Chen, president of Ibbotson, the asset allocation specialist firm now a subsid i ary of Morningstar, Inc. in Chicago.

Both academia and the financial industry have generally acknowledged modern portfolio theory as the gold standard for developing portfolios ever since Prof. Harry Markowitz won the 1990 Nobel Prize in Economics for proposing it. (Markowitz actually advanced his diversification theory in “Portfolio S e lection,” a paper published in 1952 by the *Journal of Finance* .)

Even detractors say that MPT is still a sound foundation for retiree portfolios. It just needs to be “tweaked” a little. It’s not a question of abandoning MPT, but that risks need to be taken into a c count which the client did not have previously, says Felix Schirripa , executive vice president of ELM. Because clients in retirement are no longer saving money but spending it, there is longevity risk, the need for predictability and the realization that time is no longer on the client’s side, he e x plains.

Historically, this is not the first time that the general wisdom of retirement planning has been scrut i nized. In the low inflation environment of the 1950s and 1960s, when people retired they bought bonds, says Bracaglia . “It was an easy way to structure retirement. If someone determined that they needed $50,000 annually, they would buy bonds and clip coupons,” he says.

The weakness of that strategy came to light when inflation hit in the 1970s. Annual income from bonds did not keep pace with inflation, says Bracaglia , and because the bonds were bought in a low i n flation environment, they sold at a discount—typically only 80 cents on the dollar.

After that experience retirees realized the need for an inflationary hedge in their portfolios. Equity i n vestments, however, are volatile and MPT is used to control the risk. This is fine in the “accumul a tion” phase of planning for retirement, some claim, but in the “de-accumulation” phase—when assets are actually being drawn upon—MPT must be tweaked a bit. “The problem is that modern portfolio theory doesn’t take into account withdrawals over a long period of time,” says O’Flinn . Withdrawals, he explains, make retirees more sensitive to underperformance and investments with a high rate of volatility.

For example, says Schirripa , if an investor has $100 to invest and loses $10, he can make that capital loss back by getting a better rate of return on the $90 he has left. However, if a retiree has a $10 capital loss and is withdrawing $5 annually, then the retiree needs an

even greater rate of return to make up the loss because there is less capital to recover [from the underperformance or loss].

The concept is to “leverage” MPT, says Chen, adding that Ibbotson expanded MPT to cover longe v ity risk in retirement and other factors. For example, human capital or an investor’s future earning pote n tial should be taken into account. “Human capital is like a fixed income asset in the portfolio,” says Chen. “This allows the investor to invest financial capital more aggressively.” Therefore, younger workers—because of future potential earnings—can invest aggressively.

Retirees, however, have to manage their longevity risk—that is, living past their life expectancy. The best way to cover longevity risk is to hedge the risk, says Chen, by adding insurance products such as annuities to retirees’ portfolios in addition to equities and other fixed income investments.

Buying insurance products also allows for greater withdrawals. Since the 1990s the standard formula for retiree withdrawals has been 4 percent of assets per year, adjusted up for inflation once a client reaches retirement. If you buy an annuity, however, says O’Flinn , a client can actually withdraw more than 4 percent annually because volatility has been lowered. Furthermore, he says, many annuity products on the market today can return more than 4 percent annually.

Others disagree. “Annuities are not a panacea,” says Bracaglia , “Insurance companies are not giving away anything for free. They’re taking your money, and you gain a stream of income that still gives them a profit.” Furthermore, the rate of return on annuities is low, he says.

Buying an insurance policy to cover longevity risk is similar to buying home, auto or life insurance, Chen argues. It’s not so much an investment, but a hedge. When you buy insurance, there is a cost, Chen admits, because you are buying insurance.

Longevity risk is not as big an issue for a wealthy client who lives frugally, Chen points out. “For Bill Gates, an annuity product doesn’t make sense,” he says. But if the cost is low in comparison to the value, then it does make sense to insure the risk. Chen says advisors should also look at the preference factor: “How concerned is the investor about longevity risk? At the end of the day, it’s a personal dec i sion. If an investor is not comfortable with the risk, then he should buy insurance to cover that risk.”

Bracaglia prefers to handle risk differently. He uses a two-pronged approach for wealthy investors with moderate living expenses. He creates a dedicated funding stream for their living expenses by building a bond ladder—buying bonds with increasingly longer maturity dates so that a bond comes due annually. This money, he explains is used to pay for living expenses. The balance of assets is i n vested into a well diversified portfolio.

Alternatively, Bracaglia splits retiree assets into two “buckets.” The first is the tax-deferred assets in 401(k) plans and IRAs, for example; the second is the taxable investment portfolio. Investors are not required to take distribution from the qualified tax-exempt assets until age 70 1/2. So, until that mil e stone is reached, the qualified assets are invested in a diversified portfolio as an inflation hedge. The taxable portfolio is invested conservatively to provide the assets the client will live on. The overall a s set allocation of both “buckets,” says Bracaglia is the standard 60/40 split, but the qualified portfolio could possibly be invested 80/20 and the taxable portfolio invested 20/80.

Once the client reaches 70 ½ and is now required to take distributions from the non-taxable account, the asset mix changes. “You then switch the investment strategies of the two portfolios,” says Br a caglia , “with the qualified retirement portfolio becoming more conservatively invested, and the taxable portfolio becoming more aggressively invested because they switched responsibilities.”

The bottom line issue is how to appropriately advise investors to achieve their goals and manage risk throughout their lifetime, says Chen. Twenty to thirty years ago, a lot more people were covered by traditional pension plans which insulated them from longevity risk.

Now, Chen says, retirement sec u rity is much more dependent on personal savings. Workers are now also responsible for making their own investment decisions, and the wrong decisions can lead to a less secure retirement. “The only free lunch is diversified asset allocation,” Chen says. The idea is to manage risk by capturing diversific a tion benefits over the long run.

[SIDEBAR]

Younger workers can put money away for retirement, expecting to leave it alone for years. If returns are negative, they have time to wait for a rebound. Good investment years make up for the bad ones.

For example, a loss of 20 percent in one year can be made up by a gain of 25 percent in the next year. $100- $20 (20 percent loss) = $80; $80 + $20 (25 percent gain) = $100. Making up for the earnings we counted on receiving, which were also wiped out by the loss, would require an even greater gain.

However, when workers approach retirement, the time that assets can remain untouched shortens cau s ing greater vulnerability to losses. Furthermore, when favorable experience does arrive, assets may have been reduced by withdrawals in addition to negative returns. This means that the favorable e x perience needs to be that much greater to make up for previous poor returns.

Retirement income plans are especially vulnerable to losses because annual withdrawals mean smaller amounts are available for investment. For example, assume a hypothetical couple retires in 1971, when both are 62. Their retirement plan calls for their income to last for 35 years.

Initially, the couple plan to withdraw $15,000 a year from savings of $300,000, (5 percent of savings). In addition they plan to increase annual withdrawals by 3 percent annually to allow for inflation. So, for example, in the second year of retirement their withdrawal would be 103 percent of $15,000, or $15,450, etc.

The two lines on the graph below show the assets remaining at the end of each year, after taking into account withdrawals and earnings.

If the couple’s assets could earn a net return of 7.7 percent each year (the average return of the S&P 500 Composite Stock Index over the past 35 years) as illustrated by the green line, this plan works well. Earnings would provide the planned income amount each year without dipping into the $300,000 starting balance before the end of the 35 years.

However, the red line shows what happens if annual net returns on the couple’s assets exactly matched the actual annual returns of the S&P 500 Composite Stock Index from 1971 through 2005. The ou t come here is much worse for the couple despite the fact that the red and green lines have the same a v erage annual return of 7.7 percent. The losses and withdrawals which caused the red line to decrease so much in the early years, could not be made up later, and assets are depleted after just 22 years.

Bottom line: This couple ran out of retirement assets years before expected. —ERD

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