Bills for the Bonds You Choose

by Jonathan Guyton, CFP®



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OVER THE YEARS, I've become quite skeptical of articles presenting the latest flavor of the next new investment idea. Once in a while, one of these ideas will add a little something at the margin; however, lowering expenses when you can and—as Dick Wagner famously advised—a "don'tdo-anything-stupid" orientation have largely mattered more than anything else. Even CalPERS now seems to be doubling down on this.

For me, 2009 was the last time an investment management contribution offered a real difference-maker. That's when Michael Kitces demonstrated a notable increase in safe withdrawal rates by overlaying a valuation-based asset allocation policy onto an otherwise traditionally rebalanced portfolio (see "Dynamic Asset Allocation and Safe Withdrawal Rates" in the April 2009 issue of The Kitces Report). His findings were later validated by Wade Pfau ("Withdrawal Rates, Savings Rates, and Valuation-Based Asset Allocation," in the April 2012 issue of the Journal), and Neeraj Gupta and

colleagues ("Adding 'Value' to Sustainable Post-Retirement Portfolios" in the spring 2012 issue of *Financial Services Review*).

Earlier this year, I promised to use this column space to explore two potentially practice-altering aspects of retirement income planning. This column is based on the March 2015 Journal article, "Retirement Risk, Rising Equity Glide Paths, and Valuation-Based Asset Allocation," by Kitces and Pfau. One of the paper's purposes was to re-validate the benefits of a valuation-based asset allocation policy compared to various set-it-and-forgetit glide paths. Not surprisingly (at least to me), it did just that. But there was something unexpected; understanding this additional contribution and its implications is this column's subject.

Changing the Fixed Income Allocation

Going back to Bill Bengen's first articles, sustainable withdrawal research has nearly always used some flavor of five- to 10-year U.S. government securities (bonds) as the distribution portfolio's fixed income component. Sometimes a small portion (at most, a quarter of it) also includes three-month Treasury bills (bills), but rarely is any other fixed income asset class modeled.

In their March 2015 *Journal* article, Kitces and Pfau followed this practice with their use of 10-year U.S. government bonds. However, their article also asked (in my own words), "What difference would it make to change the fixed income allocation from 100 percent bonds to 100 percent bills?" It made a big difference indeed: ceteris paribus, safe withdrawal rates rose by 25 to 50 basis points, except for scenarios beginning with an undervalued market when it made little difference.

This is important evidence to add to your empirical library of key resources in formulating advice for clients. Beyond its obvious "safe spending rates may be higher than previously thought" implication, I see at least four other implications regarding portfolios designed to fund sustainable retirement withdrawals of 20 to 40 years:

Fixed income holdings are more likely to behave the way you want them to, when it matters most, if U.S. government securities comprise a significant portion.

Shorter-term fixed income holdings support higher sustainable distributions than those with maturities closer to 10 years.

Fixed income yield matters less than you might think.

Fixed income total return matters less than its correlation with equities because of those times when this correlation (or lack thereof) matters most.

To be fair to the authors, their purpose did not include determining whether these marginal benefits could either be replicated or enhanced by things like including fixed annuities as some or all of the fixed income allocation, or by employing dynamic withdrawal policies. Neither did they compare five-year to 10-year bonds, nor look at fixed income allocations containing combinations of both bills and bonds. The latter could prove particularly interesting, as Walt Woerheide and David Nanigian showed that it took a "cash buffer" of four years' of withdrawals to produce even small sustainability improvements over none whatsoever (see "Sustainable Withdrawal Rates: The Historical Evidence on Buffer Zone Strategies" in the May 2012 issue of the Journal). Each of these seems worth exploring.

All that said, I suspect this work will also be valuable to practitioners who previously knew or believed these points to be true and for whom these beliefs inform their asset allocation and investment management decision-making. Having previously written that "the purpose of this (fixed income) part of the distribution portfolio was ... to provide a cushion to weather a perfect storm of black swan-esque systemic risk" (see my October 2012 Journal column "Back to School: Past, Present, and Future") and then doggedly maintained the significant government securities portion of our fixed income allocation, put me firmly in this camp.

What the Kitces/Pfau Research Tells Us

It is in understanding why Kitces and Pfau got their results that some key insights (re)appear. All safe withdrawal research uses either historical or simulated data to populate the scenarios that are tested to determine the (maximum) withdrawal rate at a given success rate. Whichever approach is used, a "safe withdrawal rate" is the highest withdrawal rate that meets the desired success rate.

You could ask, "Why is any given 'safe' withdrawal rate as high as it is?" The answer is: because in the most challenging scenarios for success, the portfolio held up well enough to continue funding that withdrawal level. And it did so enough times to satisfy the desired success rate. How did this happen? Because of its performance in the most challenging portion(s) of that challenging scenario. What makes a portion of a scenario especially challenging is, of course, a period of years when real equity returns are significantly negative. In those years, the performance of the portfolio's fixed income holdings becomes vitally important. At a minimum, they need to be uncorrelated with equities in those years (ideally, they would be negatively correlated).

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So why do intermediate Treasury bonds fare worse than simple, boring Treasury bills? The answer concerns the degree of interest rate risk present in bonds and bills, since no credit risk is assumed to be present. When equity markets decline sharply and/or have large negative real returns, interest rates could either be falling (like in the earlier and later 2000s) or rising (like in the 1970s). When rates fall at a time when you don't want to be selling equities to fund ongoing withdrawals, both bonds and bills are unaffected by the equity losses; bills hold their value, and bonds do even better because

their prices rise. Both behave as desired for the sake of enhancing the portfolio's sustainability.

If rates fall when equity returns are poor, bills are again unaffected; however, because their prices fall, bonds experience poor returns alongside the equities. Because these positive-correlation-at-just-the-wrongtime scenarios exist for fixed income portfolios of bonds, the withdrawal amount (and, hence, the withdrawal rate that meets the desired success rate) must be somewhat lower to allow enough scenarios to remain successful. Not so with bills. The extent to which this is a problem is when poor equity returns and rising interest rates occur together in withdrawal portfolios comprised of bonds-that's what the Kitces and Pfau result tells us. The improvement when using bills is indeed noteworthy.

An interpretation of other research suggests this differential increases with even longer-term Treasury bonds. And it's greater still when introducing the added volatility (in a very unfavorably correlated manner) of credit risk via intermediate, investment-grade corporate bonds relative to Treasury bills. Interestingly, Pfau pointed to this issue as the reason the famed Trinity study of the late-1990s lagged Bengen's mid-1990s results. The former used investmentgrade corporate bonds while the latter employed government bonds of similar maturities.

What It Means for Practitioners

What can practitioners take from this? First and most important—be aware when your portfolio's fixed income make-up differs from the composition modeled in research on which you base retirement income advice. For example, floating rate notes, highyield bonds, and emerging market debt are not modeled in any credible safe withdrawal rate research. And we know their positive correlation with equities in times of big stock market declines can be both significant and quite a problem. If they are in your clients' distribution portfolios, on what basis do you justify their presence?

Second, as Kitces and Pfau put it, remind yourself that the fixed income allocation's "primary purpose ... is to defend against equity declines and be available to reinvest for better equity returns (via rebalancing), not to be a return driver itself" (p. 47). Its purpose isn't income, yield, or total return. Bear this in mind when choosing your portfolios' asset classes, unless your bond market timing skill/luck is particularly impressive. Does this mean a distribution portfolio's entire fixed income allocation should be Treasury bills? Not necessarily. The March 2015 Kitces/Pfau article did not analyze bills/bonds combinations. But it does mean that portfolios and practices that deviate from those supported by empirical research may not be best, and that you should have good reasons for any significant exceptions that are part of your client advice.

Third, perhaps our current low interest rate environment (though not necessarily lower for all shortterm bonds than the historical real return on bills) need not be so concerning if a portfolio's shorterterm bond volatility is closer to that of Treasury bills than intermediateterm Treasuries. This leads to a final, broader implication. Let this be an opportunity to review each component of the planning advice you give clients. Note those where you can cite illuminating evidence from our profession's everbrightening body of knowledge. Then let your clients know that there are sound empirical underpinnings to the planning policies and implementation advice you've designed for them, in addition to the emotional intelligence you demonstrate in giving it. They, you, and our profession itself will be the better for it. ■

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