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## The 'Floor-Leverage' Model

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By Kerry Pechter     Tue, Oct 22, 2013

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*An easy income recipe from Financial Engines: Put 15% of your savings in a triple-leveraged stock ETF and the rest in something safe, like a TIPS ladder.*

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In a world where people can't predict how long they will live or what the stock market will do, how can they ensure themselves a retirement income that's neither too large (lest they go broke) or too small (lest they scrimp unnecessarily) and that has a chance of keeping up with inflation?

It's a question that keeps actuaries, advisers and retirees up at night.

Lots of insurance products—inflation-protected income annuities, variable income annuities with floors, and deferred annuities with living benefits—aim to solve this problem, and they can.

But investors and advisors are always looking for simpler, cheaper, do-it-themselves ways to maximize safe income. Their search generally leads them in the direction of such classic strategies as safe withdrawal rates, so-called "bucketing," or the "build-a-floor-and-then-pursue-upside" approach.

Those strategies, however, are bedeviled by their own sets of uncertainties. What's the best spending rate and the investment mix at any given time? Exactly when should money cascade from bucket to bucket? How much safe flooring should a person buy?

Jason Scott and John Watson of Financial Engines, the provider of 401(k) participant advice, managed accounts and a managed payout strategy called Income+, have studied this slippery problem for several years. In the latest edition of the *Financial Analysts Journal*, they describe a strategy they call the "floor-leverage" model.

This model is relatively simple, and wisely separates retirement wealth into safe and risky sleeves. To maximize income, it calls for an initial allocation of 85% of a retiree's investable assets to any sort of low-risk income-generating instruments, such as ladders of zero-coupon bonds or annuities. For upside, it invests the rest of the money in something racy: a thrice-leveraged low-cost exchange-traded index fund (ETF).

Then comes the critical step: Once a year, gains in the leveraged ETF portfolio are

harvested and used to buy more flooring (and more income).

"It's for people who want material upside but who also want security," said Scott, who is managing director of the Retiree Research Center at Financial Engines in Sunnyvale, Calif. "You're trying to concentrate the risk in the risky assets and create safety in the floor asset. The beauty of the money that you put in the leveraged fund is that it's 'limited liability' money."

### **You'll be floored**

The floor-leverage strategy can be executed with any type of flooring. As mentioned above, it could be a ladder of zero-coupon Treasury bonds or Treasury Inflation-Protected Securities, or any of various types of income-producing immediate or deferred annuities. Such annuities can provide nominal or inflation-adjusted income for life, for a certain period, or for one or two lives.

"People will be interested in different kinds of floors. They might want nominal income or inflation-protected income. They might want annuities or ratchet products. One advantage of this rule is that you can implement it without having an institution provide one-stop shopping for you. That's one of the strengths of the design," Scott told *RIJ*.

The spirit of open architecture also extends to the leveraged side of the strategy. Investors using the floor-leverage method can invest their 15% in any of several daily-balanced, triple-leveraged ETF funds. For instance, companies like Barclays, Direxion, iPath, ProShares and PowerShares all offer these 3x ETFs on such indices as the S&P 500, Russell 2000 and NASDAQ 100.

By using one of these ETFs, Scott explained, the investor outsources the most labor-intensive and complicated part of the strategy: the daily trading that furnishes the overall portfolio with a version of the counter-intuitive risk management technique called Constant Proportion Portfolio Insurance. It's counter-intuitive because it involves selling stocks when stocks go down and vice-versa.

For example, if you invested \$15 or your \$100 portfolio in one of these leverage funds, the manager would leverage your \$15 by shorting \$30 worth of bonds and investing \$45 in stocks. If stocks sink in value, the manager trims his losses by selling stocks and buying bonds. When stocks rise, the manager shorts more bonds and increases his equity position.

It's not a money machine: Retirees could potentially lose their entire risky allocation to such

a leveraged fund. But the loss wouldn't erode the income from their safe assets (other than leave it vulnerable to inflation, perhaps). If the leverage fund gains value, however, they harvest the gain and use it to enhance their flooring and fatten their income stream. Presumably a retiree would want to carve out a side fund for emergencies.

Scott and Watson maintain that their floor-leverage model has certain advantages over such retirement strategies as the traditional 4% withdrawal from a balanced portfolio, or strategies that divide money into buckets corresponding either to specific goals (safety, rewards, aspirations) or time periods (e.g., five-year segments).

### **Better than four percent**

Comparing floor-leverage with the 4% rule, they write, "Although sustainable spending is the goal of both the 4% rule and the floor-leverage rule, the two rules call for a very different reaction to portfolio losses. The 4% rule counts on future market returns to sustain spending, and if they fail to materialize, it calls for cutting spending or risking ruin. In contrast, the floor-leverage rule always has sufficient fixed-income investments to sustain spending and never needs to cut spending if equity returns are poor."

In the paper, Scott and Watson concede that, for those who choose a safe withdrawal rate income method, the floor-leverage model might require a 3% initial payout (adjusted each year for inflation) from the safe asset. Their initial rate is lower than 4% because they assume a 40-year retirement instead of the 30-year retirement on which the 4% rule is based. Scott noted, however, that the use of asset-liability matching could eliminate the need for a safe withdrawal rate. Alternately, life annuities could raise the effective payout rate by adding mortality credits to the mix.

Comparing floor-leverage with bucketing (or "split-account") methods, the authors point out that bucketers inevitably face uncertainty about how to invest the money in each bucket, when to move money from bucket to bucket, and how much money to move from one bucket to another.

"Split-account strategies are initially straightforward to set up but often difficult to maintain; many split-account strategies are quantitatively vague about transfers between accounts and adjustments to short-term spending as markets evolve. In contrast, the floor-leverage rule is quite specific about when and by how much to increase spending." Whether it eliminates timing decisions altogether is not clear.

Floor-leverage addresses inflation risk and longevity risk in a couple of ways. Investors can

start with a cautious 3% payout rate and adjust it upwards for inflation, or they can buy ladders of TIPSs. They can presumably also use the transfers from their leveraged account to maintain their purchasing power.

As for dealing with longevity risk, Scott puts in a plug for late-life annuities, a tool he has researched extensively and described favorably in the past. Noting that self-insuring against the possibility of living to 100 is very expensive, he suggests hedging that risk by purchasing a no-cash-value deferred income annuity that sells at a steep discount and pays nothing until or unless the annuitant reaches age 85.

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