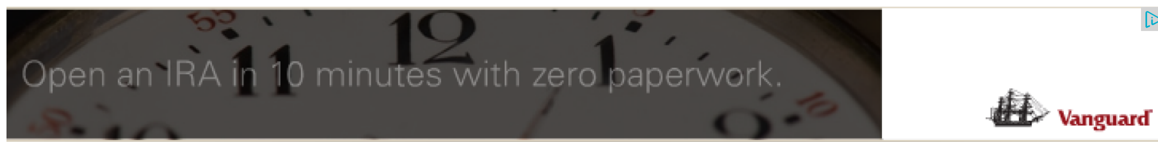

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FORBES (/FORBES/) 2/12/2014 @ 6:00AM | 26,979 views

Leverage Your Way To A Richer Retirement

This story appears in the March 3, 2014 issue of Forbes.

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Jason Scott of Financial Engines (Credit: Eric Millette For Forbes)

Will you outlive your nest egg?

It's the burning question of the millennium, and there is no shortage of financial advice or advisors willing to tackle it. For 78 million people at or near retirement age, the old rule of thumb has been to spend an inflation-adjusted

4% of the amount you retire with for each year of retirement. The rule relies on statistics that show there is a 90% probability that people holding a portfolio of 60% stocks and 40% bonds will be able to withdraw that amount for at least 30 years.

Thus, if you have $1 million when you retire at 65 you can withdraw $40,000 the first year, or $3,333.33 per month, and then adjust that number by the inflation rate each year thereafter.

The problem with the 4% rule is that it can waste assets and it doesn't always work. While tests of 90 years' worth of U.S. stock and bond returns suggest that you will be safe, a 2010 study of 17 markets in other developed countries found the 4% rule, using a more conservative 50/50 stock-bond mix, would have failed at some point in each one of them, forcing retirees to cut their spending dramatically or look forward to becoming totally dependent on government pensions.

Conversely if the stock market booms and the money in your nest egg doubles to $2 million, the rule stipulates that you don't veer from the original 4% amount. You could find yourself spending only 2% of your actual portfolio and building a large sum for your heirs to enjoy after all that self-denial.

"The 4% rule requires a lot of faith," says Jason Scott, managing director of the Retiree Research Center at Financial Engines (http://corp.financialengines.com/), a Silicon Valley-based retirement advisory firm founded by Nobel Prize-winning economist William Sharpe (http://corp.financialengines.com/corp/founder_bill_sharpe.html). "You have to say, 'Even if my portfolio doubles I still shouldn't spend any more,' and if the market crashes, you have to believe it will come back."

Scott's solution is a hybrid that he calls the "floor-leverage rule." The floor is a base level of income you want to receive until you die. Leverage is how you boost your income, by investing in a mutual fund or ETF that uses borrowed money to get triple the exposure to the stock market. If stocks go up, you take your winnings and move them into the bombproof "floor" segment of the portfolio. This permanently boosts your retirement income. If the market collapses, your equity portfolio might get wiped out, but you've still got the floor portion of your portfolio.

"It's for someone who doesn't want to outlive their money but also wants to participate in market upside," says Scott, who, with colleague John Watson, outlined the floor-leverage theory in an article in the Financial Analysts Journal (http://www.cfapubs.org/doi/abs/10.2469/faj.v69.n5.2).

Like many of the number crunchers working at Financial Engines, Scott, 46, was hired fresh out of Stanford's doctoral program after studying economics, writing his thesis on the distribution of tax benefits to employees from

investing in 401(k)s. His floor-leverage rule is an improvement over the 4% rule, he says, because it locks in a specific level of income that can ratchet up, permanently, if the stock market rises. In fact, it is based upon a more complicated theory for managing permanent endowments that guarantees a base level of income by selling riskier assets and buying bonds when stocks fall, and doing the reverse when markets rise.

The problem is few retirees have the inclination to constantly rebalance their portfolios. So Scott and Watson tested simpler approaches that require rebalancing once a year. After running 1 million Monte Carlo simulations under different market outcomes, they hit upon the floor-leverage rule. Scott and Watson assumed a 40-year post-retirement lifetime and bond yields of 2% after inflation. The idea is to put 85% of your money in investments, like inflation-protected Treasurys, that virtually guarantee a fixed level of income for the rest of your life. The rest goes into a triple-leveraged bullish stock-index fund like ProShares UltraPro S&P 500.

As a rule of thumb, it costs about $25 today to lock in a real return of $1 a year for 30 years, or about $1.5 million in TIPS to ensure $5,000 a month over that period, assuming you are drawing from interest and principal.

Another approach to setting up this "floor" would be to buy an immediate annuity that pays out $5,000 a month until you die. ImmediateAnnuities.com says it would cost a 65-year-old male $846,000, but it comes with some serious drawbacks: The cash flow and the principal disappear the day you die, there's no protection against inflation, and the money is inaccessible for emergencies.

Both are wasteful, according to economists, in that they squander potential retirement savings in the quest for guaranteed income. The high-risk, leveraged-equity component of Scott's rule seeks to eliminate that waste and substantially increase the amount of money retirees can withdraw and spend while still maintaining a floor. If the market rises, you simply shift the excess above 15% into the risk-free portfolio annually; if it falls, you simply watch it go down and hope it recovers.

While many enterprising retirees have informally used a similar "gambling money, safe money" bucket approach for years, not even Financial Engines has devised a product yet to deploy Scott's new back-tested formula. (The managed-income product it offers retirees doesn't use leverage.)

Persuading old-timers to embrace high leverage won't be easy. Exchange-traded funds like the ProShares UltraPro S&P 500, which offers three times the daily return of the Standard & Poor's 500 Index, have a bad reputation among individual investors and most advisors. Such funds tend to diverge rapidly from their underlying indexes because of the compounding effects of day-to-day repricing and volatility. An investor who puts $10,000 into a triple-long index fund whose underlying index drops 10% the first day and rises 10%

the next will end up with $9,100 at the beginning of the third day, while a straight index buyer will have $9,900. Over a year this difference can become significant. During the bear market of 2008, for example, droves of investors in leveraged inverse short ETFs were left dissatisfied after they profited much less than they expected.

Still, Scott and Watson's analysis shows that buying and holding leveraged equity investments can deliver outsize in?creases to income if the market rises over the year. From an initial withdrawal rate of 4.4%, a hypothetical retiree in 1950 would have been able to spend 12.5% of his starting wealth each year by the early 1970s, thanks to the long bull market during that era and the one-way infusions of cash from the leveraged equity portion of the portfolio (leveraged ETFs didn't exist until 2006). The worst scenario was a retiree who started in 1960 and flatlined at 5.9% after the 1973-74 recession and bear market wiped out most of his equity portfolio. But in all cases retirees were eventually able to spend well above the 4% rule.

Of course, Scott notes that there are ways to fine-tune the floor-leverage rule. Sixty-five-year-olds who want to spend more from the outset can assume that they will die before age 90 or they can choose to ignore inflation. Or they can use some of the 85% floor portfolio to buy deferred-income annuities, which kick in and offer lifetime guaranteed income starting at specific ages.

Scott and Watson calculated "efficiency scores" for various retirement strategies and determined that the floor-leverage rule was 99.6% efficient, meaning it "wastes" $4,000 per $1 million on goals other than providing the maximum combination of income and upside potential in retirement. A straight bond portfolio is 87.9% efficient, meaning it "wastes" $121,000 on a million dollars invested.

But one man's waste is another's treasure. Your children might prefer that you stick to the old 4% rule because, with it, you're more likely to end life with a big cushion of capital. To a dismal scientist that would be a tragedy.

SPENDING FORMULAS, OLD AND NEW

Jason Scott's floor-leverage strategy is just one of many formulas being recommended to people facing the scary prospect of outliving their money. Here are some old and new strategies for making the money you've saved last:

Old: The Bombproof Bond Portfolio. Buy a ladder of zero-coupon Treasurys that mature every year until you die. Cost: at current Treasury rates, $19,000 per $1,000 of annual income, or $950,000 for $50,000 a year. Want inflation protection? Buy Treasury Inflation-Protected Securities instead, at a cost of $25,000 per $1,000 of annual income.

Upside: Worry-free guaranteed income. **Downside:** You'd better not live more than 30 years.

Old: The 4% Rule. Withdraw 4% of your initial retirement nest egg in the first year of retirement and adjust the amount annually by the rate of inflation of the preceding year. You have a 90% chance of sustaining that income for 30 years. The rule assumes a 60/40 allocation of stocks to bonds and would cost about $1.25 million today to get $50,000 in annual income.

Upside: Greater potential wealth. **Downside:** You could be limiting your lifestyle for the benefit of your heirs.

New: The Dynamic Strategy. Devised recently by analysts at T. Rowe Price. You start with a conventional 60/40 stock/bond mix and an initial withdrawal rate of 5.1% ($63,750 on $1.25 million). Important: You must skip inflation adjustments after down-market years.

Upside: Greater retirement income. **Downside:** Real income takes a hit if the market falls and inflation soars. Plus your heirs may still end up with much of your money.

Old: Bucket Strategy. The floor-leverage rule is a variation of this old standard. Place enough money in low-risk investments, like investment-grade corporate bonds or defined-maturity bond funds, to guarantee a base level of income over 30 years. You can put the rest in the stock market and try to fund discretionary expenses with that, or you can ladder the entire portfolio so that maturities coincide with spending targets.

Upside: Low risk, and you can diversify interest rate exposure by laddering. Plus your stock gains could boost income. **Downside:** You could get stuck with your base level of income if the market crashes.

New: Deferred-Income Annuities. If you're inclined to go YOLO and start enjoying your money once you hit 65, this approach can safeguard against the curse of longevity because annuities eventually take over. ImmediateAnnuities.com (http://www.immediateannuities.com/)prices an annuity that pays around $4,000 a month starting at age 85 for a 65-year-old at $85,000. (Prices change with interest rates and other market conditions.)

Upside: Have fun running through your nest egg in the first part of retirement, knowing that you'll be set beyond age 85. **Downside:** There is no inflation protection, and if you die before the payout age, the annuity firm keeps your premium.

Old, but New again: Social Security. In exchange for a lifetime of paycheck deductions, Uncle Sam promises an almost unbeatable deal in today's low-interest environment. Social Security benefits are inflation-adjusted and can be inherited by your spouse (even a divorced spouse), dependent and disabled children or parents. Don't underestimate this benefit. In order to ensure $50,000 a year in retirement income it would ordinarily cost you $1.2 million in TIPS.

Upside: You can obtain maximum income for life if you wait until 70 to collect. **Downside:** Unless Congress acts, Social Security will be able to pay only about 75% of promised benefits come 2033.

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