Do Americans Save Enough? It Depends on What Calculator You Use

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Every week, one financial services firm or another releases findings of its latest retirement study: Americans aren't saving enough. The savings rate is abysmal. Americans keep up with the Joneses at the expense of their Golden Years. They borrow against their homes to pay for luxuries, and so forth. But is the situation as dire as most people think? A *New York Times* story on January 27 cited a handful of academics who think Americans are saving plenty -- too much, in many cases.

So who is right?

There is no definitive answer, says Olivia S. Mitchell, professor of insurance and risk management at Wharton and executive director of the school's Pension Research Council. Some studies, including one of her own, suggest Americans are not headed for the old-age catastrophe that many predict. But key factors, like the future health of Social Security, are impossible to handicap. "It's just a brutally difficult problem," she notes.

The recent debate involves the conflicting results that can be obtained with different forms of computerized financial calculators used to figure how much a household needs to save for retirement. Laurence J. Kotlikoff, economics professor at Boston University, argued in a recent paper titled, "Is Conventional Financial Planning Good for Your Financial Health?", that the simple calculators in wide use can easily overestimate a household's annual retirement costs by 10%. For a 40-year-old couple with a $72,000 annual income, this could lead the program to recommend annual savings of nearly $12,000 when $1,400 would be enough, he says, adding that financial services firms use these calculators to pump up sales.

Static vs. Dynamic Inputs

The most widely used financial calculators found on the Internet and in software for consumers rely on a static, or unchanging, set of inputs. In real life, these things fluctuate. Or, as Wharton professor of insurance and risk management Kent Smetters notes, in many cases the simple calculators use "pure rules of thumb -- and the rules of thumb are in error." The basic web calculators typically assume stocks will return 8% a year like clockwork, that inflation will sit at 3% forever and that the household's income will keep pace with rising prices.

The more complex "dynamic" financial models being developed by academics try to account for more variables, as well as the household's ability to trim spending and increase income during lean times. While it is not always the case, many households shown to be saving too little, according to simple calculators, look to be doing well in the more realistic ones.

But Smetters and others caution that the dynamic calculators have flaws as well, since they cannot accurately predict the risk that a breadwinner will lose a job or that Social Security and Medicare benefits will be trimmed.

No one can know for sure how people will fare in the future. That will depend on people's life spans, investment returns, inflation, the cost of housing and medical care and many other unknowns. But people have to plan as best they can despite the uncertainties. The standard approach, used by financial planners and consumer software programs offered online and through financial services firms, is to figure how much savings it will take to produce a nest egg big enough to replace 75% to 85% of a household's pre-retirement income -- a figure called "replacement rate."

To do that, these programs look at factors such as current assets and living expenses, life expectancy and eligibility for pensions and Social Security. The software typically assumes investments like stocks and bonds will perform as they have in the past and that annual income will grow at a given rate. Thus, it is simple math to say how big a sum one would need at the start of retirement to generate enough income to live for the next 20, 30 or 40 years. And it's easy to figure how much has to be saved each year at a given rate of return to accumulate that sum in time. "What most of them do is think about some [time] horizon and how to end up with some pile of money at the end of that horizon," states Nicholas S. Souleles, professor of finance at Wharton.

But the standard 75% to 85% replacement rate is a shortcoming, says Mitchell, noting that such figures are "essentially numbers made up out of thin air. It's difficult to forecast what your spending objectives will be going forward. Even if one can predict spending needs at age 65, one does not know whether expensive nursing home care will be needed at 85," she says, adding that "50% of people live longer than their life expectancies. If I'm still here, I still want to consume."

Moreover, a person earning $20,000 a year when the calculator is used the first time may be earning $80,000 a year on the eve of retirement decades later, according to Mitchell. The proper replacement rate, the amount needed to live adequately in retirement, clearly would be more than 75% of $20,000, but it might not be 75% of $80,000. It might be somewhere in between.

Because things can go wrong -- the stock market could tank, a job could be lost or inflation could spike -- a person using a static calculator is likely to build in a margin of safety, aiming for a larger nest egg just in case, Souleles says. That requires more saving each year before retirement. "It's going to force you to be a little conservative," he notes.

But in real life, the household may well find ways to adjust to jolts like a stock market downturn. By cutting back spending or taking on overtime or another job, the household can increase annual savings and keep on track. Mitchell says her studies have shown, for example, that many people can cut their retirement funding shortfalls in half simply by working to age 65 instead of 62.

These are the kinds of adjustments the dynamic models try to take into account, Souleles says. In addition, some consider the user's occupation, assessing whether income is likely to rise steeply or not, and whether periods of unemployment may occur. "What the dynamic models do is they acknowledge you have some control in the interim," he says. "You can start responding to events as they occur....There are spending and saving decisions that are made each year, and there is a decision about how hard to work each year. These allow someone to respond to bad events."

In fact, this kind of adjusting is found in the historical evidence.

Karl Scholz, an economics professor at the University of Wisconsin at Madison, and two colleagues used a sophisticated dynamic calculator to look at the saving and spending patterns among more than 7,700 households headed by people born between 1931 and 1941. The dynamic calculator figured the financial resources each household would need to maintain its actual spending level, or "consumption," in retirement. Then the researchers looked at what the households had actually saved and could expect to receive from investment income, Social Security, pensions and other sources.

"We find that over 80% of the ... households have accumulated more wealth than their optimal targets," the researchers wrote in their 2006 paper titled, "Are Americans Saving 'Optimally' for Retirement?" Moreover, they added, "For those not meeting their targets, the magnitudes of the deficits are typically small."

But will baby boomers and later generations share the experience of those born from 1931 to 1941?

Scholz and his colleagues concede that "we need to be careful in generalizing our results ... to younger households."

Among the risk factors they and others point to are the hazards facing Social Security. In addition, today's workers, and future ones, are far less likely than those in the study to have traditional pensions. The adults Scholz looked at had mean annual incomes just short of $36,000. To maintain their standard of living throughout retirement, they could count on $106,000 from pension benefits, $108,000 from Social Security and $226,000 from other assets such as investments and home equity.

Mitchell has studied baby boomers for a book to be published this summer, finding that as a whole, this group appears to be in fairly good financial shape. But the broad numbers conceal wider extremes than are found in older groups she studied. Women, non-whites and people with little education are at much greater risk of coming up short in retirement, she notes.

Relying Too Much on Calculators

In a 2006 paper titled, "Is Conventional Financial Planning Good for Your Financial Health?", Kotlikoff argues that static calculators used by four major mutual fund companies are really marketing tools meant to scare users into buying the companies' products. (In addition to his position at Boston University, he is president of Economic Security Planning, a firm marketing a dynamic calculator to individuals and institutions.)

"Their advice is remarkably simple, geared, as it is, to speed households through the planning process in a matter of minutes and quickly reach the purchase page," he writes. He adds that the advice produced by the four companies' calculators "leads to dramatic over-saving thanks to retirement-spending targeting mistakes ranging from 36% too high to 78% too high."

Have the financial services firms rigged their calculators to encourage unnecessary investing? Souleles does not think so. "I've seen no evidence there is a deliberate bias," he says, noting that static calculators originated in the academic world. The problem arises, he says, when users take the static calculator's results as gospel rather than as one planning tool among many.

"There are limitations in this class of models on the web," Souleles suggests. "There are more elaborate models out there, but it's difficult to figure how to bring them to the public." It can take hours to properly set up a dynamic model for one household, and it can involve considerable financial education in the process. Static calculators can be used in minutes.

Most retirement planning aims to achieve "consumption smoothing," a standard of living in retirement comparable to what went before, Kotlikoff observes. Static planners thus begin by asking the user to tally the current cost of living. But these planners do not examine whether that can realistically be sustained for a lifetime. If a household is living beyond its means, the calculator will assume very high retirement needs and demand an excessive amount of savings, he says. Facing impossible savings demands, some people will give up and others will try to close the gap with investments that are too risky.

Kotlikoff argues that if a typical household of modest means overestimates its cost of living in retirement by 10%, it will have to save so much that its current annual expenditures would have to be reduced by 30%. Some dynamic calculators, he says, attack the problem by looking at a much wider array of factors, ranging from the household's state of residence and tax brackets to things like plans for having children, vacation home purchases and possible one-time financial events such as inheritances. While a static planner typically assumes cost of living merely rises with inflation year by year, a dynamic one recognizes the mortgage will eventually be paid off, the children will finish school and leave home and work-related expenses will fall in retirement -- but that other expenses, such as health care, may rise.

Kotlikoff's calculator uses "Monte Carlo" simulations to look at a range of possible results, such as what happens if the stock market follows various patterns. It then determines the probability the household will achieve its goal with a given savings rate. "What's nice about this is he has a very detailed treatment of the tax system," Smetters says, "and that makes it much better than many standard models." But he also says that the Kotlikoff model does not give enough weight to the damage done by possible periods of unemployment. "He's probably right that people are saving enough if they don't factor in that uncertainty. But that uncertainty is a very major reason people should save."

The Kotlikoff model and others like it do indeed improve on the simpler, static calculators, Mitchell says, but points out also that Kotlikoff's model has shortcomings because it cannot accurately forecast the risk that Social Security and Medicare benefits will be cut, or that taxes will increase dramatically to shore these programs up, undermining people's ability to save and increasing the cost of living in retirement. "To simply ignore that risk ... is not a sensible thing to do," Mitchell says.

"The bottom line," adds Smetters, "is that the traditional wisdom that people are going to come up short is more right than wrong. As a prudent economist, I would still say the message has to be that people need to save more."

