

Are Americans Financially Prepared for Retirement: Why Do Economists Disagree?

Anthony Webb

Scholars at the Center for Retirement Research at Boston College claim the United States faces a retirement savings crisis, a view that is widely held among both academics and policymakers.¹ Others have argued that most workers are saving appropriately, citing among other research an influential 2006 study by Scholz, Seshadri, and Khitatrakun of workers approaching retirement. The authors of the study reported that “fewer than 20 percent of households have less wealth than their optimal targets, and the wealth deficit of those who are under-saving is generally small.”² Yet other studies have found generally small declines in income or consumption as households enter retirement and little evidence that retired households are depleting their retirement savings too rapidly.³ The purpose of this essay is not to weigh in on one side or other of the debate – others have done that very effectively – but to help readers understand how scholars can reach such different conclusions, often when using the same datasets.⁴ I must also declare an interest – for eleven years, I was one of the authors of the National Retirement Risk Index (NRRI) compiled by Boston College and have long argued that the retirement savings crisis is real.

One approach to determining the adequacy of retirement savings is to investigate whether households are on track to have enough resources to maintain their living standard or stay out of poverty once they retire. But some households can do everything right and still end up with insufficient resources either through some financial misfortune or because they had low lifetime earnings. For these households, the problem is not under-saving but inadequate private and social insurance against bad financial outcomes, inadequate lifetime resources, and the use of retirement savings to buffer pre-retirement financial shocks. Economists investigating the adequacy of retirement savings therefore focus not on financial outcomes but on whether households are saving in accordance with the life-cycle model of savings behavior, a model of how households should save to maximize their lifetime financial wellbeing.

The life-cycle model postulates that households should save during their working life and draw down those savings in retirement, using financial and housing markets to shift consumption from the years when they are working to the years when they are retired. They should not necessarily attempt to smooth consumption but should instead save an amount each period such that the benefit derived from an additional dollar of consumption in the current period equals the expected benefit of an additional dollar of consumption in each future period.⁵ For the purposes of the model, consumption includes the rental value of owner-occupied housing. Additional consumption might be particularly valuable when the kids are growing up, or at very advanced ages when health costs rise. But consumption might be less valuable at old ages if poor health limits participation in leisure activities and it may not be appropriate to target the same level of consumption at ages to which the household is unlikely to survive. Little is known about household preferences and studies differ in the assumptions they make regarding household preferences,

¹ Munnell, Alicia H., Wenliang Hou, and Geoffrey T. Sanzenbacher. 2018. National Retirement Risk Index Shows Modest Improvement in 2016. Center for Retirement Research Issue Brief 18-1.

² Scholz, John Karl, Ananth Seshadri, and Surachai Khitatrakun. 2006. Are Americans Saving “Optimally” for Retirement. *Journal of Political Economy*. Vol. 114, No. 4. August pages 607-643.

³ For example, Hurst, Erik. 2008. The Retirement of a Consumption Puzzle. National Bureau of Economic Research Working Paper. No. 13,789.

⁴ Biggs, Andrew G. and Sylvester J. Schieber. 2015. Why Americans Don’t Face a Retirement Savings Crisis. AEI Economic Perspectives argues against there being a systemic crisis.

⁵ Assuming the rate of interest equals the rate of time preference.

contributing to differing conclusions about the adequacy of savings. Some authors rely on equivalence scales, but these tell us how much households of various sizes need to get by, not about preferences.

Households face labor market, financial market, longevity, and health care cost risk. Although financial products exist to insure some but not all of these risks, take up is often low. If the benefit of being able to consume more than expected is less than the discomfort of consuming less than expected, the life cycle model predicts that households should respond to such risks by engaging in precautionary saving, to give themselves an additional cushion should the bad financial outcome materialize.

Studies of whether households are saving in accordance with the precepts of the life-cycle model fall into two categories. One approach is to investigate whether patterns of wealth accumulation and drawdown over the life cycle are consistent with what the authors of the study consider to be plausible household preferences and beliefs. Another is to examine responses to foreseeable life events, such as a planned retirement. The life cycle model predicts that households should save in anticipation of such events and that consumption should not decline following their occurrence.

An example of the former type of study is the paper by Scholz, Seshadri, and Khitatrakun. Readers should note that the paper only claims that these households had saved optimally; it does not claim that they will be able to maintain their standard of living. Some may have done everything right but suffered economic setbacks that mean they will be unable to maintain their living standards. But it seems plausible that those who under-saved and got lucky counterbalance those who saved appropriately and suffered some misfortune. More importantly, the conclusion that 80% of households are saving appropriately reflects specific assumptions about unobserved household preferences and also about the financial and labor market risks households face. Different assumptions would likely yield different conclusions. The most significant assumptions are as follows.

First, the study notes that kids are expensive and assumes that households want to enjoy higher consumption when the kids are at home and lower consumption after they have left home and in retirement. This assumption lowers the household's replacement rate target because the household only has to maintain the lower level of consumption it enjoyed after the kids left home. It also means that most of what little saving the household needs to do can be done after the kids have left home. My own research leads me to question this assumption. I find that households neither decrease consumption nor increase their retirement plan contributions after the kids have left home. Instead, households increase their standard of living, without willing the resources to maintain that standard of living in retirement. But other studies reach different conclusions about household behavior and the question is not settled.

Second, the model assumes that households plan for post-retirement consumption to decline with age because they are less likely to survive to enjoy consumption at advanced ages. Households need to save less if consumption is to decline than if it is to remain constant. The concern with this assumption centers on both the willingness and ability of households to decrease consumption as they age. Much consumption is housing related and households rarely downsize except in response to a precipitating shock such as entry to a nursing home.

Third, the authors assume households invest in a single risk-free financial asset, a necessary simplification given the computational complexity of the model. In reality, households face financial market risk – stocks may decline, inflation may make a resurgence, and so on, and the life cycle model predicts that households should save additional amounts as a precaution against such events.

Fourth, the model assumes that households retire at their expected retirement age. Some households work beyond their expected retirement age and will presumably be even better prepared for retirement

than the authors predict. But somewhere between a third and one half of workers retire involuntarily, often before their expected retirement age. These households have their savings plans cut short, losing years which under the assumptions of the Scholz, Seshadri, and Khitatrakun model would be peak saving years. They also have to make their savings last a greater number of years in retirement. It is no surprise that other research shows that retirement income inadequacy is greater among those who retire involuntarily. Reflecting this risk, the life cycle model predicts that households facing the risk of involuntary retirement should save more in anticipation. Perhaps the key lesson of the Scholz, Seshadri and Khitatrakun study is that we need more research focused on understanding household preferences and to do an even better job of modeling labor and financial market risks, perhaps allowing those risks to vary from household to household.

In contrast, the National Retirement Risk Index (NRRI) constructed by the Center for Retirement Research concludes that most working age households will be unable to maintain their standard of living in retirement. The NRRI projects wealth at retirement of working age households and compares this with a spreadsheet model that calculates the amounts required to maintain pre-retirement living standards. If projected wealth falls short of the target, the household is classified as being “at risk.” The NRRI finds that larger shares of succeeding birth cohorts are “at risk.” Even if one accepts the preference parameters built into the spreadsheet model, the NRRI approach has two significant limitations. First, the spreadsheet model, in common with all similar models and financial calculators, cannot accommodate financial or labor market risk. The targets are ones that maximize household financial wellbeing only in a world without such risk. Households would likely want to save even more in the presence of these risks and spreadsheet models that assume them away likely understate optimal savings rates. Second, the progress of households towards meeting their targets will be affected by the same risks. One might have a situation in which all households are saving appropriately, but in which one half have favorable shocks and the other half unfavorable shocks. The NRRI would report half as being “at risk.” Yet the appropriate policy intervention might be to encourage social and private insurance against such risks, rather than to promote yet more saving.

The projections of wealth at retirement relies on an empirical regularity in wealth-to-income ratios. The authors plot wealth-to-income ratios by age for succeeding birth cohorts. They find that the lines lie almost on top of each other, with years in which the stock market was doing well a little above, and years when the stock market was doing poorly, a little below, and the housing bubble appearing in the 2007 data. Wealth-to-income ratios exclude wealth in defined benefit retirement plans, and the primary reason that succeeding birth cohorts are in worse shape is that household savings have not increased to offset the decline in defined benefit retirement plan coverage. The wealth projections are likely fairly accurate for households approaching retirement. But it is asking a lot of the model to project wealth at retirement for households that have barely started their savings careers. The assumption that succeeding birth cohorts will accumulate similar amounts of wealth relative to their income lacks any basis in a rational or even a behavioral savings model and disregards firm level studies showing that interventions such as auto-enrollment and auto-IRAs boost savings. The authors of the study would no doubt counter by arguing that the effects of such interventions have yet to show up in household level data sets, and it requires an act of faith to assume that they will eventually have an effect.

One recent study has criticized the NRRI for expressing target replacement rates as a percentage of pre-retirement household income, rather than as is conventional, as a percentage of either average lifetime labor market earnings or earnings just before retirement. But the model would yield identical dollar amounts of target retirement income were it to use a different denominator, because the model is based on an assumption of consumption smoothing over the life cycle.

The preference parameters built into the model differ from those of Scholz, Seshadri, and Khitatrakun. The model assumes that the presence of kids has no effect on desired consumption. The model also assumes that households have a preference for level inflation-indexed consumption in retirement and express this preference by purchasing an inflation indexed annuity. Both these assumptions lead to higher target replacement rates and a larger share of households “at risk.” But the model base case excludes health care costs, implicitly assuming that these are paid out of general consumption, reducing the share of households “at risk.”

The authors of the NRRI re-ran their calculations, imposing the Scholz, Seshadri, and Khitatrakun assumptions regarding kids and post-retirement income, and obtained an almost identical share of households “at risk” to the share Scholz, Seshadri, and Khitatrakun report as saving sub-optimally. I conclude from this exercise that differences in assumptions regarding kids and drawdown are key to understanding differences in conclusions.

But this still leaves us with the problem of reconciling the more pessimistic studies of wealth accumulation with studies that fail to find dramatic consumption declines as people enter retirement. Studies show that consumption declines only modestly when households retire, with the largest declines among households that retire involuntarily and whose savings careers were presumably cut short. Such declines in consumption are consistent with households having a modest preference for greater consumption early in retirement when they are more likely to be alive and in good health. One possible explanation is that studies have focused on recently retired households that belong to cohorts in which defined benefit retirement plans were the norm. Subsequent birth cohorts may fare less well. Another possible explanation is that many of the households the studies classify as retired are in fact still working part time. I consider a better approach is to examine the total resources available to the household and to calculate whether those resources are sufficient to enable the household to maintain its pre-retirement standard of living. This enables us to focus on more recent birth cohorts. These calculations suggest that most households approaching retirement lack the financial resources to maintain their pre-retirement standard of living.

My own personal assessment is that the assumptions Scholz, Seshadri, and Khitatrakun make about household preferences are overly sanguine. But the matter is by no means free from doubt and further research is needed. Assessments of the appropriateness of household saving rates would also benefit from the incorporation of financial risk and the risk of premature retirement into models such as Scholz, Seshadri, and Khitatrakun.

Households and their financial advisors lack the skills to utilize models of the complexity of that of Scholz, Seshadri, and Khitatrakun and will continue to rely on spreadsheet models, supported by Monte-Carlo simulations that provide an indication of the range of financial outcomes from a given decision. Households should understand that spreadsheet models will rarely deliver the predicted outcome and should consider whether they hold the preferences assumed by the model regarding such matters as children and drawdown in retirement.

Anthony Webb, holds a Ph.D in Economics. He can be reached at tonywebb10014@gmail.com.