The Retirement Crisis Controversy

By Mark J. Warshawsky

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In this article, Warshawsky argues that many American working households are not on the path to a well-funded retirement and that the solutions to this crisis lie in evolving and changing private behavior.

There is a raging debate in the think tank world and among some academics that has spilled over to the op-ed pages: the question whether there is a looming retirement crisis for American workers. Both sides of the debate use the same underlying data sets and similar methodological approaches. One side says that most American households are woefully underprepared for retirement and that aggressive government policy, like increasing Social Security benefits or creating new mandatory government-run retirement plans, is needed. The other side says that the assumption-based crisis threat is substantially exaggerated. It contends that not only are no new government programs needed but that the existing ones, like Social Security and government employee pension plans, are themselves weak reeds that must be repaired and trimmed soon.

Before this debate heated up, a colleague and I addressed the issue comprehensively with a better method than most of the cited studies. We came to the following somewhat paradoxical conclusions. The analysis indeed indicates that many American working households are not on the path to a well-funded retirement, but the solutions to this ''crisis'' lie in evolving and changing private behavior — longer working lives, higher savings, longer planning horizons, and more efficient investment strategies before and during retirement.

The Retirement Crisis Crowd

Among several analysts, the retirement crisis viewpoint is best represented by researchers at the Center for Retirement Research at Boston College, in particular through the periodic National Retirement Risk Index (NRRI) developed there.[1] The basic method used is the following: Project a replacement rate (that is, retirement income as a share of pre-retirement income) based on current assets and income for each household in a nationally representative data set; construct a target replacement rate that would allow each household to maintain its pre-retirement standard of living in retirement; and compare the projected and target replacement rates to find the percentage of households at risk of inadequate retirement preparedness. Naturally, the first two steps in this process are based both on data and on many assumptions.

In the NRRI, relevant household assets used to produce retirement income include 401(k) plans and other retirement account assets, other financial wealth, and housing equity, less debt, as reported in the most recent Survey of Consumer Finances (SCF) conducted by the Federal Reserve Board. These assets are projected to retirement based on a stable relationship between wealth-to-income ratios and age evident in SCF data collected over the years. Retirement income is based on the asset conversion rates implicit in estimated prices for inflation-indexed immediate life annuities. For housing, there are two sources of income: the rental value derived from living in the house, and the annuity income converted from a lump sum borrowed from housing equity through a reverse mortgage. Other sources of retirement income include defined benefit pension income and Social Security benefits. Earnings before retirement are calculated by creating a wage-indexed earnings history and averaging these indexed wages over the individual's lifetime. Interest on debt is subtracted from income, and investment income is added.

In the NRRI, the target replacement rate is generally less than full pre-retirement income, like 75 percent, to account for lower spending on taxes, savings, and mortgages in older ages. These target replacement rates are estimated for different types of households by a few broad demographic and income categories, with consideration of average pension coverage and homeownership.

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[1]*See* Alicia H. Munnell, Wenliang Hou, and Anthony Webb, ''NRRI Update Shows Half Still Falling Short,'' Center for Retirement Research at Boston College, No. 14-20 (Dec. 2014).

In the final step, the NRRI compares each household's projected replacement rate with a target. Those who fall more than 10 percent below target are deemed to be at risk of an inadequately funded retirement. The actual index for 2013, based on the SCF, was 52 percent — that is, more than half of American households were not on track for a funded retirement. This was little changed from 2010 despite the increases in equity and housing values. The stability occurred because of countervailing factors: scheduled downward adjustments in Social Security benefits arising from the 1983 reform legislation; a decline in real interest rates, which cuts income from life annuities; and tightening terms on reverse mortgages. Younger and lower-income households were estimated to be more at risk, whereas those with defined benefit pension coverage (mainly government workers) were much less at risk. These patterns changed little between 2010 and 2013.

The Anti-Retirement Crisis Critiques

A few carefully done academic studies, using the same general approach as the NRRI but with somewhat different assumptions, have not found evidence for a widespread retirement crisis.[2] These studies assume that retirees use systematic withdrawals such that optimal spending declines significantly during retirement; this assumption reduces the wealth needed to fund retirement income flows. By contrast, the NRRI assumes that real income flows produced by a life annuity should be flat and steady during a possibly long retirement.

Critiques of the NRRI are most prominently associated with a resident scholar at the American Enterprise Institute, Andrew G. Biggs, and Sylvester J. Schieber, an independent pension consultant and former chair of the Social Security Advisory Board.[3] They focus on three key assumptions in the NRRI: the use of housing equity to produce retirement income, replacement rates calculated using wage-indexed average lifetime earnings (which lowers measured replacement rates at retirement) rather than price-indexed average of career earnings, and the lack of adjustment for the presence of children in the household (which raises measures of retirement inadequacy because pre-retirement spending is assumed higher).

Biggs and Schieber criticize the use of housing equity in the NRRI because they believe that the large declines in house values recently experienced are largely irrelevant to the retirement prospects of households; they think most households do not monetize their housing equity either during their working years or during retirement but just live in their houses. (This argument ignores the big run-up in home equity lines of credit and mortgage finance before the recent bursting of the housing bubble and the fact that retired households do eventually downsize, particularly as their health declines and they enter and pay for nursing homes.) Biggs and Schieber also criticize the use of wage indexing of lifetime earnings in calculating replacement rates because the standard economic theory of life-cycle spending and saving is clear that desired smoothing of lifetime consumption for households should be based on actual price inflation-adjusted earnings and not on earnings notionally indexed to rising national wage levels. They also note that the wage indexing is applied inconsistently in the NRRI — during working years but not during retirement.

Finally, Biggs and Schieber argue that the presence of children should have a marked effect on how to measure retirement preparedness. Households with children should generally save less for retirement than those without children because part of parents' income during their working years is consumed by their children. But this segment of spending does not need to be replaced during retirement because most children have already left the home. In the NRRI, by contrast, it is assumed that parents raise their consumption once children leave and that this higher level of spending is what households want to maintain during retirement.

Biggs and Schieber estimate that adjusting target replacement rates for the presence of children reduces the target rates by around 16 percentage points. They also say that calculating the replacement rates using price-indexed earnings rather than wage-indexed earnings lowers the proportion of the population at risk by about 18 percentage points. The impact of including housing value in the NRRI is unclear over the years, but presumably it lowers the proportion at risk at any point in time, going in the same direction as that generally supported by Biggs and Schieber, despite their criticism of the inclusion of housing.

The Paper by Pang and Warshawsky

The 2014 paper by Gaobo Pang and me was written with some of the early retirement crisis controversy in the background but before the most recent crescendo.[4] It is based on a much earlier

[2]The most prominent of these articles is John Karl Scholz, Ananth Seshadri, and Surachai Khitatrakum, ''Are Americans Saving 'Optimally' for Retirement?'' 114 *J. Pol. Econ.* 607 (2006).

[3]*See* Biggs and Schieber, ''Why Americans Don't Face a Retirement Crisis,'' *AEI Economic Perspectives* (Mar. 2015).

[4]*See* Pang and Mark Warshawsky, ''Retirement Savings Adequacy of U.S. Workers,'' *Benefits Q.* 29 (1st quarter 2014).

model, which was set up independently but anticipates the criticisms of Biggs and Schieber. Moreover, it contains several features that are arguably superior to the NRRI.

We use the same general approach as the NRRI — that is, we compare actual wealth of households with target levels using data from the 2007 and 2010 SCF and calculate the proportion of the population that is saving inadequately. Our model is based on the life-cycle theory, which is that households have the goal of maintaining a similar living standard before and after retirement. It calculates for every household the desired income replacement rate in retirement and simultaneously the necessary savings rate in working years. (Note that this household-by-household calculation of the target is much finer than the gross targets in the NRRI for broad categories; optimal savings rates vary substantially with households' economic and demographic situations (including the presence of children, as well as with retirement plan provisions). The model uses estimated workers' earnings profiles, work- or age-related expenses, tax schedules, retirement benefits, and plan provisions, including Social Security, 401(k), and defined benefit plans. (I believe these features are more detailed and comprehensive than found in the NRRI.)

Our definition of household wealth is similar to that of the NRRI, but we exclude housing equity, thereby avoiding a criticism of Biggs and Schieber. Implicitly, we are assuming that housing equity is devoted to the payment of long-term care services later in life; this is an empirically founded assumption. Age-earning profiles are constructed for households based in part on their current earnings and in part on the assumption (used roughly by Social Security) that earnings grow by a nominal 3.9 percent per annum before the age of 55 and then 2.8 percent until retirement at the Social Security normal retirement age, 65 to 67. Investment returns are conservatively assumed to be a nominal 5.5 percent.

In the model, individuals in their working years earn, consume, and save for retirement. Total income each year is used for taxes, life-cycle expenses (food, clothes, transportation, housing, and healthcare, all estimated for age and income effects), savings, and other discretionary consumption. The presence of children and their unique expenses for the household are explicitly included in the model. The model equilibrium, giving optimal saving and replacement rates, is such that other discretionary consumption is the same just before and after retirement. We thereby avoid the reasonable criticisms of Biggs and Schieber that replacement rates should not be based on wage-indexed amounts and that the presence of children should be considered.

Retirees are assumed to convert their accumulated wealth into income using a nominal life annuity. Because there is some inflation, our implicit view is that there will be some decline in spending during the retirement years but not as fast as implied by the models used in the academic papers mentioned above. We have some sympathy for the use of the inflation-indexed life annuities in the NRRI, but in the real world, these annuities have much higher loads for expenses and adverse selection than nominal annuities, and so we eschewed them.

Our result for 2010 is that 44 percent of working households age 40 and older are not saving adequately for retirement, by the criterion of having a 10 percent or more gap. Younger workers are proportionately less prepared, while married workers are better prepared. Households with pension coverage are much better prepared, reflecting the generous terms of these plans, especially in the government sector. A particularly interesting result is that households with long planning horizons were much better prepared for retirement than those with short horizons — 33 percent unprepared compared with 50 percent unprepared. Overall, the retirement outlook was better in 2007, when 39 percent of households were deemed to be at risk; some of the deterioration between 2007 and 2010 reflects the closing and freezing of defined benefit pension plans in the private sector during that time.

Interpretations for Public Policy

Our empirical findings are largely in line with those of the NRRI. Yet, my interpretation for public policy is not that of the retirement crisis crowd. This is based in part on further results in my paper with Pang. We find that if one year is added to the working life of the household, the proportion of households at risk is reduced by 6 percentage points. If the savings rate is increased by 2 percentage points, the proportion of households at risk is reduced by 12 percentage points. If annual asset returns are increased by 2 percent, the proportion of households at risk is reduced by 5 percentage points. These remedies need not act alone, and so the simultaneous improvements of longer working lives, higher savings, and more efficient investment strategies would more than halve the retirement shortfall.

The higher asset prices experienced since 2010, and the more extensive participation in 401(k) plans derived through greater use of automatic enrollment, will surely also have helped to improve retirement prospects. Further, better education of workers to extend their planning horizons through better disclosure of the retirement income that 401(k) accounts can produce, as proposed by the Department of Labor, will provide an additional

boost in the future when it is finally implemented. Changing Federal Reserve policy will raise interest rates and thereby lower annuity prices. Finally, higher real incomes and asset returns during retirement arising from the new optimal combination strategies I have proposed rather than the incomes available from the exclusive use of either life annuities or systematic withdrawals would further improve the retirement preparedness of American working households.[5] All this can be, is being, and will be accomplished without the creation of new government benefits and programs.

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[5]*See* Warshawsky, *Retirement Income: Risks and Strategies* (2012).