Aging and Retirement

Redefining the Goal of Retirement Planning - Essay Collection

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SOCIETY OF ACTUARIES

Contents

Introduction

John Cutler and Andrea Sellars

The Society of Actuaries' (SOA) Committee on Post Retirement Needs and Risks issued this call for essays, *Redefining the Goals of Retirement Planning,* in May 2020. Previous essay collections addressed a variety of issues including diverse risks encountered in retirement; developments in financial wellness; perspectives and potential solutions to the problem of ensuring retirement preparedness and innovations for securing future retirements; the role that family structure can have on financial and retirement security; and new developments in tools, products and/or strategies that address retirement risks. The collections can be found on the SOA website at: https://www.soa.org/research/topics/research-post-retirement-needs-and-risks/#other.

This call for essays, issued in partnership with the Retirement Income Institute, a project of the Alliance for Lifetime Income, aimed to gather perspectives, opinions and data on how to advance the state of effective retirement planning to assist individuals, actuaries, financial advisors, employers, and other stakeholders. The goal was to explore ideas and thoughts on identifying current and alternative means of achieving and measuring retirement income adequacy. A panel of judges did a blinded review of the essays and selected ten for publication.

The essays that appear in this collection are:

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As in previous years, we hope the publication of these essays will further add to our knowledge base, stimulate discussion and promote future efforts in this area. Recent events including passage of the SECURE Act and other developments make this collection even more relevant for stakeholders addressing these issues in the future. Plans are underway for future call for essays and thoughts for new topics are always welcome.

Finally, our appreciation and congratulations again go out to all of our authors who have contributed to another successful call for essays, and our thanks go out to the members of the Project Oversight Group for their participation and contribution to this effort.

POG members are: John Cutler (Co-Chair), Andrea Sellars (Co-Chair), Anna Rappaport, Carol Bogosian, Charles DeClara, Howard Iams, Jack Van derhei, Larry Pollack, Robert Eaton, Sam Gutterman, Steve Newman, Steve Vernon.

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Economic Security in Retirement
Doug Chandler

Most often, when we talk about retirement security, we focus on income security. But income is only one piece of the puzzle. To understand the role of income security, we need to place it in the broader context of economic security. We need to consider all of the means by which society's resources will be allocated to meet the necessities and indulgences of life. Economics is defined as "… *the science which studies human behavior as a relationship between ends and scarce means which have alternative uses*."[1] It is not limited to markets or resources with monetary value.

Individuals find value (or "utility") in economic security – they like to have confidence that their needs and wants will be met, not only for the moment but over their lifetime. They look to financial markets for long-term economic security, just as they look to other markets to buy the goods and services they consume from day to day. But this is only one place to look for economic security. The main sources of economic security in a modern society can be grouped into four broad categories. Think of them as pillars of one structure. All are essential to the entire structure and all bear part of the load. At times, the load shifts more onto one pillar or another.

Pillars of Economic Security

Finance	Government	Community	Property
Investments, pensions, annuities and other financial products	Social Security, roads, parks, protection and emergency services, law courts	Family, neighbors, volunteer organizations	Home and cottage, furniture, tools, recreational equipment

Some of the necessities and indulgences of life can be met in more than one way. If you intend to play a lot of tennis after you retire, you can build up your retirement savings so you'll have the money you need to pay court fees. You can move to a town that has free municipal tennis courts. You can join a community tennis club. You can buy a lifetime membership in a private tennis club. You can even buy a home big

[1] Robbins, Lionel (1932). *An Essay on the Nature and Significance of Economic Science*. p. 15. London: Macmillan and Co., Limited. https://mises.org/library/essay-nature-and-significance-economic-science

enough to have your own tennis court in the back yard. The right choice for you might not work for other tennis aficionados.

A less frivolous example would be the way we prepare for our potential need for long-term care in our declining years. Will we count on family? Long-term care insurance? Government facilities? Will we sell our home to pay for a continuing care retirement community when the time comes?

Consideration of economic security in retirement must reflect the special needs of seniors with declining ability to be fully self-sufficient. Shopping, personal care, financial management, and mobility cannot be taken for granted. Private domestic services, public home care services, family and volunteer support can all help, but none is fully reliable in isolation.

The Financial Pillar

Money provides access to goods & services that can be purchased in retirement. Some financial products are designed specifically to provide retirement income while others are designed for wealth creation and preservation.

The main strength of these financial products is that money is fungible. You may think you'll want money to pay for vacations in your retirement but if it turns out your health or world events won't permit you to travel, you can use your money for home care or entertainment instead.

Relying on financial markets for economic security comes with a host of risks. Investment returns, inflation and longevity may be the ones most discussed and most easily quantified. Changes in taxation, failures of financial institutions and fraud are others. In extreme conditions, market shortages can lead to rationing of essential goods and services, so that having the money to buy what you need might not be sufficient, or even necessary.

The decline in real interest rates over the last three decades has more than doubled the price of a dollar of purchasing power to be delivered during a future retirement. The price of a nominal dollar has increased far more. The natural economic response to this price increase has been decreased reliance on the finance pillar and increased reliance on the other sources of economic security. From an employer perspective, this has meant that normal contributions to pension plans have not increased to keep pace with the cost of retirement income.

The Government Pillar

We expect some services to be provided by the public sector because they are natural monopolies or because society benefits from universal availability. Core public services such as the judiciary can only be provided by government. Without the ability to use law courts to enforce contracts and land titles, the financial and property pillars are unreliable.

Some social insurance programs are designed specifically to provide economic benefits during retirement. These entitlements are based on statutes, rather than contracts. Although current benefit levels may be the best indicator of future levels, demographic shifts or macroeconomic factors could make costs untenable and lead to legislated benefit changes.

Some financial planners might advise clients to make financial plans as if social security did not exist. They disparage the reliability of government income support programs and public health care. In contrast, they would not suggest pre-funding for highway maintenance, for example, on the presumption that this public service might be withdrawn. It could be argued that some government programs are more reliable than financial solutions because the government has the authority to confiscate financial assets or property if needed for the common good. Nonetheless, there are risks associated with relying too heavily on government and those who can afford to do so will seek other sources of economic security as well. The challenge is to anticipate which government programs and services will be deemed expendable in the face of an aging population, a shrinking workforce, climate change and mounting government debt.

If nothing else, the government responses to the pandemic of 2020 demonstrate how quickly governments can change course and how far they will go to intervene in the normal functioning of business, families and community groups and in the use of private property[2].

The Community Pillar

Historically, large families were the primary source of economic security. Even in developed economies, multi-generational households and family networks provide an exchange of services such as childcare, elder care and computer technical support. Community and family support can be particularly important for seniors with mobility difficulties.

In natural disasters and other crisis situations, family and social networks are the most responsive source of security. Faith communities, charities and local governments might also respond quickly, but markets and senior governments take longer. Ownership of property can be irrelevant.

One advantage of the community pillar is that it forms a non-taxable economy. It is not merely eligible for tax deferral or reduced tax rates: volunteer and family cooperation is beyond the capacity of governments to tax incomes, property and consumption.

The problem with the community pillar is that it is unenforceable. Even though you look out for your neighbor's children when they come home from school to an empty house, the neighbor still might not shovel their walk, or might move away when you need them most. Similarly, younger retirees in their 60s and 70s may be the most active volunteers in community social programs but when they are in their 80s and 90s and no longer able to take leadership roles, these programs may wither away.

The 20th century was a period of urbanization, increased mobility and, at least in North America, changing family structures and values. The changes emerging in the 21st century include online social connections and a return to working from home. These recent changes have the potential to restore reliance on community and family as a pillar of economic security.

[2] Humphries, Adrian. *Outrage, secrecy, confusion: Medical officer of health orders summer cottagers away*. National Post, May 1, 2020. Retrieved from https://nationalpost.com/news/outrage-secrecy-confusion-medical-officer-of-health-orders-summer-cottagers-away

The Property Pillar

Most seniors own their home. Shelter cost (mortgage principal & interest or rent) often takes up 30% or more of income so paying off a mortgage significantly reduces retirement income needs[3]. Ownership of property that will be used during retirement is risk free in the sense that, regardless of what happens to prices, the property remains affordable.

In an environment of negative real rates of return, hoarding becomes a viable retirement saving strategy. Choosing more durable furniture and roof shingles or stocking up on non-perishable consumables can be a relatively sound investment. The most important risk to relying on property arises from ongoing suitability. Durable goods can go out of style or become obsolete. The pre-retirement home may not continue to be appropriate as retirement progresses, and the relative cost of alternatives could change.

Extreme Risks

A discussion of economic security is not complete without consideration of the sorts of events that could barely be imagined before they occur. Of course, there is little we can do to prepare for the end of human civilization, whether it is caused by a comet, nuclear apocalypse or a 5˚ rise in global temperatures. On the other hand, there are things we can do to prepare for less severe catastrophic events such as plagues, revolutions or volcanic eruptions. The resulting death and destruction might be unprecedented and might severely damage some of the pillars of economic security, but individuals with well-prepared and well-diversified retirement plans will cope better than others.

The pandemic of 2020 illustrates how a single event can strain several pillars at the same time, and how quickly and dramatically priorities can change when necessary. These sorts of events cannot be anticipated in economic scenario generators calibrated to historical experience or addressed through margins of conservatism. We must be prepared to respond with changes to our lifestyles and institutions.

Other kinds of adverse events are predictable, if not fully understood. A continuing increase in the frequency of adverse weather events and a shift in our planet's habitable zones are virtually inevitable. What is unclear is the extent of property destruction, migration and conflict. Environmental, social and governance factors affect all the pillars of economic security, not just investments. As with all things, it is unwise to put all your eggs in one basket. The greatest economic security will come from a balanced approach.

Implications for Employers

As employers scale back the projected income replacement ratios in their retirement income plans, they need to prepare their employees for increased reliance on government, family and social networks to

[3] In the United States, 79% of occupied housing units are owner-occupied. See U. S. Census Bureau, Quarterly Residential Vacancies and Homeownership, First Quarter 2020. April 220. Retrieved from https://www. census. gov/housing/hvs/files/currenthvspress. pdf. In Canada, 68% of households headed by seniors are homeowners and, of those, 80% are mortgage-free. See Statistics Canada, Home Ownership mortgage debt and types of mortgage among Canadian Families, August 2019 Census. Retrieved from https://www150. statcan. gc. ca/n1/pub/75-006-x/2019001/article/00012-eng. pdf. These statistics are not necessarily comparable, due to different sampling frames,

achieve an acceptable retirement lifestyle. Employees will be unwilling to give up secure employment until retirement is more appealing than continued employment. If they are unprepared for retirement, employers will find it necessary to dismiss long-service employees for cause, even though the cause is a natural consequence of aging or a failure to adapt to changing business needs. Pre-retirement planning seminars addressing all economic and social aspects of retirement can help prepare long-service employees for a secure retirement that is less reliant on financial solutions.

Employers can continue to provide their employees with access to wholesale financial markets (group insurance and savings plans). They would be well advised to structure these offerings in a way that avoids unconditional long-term financial commitments to employees, given the pace of change and societal disruptions in the 21st century. Targets and cost-sharing commitments make more sense than defined benefit guarantees.

Financial literacy has been identified as a focus area for addressing retirement well-being. It seems unlikely that improved understanding of compound interest and investment opportunities will be enough to overcome the dramatic increase in the price of retirement income, or to support retirement in a world with reduced reliance on the finance pillar. Indeed, when real interest rates are close to zero, compound interest mathematics is pretty much irrelevant. Perhaps a wiser focus would be on economic literacy – understanding how economic needs can be met in alternate ways and how investments in community and property can augment stocks and bonds. Work/life balance could be regarded as a retirement strategy.

The strength and resiliency of government and social institutions should not be overlooked. These factors should be considered by employers in the choice of business locations and supported on an ongoing basis through corporate citizenship and by facilitating employee involvement in civic affairs. Once it is understood that there is more than one way to play tennis or arrange long-term care, employees will give credit to their employers' long-term investments in their future, regardless of the form the investments take.

In an era of contract work and outsourcing, secure employment remains the key to obtaining a mortgage and purchasing a home. In turn, home ownership contributes to an employee's long-term commitment to a community and an employer. The ability for employers to provide permanent jobs is crucial. This should take precedence over fringe benefits. In some cases, examination of the full range of economic security options will lead employers to abandon employment policies and scale back benefit plans that cost too much or require inflexible commitments.

Reconsidering the balance between the pillars of economic security does not mean abandoning financial security or retirement income plans. These financial instruments remain important and may well attract just as big a share of the total compensation envelope as they have in decades past. The consequence of rebalancing is that the cost of retirement income will not be allowed to balloon along with rising life expectancy and falling interest rates when there are viable alternatives.

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Inequalities in Retirement Security: Unique Challenges for African American Households

J. Michael Collins and Cliff A. Robb

The prospect of planning for retirement is a daunting one for many Americans. A nearly universal shift to defined contribution structures in favor of defined benefits, decreasing personal savings rates, and a potential weakening of the Social Security programs all place an increasing burden on individuals to engage in retirement planning. The challenges faced in preparing for a secure and timely retirement impact many households, but African Americans face unique challenges. Financial planners and policymakers need to understand the risks of financial insecurity among African American households as they approach retirement. Among the most important factors include that African Americans have historically lacked access to retirement plans, face more employment instability and are more reliant on the Social Security system. Financial planning can play a role in narrowing racial retirement wealth gaps, but even controlling for income African Americans are less likely to work with a professional advisor.

Traditional retirement planning considers three core components: Social Security income, employer-based retirement plans, and personal savings. Roughly 50% of households 65 or older rely on Social Security benefits for at least 50% of their income in retirement (Dushi et al., 2017). This percentage is notably higher for Black households at 57%. Even more concerning, over 33% of Black households rely on Social Security benefits for at least 90% of their income, compared to 24% of white households. The 2020 Annual Report of the Board of Trustees of the Social Security trust funds estimates that Social Security benefits will only pay 76 cents on the dollar in 2034 if no changes are made to the structure of the system (note these estimates were made before the COVID-19 pandemic and may be revised negatively). Given the relative importance of Social Security benefits for retirees, these decreases would have a disproportionate impact on African American families.

Another critical issue for African American households is retirement plan availability. The Federal Reserve Board reported that only about 41% of Black households between the ages of 32-61 had savings in a retirement account in the 2016 Survey of Consumer Finances (Bricker, 2017). Whereas this percentage is higher than that of comparable Hispanic families in the United States, it is far below the nearly 70% of white households that indicated some retirement savings. Further, among households that do have retirement savings, median savings for white households are nearly four times that of Black households. Similar inequalities are noted for overall wealth by race, with Black households holding about one-tenth the wealth of white households, on average (Bricker, 2017). These data demonstrate the stark reality that many African American families are not well positioned for retirement and are at a higher risk of having a lower standard of living in their later years. In fact, the Boston College Retirement Risk Index shows that in 2016, 48% of white families were at risk of having a lower standard of living in retirement, compared to 54% of Black families (Munnell, 2018).

Evidence suggests that it is not simply a matter of African American households opting out of retirement plans from their employers. Only 47% of African Americans had access to a structured retirement plan at their employer, compared to 57% of white households based on data from the Financial Industry Regulatory Authority (FINRA, 2016). African Americans also face greater employment instability, as evidenced in the 2020 recession and COVID-19 pandemic layoffs. Whereas unemployment rose across the board during the first few months of 2020, white men faced the lowest overall unemployment rate in May of 2020 at about 11%, an increase of 8 points from 3 months prior (BLS, 2020). The unemployment rate for Black men rose from 5% in February of 2020 to over 15% in May. The increase in unemployment was even higher among Black women during the same time frame. Simply put, the types of jobs and employers that African Americans typically work in do not offer the same level of financial security.

The above issues are only exacerbated by gaps in financial literacy. Financial literacy is a global issue, but African Americans appear to significantly lag whites in this area. About 43% of white households are labeled highly financially literate based on widely used survey questions, compared to only 20% of African Americans surveyed (Dewees and Mottola, 2017). Meanwhile the current landscape of financial advising and supports do not serve all Americans equally. The general idea is that the many households lacking information could turn to financial advisors. According to our tabulations of the 2016 Survey of Consumer Finances, only 23% of Black respondents have worked with a professional financial planner related to savings or retirement. Among Black households earning more than $100,000, as many as 39% report working with a planner. However, 49% of higher-income white households use a planner—10 percentage points higher.

In part, this gap in the use of financial planners by race even among more affluent households is likely due to the structure of the field. While there have been positive trends in the financial services industry, like growth in the number of women and minorities choosing to work in advisory roles, the industry remains dominated by planners who are older, white, and male. Out of the over 87,000 Certified Financial Planners ® (CFPs), 77% are male and about 47% are over the age of 50 (CFP Board, 2020). It is notable that the current demographics reported by the CFP Board do not even include race or ethnicity. However, survey work from 2018 indicated that about 1,200 of the over 80,000 CFPs were Black (Eisenberg, 2018). Numbers were similar for Latino advisors. More troubling, 58% of prospective planners who were Black or Latino indicated that they have never seriously considered working as financial planners (Eisenberg, 2018). Greater racial diversity in the field might help more families feel comfortable working with a financial planner and might generate greater trust and shared understanding between clients and advisors. But this requires work from the ground up, beginning with financial education in middle school and high school. It also requires thinking hard about compensation models and how net worth or investable asset minimums might discourage many minority clients considering the statistics on wealth and savings gaps. Indeed, personal financial planning programs can do more to recruit and train students of color in CFP programs, as well as financial services more broadly.

The gap in financial security between African Americans and whites is stark. In 2016, the average Black household held about one-tenth the wealth of the average white household (Bricker, 2017). These patterns are the result of a long history of inequities in education, job opportunities, housing and access to high quality financial products and services. The prospect of a secure retirement is possible, however, including for African Americans. Expanding employer-based retirement savings options is one important step. Some states are experimenting with support for IRA options for workers who lack an employer-sponsored plan, further closing that gap. Meanwhile, there have been several proposals for shoring up Social Security, from changing the payroll tax, to indexing claiming ages, to recalibrating cost of living calculations. Policymakers need to recognize the importance of stabilizing Social Security benefits for many older Americans, including people of color. Finally, the financial planning profession can explore ways to make its services more accessible by not only reducing the gap in using a planner among higher-income families, but also expanding access to middle and lower income families as well. This will require real adjustments at all levels, but it is necessary if diversity is a real goal of planners and firms. The planning field itself must become more diverse, so that future generations of planners look more like the nation at large.

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Creating a Retirement Paycheck Using an Income Floor

Glen Nakamoto

First of all, just to make clear, I am not a financial advisor or anyone who has any background in financial planning. Before I retired, I was a cybersecurity analyst who, like many, had not thought much about how to create income in retirement. What follows is a recounting of some lessons learned as I tried to create a plan for generating retirement income. It should not be construed as advice since any advice should be specific to your situation.

Saving for Retirement Was the Easy Part

As I was approaching retirement, I started to get concerned about how to create income in a comfortable manner rather than just "take money out of savings when needed". It seemed like saving for retirement was the easy part so long as your company had a good retirement plan - which it did - and you started early enough - which we didn't. My wife didn't start contributing to a retirement plan until age 40 while I basically started at age 32. While we both retired at age 63 (she in 2010 and I in 2013), I compensated by working part time until age 68.

Figuring Out Retirement Income Is the Hard Part

Two years before I retired, I started to explore different options for generating income (bucket strategy, 4% rule, variable percentage withdrawal, annuities, and so on). However, it was hard to determine which one would work best for us - both financially as well as emotionally. When I talked to some advisors prior to retirement, their advice focused on managing my investments. However, to generate income, the advice was to "take money out of savings when needed" using something like the 4% rule - not the advice I was seeking. So, in order to develop my own strategy, I decided to establish some goals, which are as follows:

- Have reliable and predictable lifetime income for essential expenses
- Plan for discretionary income to maintain our lifestyle
- Protect against inflation
- Mitigate impacts of market volatility.

If sufficient assets permit:

- Plan for college expenses (grandchildren)
- Leave a legacy.

Reliable Lifetime Income

The first goal of having reliable lifetime income for essential expenses is at the core of what some have called an income floor, which I consider to be like a retirement paycheck. Reliable lifetime income is income that is guaranteed for life and is not significantly impacted by market conditions. Some examples are social security, defined benefit pensions, and some types of annuities.

My Version of a Bucket Strategy Using an Income Floor

I initially started with the classical three bucket strategy but modified it to address my stated goals.

- Bucket 1 became my income floor (reliable lifetime income), which does not need replenishment except for addressing inflation. This bucket, or more accurately an income stream, covers our essential expenses.
- Bucket 2 was used to cover discretionary spending for a rolling 5 years but has undergone some modifications 7 years into the plan.
- Bucket 3 could then be used to address future inflation, replenishing bucket 2, and legacy. Since my plan was not to need bucket 3 within 5 and maybe up to 10 years, I could take more risk with the potential for better returns given the longer investment time period.

BUCKET 1 - THE INCOME FLOOR

The first challenge to establishing an income floor was determining the amount needed for essential expenses. I documented all our expenses for two years prior to retirement, identifying what we would consider as essential. By definition, everything else was discretionary, planned one-time expenses, or not applicable. Since I was still working, I also had to factor work-related expenses that would not apply.

With essential expenses identified, I then explored how to create a lifetime income stream that could establish that income floor. Since neither my wife nor I had a pension, we could initially only count on Social Security. My wife had retired three years before me and started Social Security benefits at age 63. I estimated my benefits at my full retirement age (FRA) using the ssa.gov website. We then sought to self-fund a “pension” using single premium immediate annuities (SPIA). When combined with my projected social security income at FRA, this income stream would cover our essential expenses.

Social Security: I used “my” Social Security benefit (as the higher income earner) versus “our” Social Security benefit to ensure that the passage of one spouse does not have an adverse financial impact on the surviving spouse.

Annuities: To self-fund this pension, we used roughly 35% of our original retirement assets (at the point when I retired). We purchased the annuities as joint survivor with 15-year guaranteed payment to our beneficiaries, in case we unexpectedly passed early. I did look at annuities that paid fixed (2%) Cost of Living Adjustments (COLA). However, the income reduction during the early phase of retirement was too much to accept from our viewpoint.

COMMITTING TO AN ANNUITY WAS A CHALLENGE

I will admit that taking that much money out and committing to funding this “pension” was probably one of the hardest things we’ve done. In that we wanted to further protect such annuity payments in case of company failure, we also spread our SPIA purchases across a few higher quality companies to stay within our state’s insurance guaranty program coverage limits. This program would replace the annuity in the unlikely case the company fails.

BUCKET 2 - DISCRETIONARY SPENDING/REQUIRED MINIMUM DISTRIBUTIONS

My initial goal was to find funding sources in this bucket that would not be significantly impacted by market volatility in the near term (~5 years). Presently, our Bucket 2 consists of a 5-year CD ladder which covers our estimated RMDs each year for the next five years. CDs, with their return rate of 3.0-3.5%, were the best choice at the time. Since one year’s required minimum distributions (RMD) coincidentally funds two years of discretionary spending, we also have plans to invest any unspent RMD funds in tax-efficient accounts. Beyond the 5-year ladder, our current plan is to do in-kind distributions of RMDs from our tax deferred account (Individual Retirement Account or IRA) to a taxable account to satisfy our annual RMDs. An alternative is to use multi-year guaranteed annuities to extend the ladder if rates are good.

This Bucket 2 originally used 11% of our initial retirement assets and constitutes about 18% of our investable assets (Buckets 2 and 3 combined). When I start my RMD in 2022, I envision that this bucket will transition from a 100% tax-deferred bucket to a combination tax-deferred and taxable account, where tax planning takes on a more significant role. While we have been replenishing this bucket for the first seven years of retirement and have 10 years of discretionary funds "set aside", it is likely that this bucket will disappear after 10 years with Bucket 3 covering discretionary expenses if needed.

BUCKET 3 - INVESTMENT

With 35% of the original retirement asset needed for the self-funded pension and 11% needed for 10 years of discretionary spending, this leaves roughly 54% of our original retirement assets to Bucket 3. This bucket also represents the remaining 82% of investable assets.

Bucket 3 is generally heavily weighted with equities using a diversified index-oriented portfolio spread between small, medium, and large cap along with Real Estate Investment Trust (REIT), international, and emerging market funds. We also have both investment grade and high yield bond funds. In this bucket, we normally maintain an 80/20 equity/bond ratio. While this 80/20 ratio may seem high for a retiree, keep in mind that Bucket 1 (fair market value of SPIAs) and Bucket 2 (CD ladder) constitutes 46% of our retirement assets. I consider such assets as "bonds" from a total asset allocation viewpoint. With Bucket 3 at an 80/20 equity/bond ratio, the overall allocation ratio is roughly 43/57, which many would consider conservative. Approximately 25% of Bucket 3 is also in a Roth account and continues to grow via planned conversions while the tax rate is low, where conversion amounts are constrained by marginal tax rate and Medicare Income Related Monthly Adjustment Amount (IRMAA) penalty considerations.

Assessing the Income Floor Against the Goals

If we look at our previously stated goals, we can see how this plan addresses them:

RELIABLE LIFETIME INCOME

The income floor (my version of Bucket 1) covers in excess of 100% of essential expenses regardless of market volatility and satisfies this goal. In a severe market downturn, the income floor provides a stable paycheck while a probability-based approach such as a 4% withdrawal plan may provoke some anxiety, especially if the downturn lasts more than a couple of years or if there is extreme volatility. While the Social Security income is inflation protected, in the long term, resources from Bucket 3 will be needed to supplement this income floor since the self-funded pension is not inflation protected.

DISCRETIONARY INCOME

If Bucket 2 is properly structured (with bonds, CD ladder or a deferred annuity, for example), it should be possible to draw funds for discretionary expenses from assets not impacted by market volatility. Presently, we have upwards of 10 years of such spending covered during our earlier phase of retirement that is minimally impacted by market volatility. One other aspect of identifying discretionary income as a bucket is to preserve one's lifestyle as part of an overall plan and not rely on serendipitous market outcomes.

Beyond the next 10 years as our discretionary spending wanes, I envision using Bucket 3 for discretionary expenses if needed.

INFLATION

Inflation is potentially one of the harder challenges for any retirement income plan especially when income is not automatically inflation adjusted. Social Security has some inflation protection but with every succeeding year, that protection gets less due to the way cost-of-living adjustments are used to compute increase in benefits. Since our self-funded pension was not inflation protected, which over time will reduce in value, it must be supplemented either from discretionary funds or the investable IRA (Bucket 3).

Periodically, I do an assessment using a Retirement Planning Tool to determine if the income floor needs further supplementation due to changes in spending or inflation. Seven years later, it hasn't and there is a chance it might not need supplementation (see next paragraph). However, if we do need to supplement the income floor, we plan to initially use dividend income from blue chip companies or other "dividend aristocrats". Currently, we have a set of funds that have provided consistent dividends which are automatically reinvested. In six to 10 years, these dividends could become an additional cash flow to address inflation if needed. During the past 12 months (including the March 2020 downturn), our dividend return from Bucket 3 was 2.9% while market gains were negative. In 20 years, the projected annual withdrawal rate against Bucket 3, just to address inflation for the income floor, would grow to 1.9%. This projection is based on Monte Carlo simulations at 90% confidence level needed to address an annual inflation rate of 3% and an annualized 3% rate of return. As such, it seems this dividend strategy appears to be a viable option. If inflation gets worse or the withdrawal rates increase, a qualified longevity annuity contract (QLAC) or a deferred annuity are additional strategies being considered to address inflation.

It turns out that waiting to age 70 to collect my Social Security benefit was one of the best inflation hedges possible and in retrospect, should be the number one implementation goal for creating a retirement paycheck. Given the SPIA purchases were sized to complement my Social Security benefits at age 66 and not age 70, our income floor covers substantially more than our essential expenses. Since I did not include my wife's Social Security benefit in computing the needed "pension", her Social Security benefits were also in excess of our essential spending needs. If I add my 32% Social Security boost plus my wife's Social Security benefit, this total "excess" amount (as of 2020) already exceeds the 80.6% annual inflation supplement needed in 2040, effectively eliminating any need to address inflation for the SPIA income. The 80.6% is the cumulative inflation impact that will occur in 20 years with inflation at 3%. Given the excess income is also CPI-U (Consumer Priced Index for All Urban Consumers) inflation protected, the amount 20 years later should be substantially more. The combination of her "early" Social Security benefit, SPIA income, part-time work, spousal Social Security benefit, and planned IRA withdrawals (for "buying" more Social Security annuity) made it possible to wait to age 70 to maximize my Social Security benefits.

Mitigate Market Volatility

This goal is one of the main reasons I like the income floor. If the market suffered a significant drop and interest rates were to stay low for years, we would not have to cut back on essential expenses and still have 10 years of discretionary funds available. If we were in a probability-based withdrawal plan, I think I would feel the need to cut back on spending. This would most likely impact our "go-go" years if the downturn lasted a while. I also believe that there could be a lot of emotional strain even if the "math" works out that doing 4% withdrawals will be okay in the long run. I think there would be a strong possibility that we would underspend if such a sequence-of-return issue arose, a concept that I knew nothing about when we first established our goals.

Income Floor Strategy Summary

In my opinion, this income floor strategy follows a safety-first mindset and is a reasonable trade-off between safety and maximizing returns.

Prior to retirement (seeking advice for retirement income), I've had advisors tell me that annuities are for retirees with limited assets who need assurance those assets will last their lifetime. They felt that I would be better off in a probability-based withdrawal scheme even though some of their more pessimistic simulations indicated that we could run out of funds in less than 30 years.

However, in the end, I prefer to have that peace-of-mind of stable income rather than worry about probabilities and percentages, at least, for essential expenses. As part of my annual monitoring process, I run Monte Carlo simulations (with 90% confidence level) using annually updated expense data against our current retirement account balances - Buckets 2 and 3 combined. Our projected annual savings withdrawals continue to stay under 1.8% until age 85 (covering all inflation supplementation and discretionary spending) and goes to a maximum of 2.5% at age 95.

With this low withdrawal rate and growth-oriented investment posture, the legacy projection (at my age 95) grows with each succeeding year. As such, we are in reasonable shape to address our last two goals, college funding and legacy, when the time comes.

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Income Flooring: Is Annuitization the Right Strategy?

Anna M. Rappaport

Managing the post-retirement payout period is a major topic today. Professionals generally agree on the importance of long-term planning and having an income plan, but not on the specifics of how to get there. "Income flooring"[1] and annuitization are two common topics in the discussions. There were recent discussions of income flooring and annuitization among retirement experts on the Society of Actuaries Post-Retirement Needs and Risks listserv. This essay reflects a compilation of issues raised during the discussion together with SOA research on related topics and my additions to the discussion based on more than twenty years of work focusing on these issues. An extensive discussion was started after a blog post[2] written by an individual was cited. That individual developed a comprehensive retirement income plan which included an income floor created by buying single premium immediate annuities (SPIAs) with about 1/3 of his assets and combining those with his Social Security benefits.

Big Picture of Findings

Income flooring is a good idea. It is particularly important for middle income people. However, many people do not have an adequate emergency fund or much in the way of financial assets. As we have seen with COVID-19 in the first part of 2020, emergency funds are critical and many Americans do not have adequate funds. The first priority for financial assets is to have an emergency fund and then the establishment of an income floor should be considered.

The discussants had different opinions on most points. They generally seemed to accept the desirability of income flooring, but they did not agree on implementation. They also seemed to agree that for most people, deferring Social Security claiming is a good way to increase guaranteed lifetime income. They definitely had different perspectives on the advisability of buying annuities, on how much annuity was the right amount, and on whether there was a general solution that works for most people.

Some of the themes that generated considerable discussion or are important based on prior research are:

- Different financial products and approaches can be used for income flooring.
- There is a need for inflation protection and there are different methods of inflation protection.
- There are pros and cons of annuities.
- One must acknowledge consumer preferences and knowledge.
- It is important to link other risks and assets to the income flooring discussion.
- Social Security issues and claiming are complicated and important to understand.
- There is a role for employee benefit plans and plan sponsors.

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[1] Income flooring is establishing a lifetime income stream to cover a floor of minimum required expenses.

[2] https://www.newretirement.com/retirement/establishing-retirement-income-using-an-income-floor/

Different Financial Products and Approaches that Can Be Used for Income Flooring

A variety of approaches can be used in a flooring strategy:

- Deferral of Social Security commencement
- Election of income options in defined benefit plans
- Use of withdrawals from defined contribution plans, IRAs and other personal savings accounts
- Immediate life annuities, possibly with fixed rate increases as a partial cost-of-living adjustment
- Longevity insurance or advanced life deferred annuities (QLACs)
- Bond or annuity ladders
- Treasury inflation-protected securities (TIPS) or I Bonds
- Cutting expenses to reduce the income floor needed

The Society of Actuaries offers a Decision Brief and a series of research which helps the reader understand the trade-offs between different income options.

Deferring Social Security is the first strategy that would usually be recommended because of the favorable provisions for deferred Social Security payments. This is discussed further below.

Single premium immediate annuities (SPIAs) provide a guaranteed lifetime income starting at the time of purchase, and they are the easiest type of annuity to compare. They can be provided on a joint life basis and can include a death benefit in the form of payments guaranteed for a minimum period of years. A SPIA without a minimum death benefit provides for the most longevity protection yet surrenders liquidity. The discussion pointed out that SPIAs can be purchased through the use of a bidding service which often enables the purchaser to get a more advantageous price.

Variable annuities sold at earlier ages may include guaranteed minimum payments in the form of income. These are commonly referred to as Guaranteed Life Withdrawal Benefits (GLWBs), and they provide some longevity protection and some liquidity, and may have substantial fees. These annuities have more market acceptance than SPIAs due to their flexibility. GLWB provisions can be built into investment options for employer-sponsored defined contribution plans offering a way to buy longevity protection while still working. These products offer a variety of investments and floor guarantees on returns for a price.[3]

Advanced life deferred annuities (QLACs), also called longevity insurance, are deferred annuities purchased at an earlier age and making payments starting at a high age such as 80 or 85. They have a lot of theoretical appeal. One discussant pointed out that they are an efficient way to ensure retirement income lasts into the tail of the survival curve. They can also be helpful in providing some funds for long-term care. They have not had much market acceptance even though they cost considerably less than SPIAs for a given amount of income.

Bond ladders are an approach where bonds maturing at different times are used to create an income payout over time with little market risk. Returns on bonds are based on the market when the arrangement

[3] In the SOA online discussion, one discussant mentioned that his company sold about $20 billion of GLWB annuities and $20 million of SPIAs in the same time period.

is set up. They offer income but not longevity protection. They can be combined with a QLAC for longevity protection. Professional help would be needed by most individuals to set up such an arrangement and it would not be suitable for the average person with a modest amount of assets.

A very common method of withdrawing money from Individual Retirement Accounts and defined contribution plans is the Required Minimum Distribution. This does not directly address income flooring, but it provides an income in addition to Social Security although it is not guaranteed.

The Need for Inflation Protection and Different Methods of Inflation Protection

Inflation protection is an important issue. Social Security includes built-in lifetime inflation protection. The amount of initial Social Security monthly income can be increased by claiming it later. It is unclear whether inflation protection is necessary for the entire amount of minimum income covered by flooring since many households reduce expenses during retirement.

There are currently no (or almost no) inflation-protected SPIAs on the market. TIPS, I Bonds, and longevity insurance in combination are an option for someone who wants inflation protection.

SPIAs can be laddered for inflation protection and QLACs can be used for partial inflation protection. (Laddering of SPIAs would not be practical unless there are significant assets and a knowledgeable buyer.)

Inflation risk can also be managed by spending less. SOA and other research show that household spending (other than health care) tends to drop with increasing age.

Pros and Cons of Annuities

SPIAs provide good longevity protection and have a valuable place in establishing an income floor, but people's views of them vary greatly. The online discussion brought out some advantages and some of the reasons for reluctance to buy annuities. Some of the advantages in addition to longevity protection are:

- Protection against bad decisions due to cognitive decline later in retirement.
- A way of ensuring regular income to a surviving spouse who may not have the background or interest to make financial decisions.
- A way of providing an inheritance to a spendthrift heir.
- Protection from creditors, since only the income can be attached.
- Protection from fraud and scammers targeting large pools of assets.

Annuities include guarantees that are not available in arrangements that pay out investment funds over time. It is very likely that many people do not understand the guarantees and their value.

There are very rational reasons why people would prefer not to buy an annuity and not to make an irrevocable decision:

- A preference to keep funds in a liquid form so that they can be used earlier if needed. For people who do not have adequate emergency funds and long-term care insurance or another funding source for long-term care, this availability is very important.
- A preference to keep funds in a form so that the remainder will not be lost on early death.

- An opinion that the buyer can earn a better return on their money by investing it differently. This may or may not work out and it involves risk.
- Exchanging an asset for a guaranteed monthly income stream may make the buyer feel less wealthy. Behavioral finance tells us that this can be a big influence in decision making.
- There are few marketplace options that offer inflation protection, so the longevity protection provided is incomplete.
- Financial products are often hard to understand and compare.
- Annuity products may be viewed as expensive.

Consumer Preferences and Knowledge

Retirement savings plans can be positioned primarily as asset accumulation or income replacement plans. This positioning is a critical issue for the future since it helps to shape participant expectations for the spenddown period.

There are many gaps in consumer knowledge and decisions are often driven by behavioral preferences rather than rational economic analysis. Consumer preferences often do not match what economists and actuaries think is the ideal strategy. The ideal strategy for income flooring is often set forth based on the assumption that the retiree wants to maintain pre-retirement living standards without recognizing actual spending patterns and retiree preferences with regard to asset spend down. However, many retirees have reduced expenses and are quite resilient. (Average household expenses, except health care, tend to go down with increasing age.) Retirees have repeatedly told the Society of Actuaries in various research studies that they prefer not to spend down their assets. Turning over assets to an insurance company to buy an annuity does not match what many consumers say they prefer.

Consumers often do not have a long-term planning horizon or much understanding of the value of guarantees. Without a long-term planning horizon, it seems unlikely that they will do much to develop a long-term income floor.

Linking Other Risks and Assets to the Income Flooring Discussion

People are subject to a wide variety of retirement risks. Products that offer risk protection may cover one or more risks, but they generally do not cover a wide range of risks. What looks good when you look at a part of the picture may not work so well when looking at the total picture. SOA focus groups indicated that many people want to hold on to assets and deal with risks as they occur – this enables them to allocate the asset to the risk that occurs first.

The income flooring discussion may be part of a holistic discussion about retirement security or it may take place in a narrow context, focusing on income only and not on the broad range of retirement risks.[4] Risks include outliving assets, unexpected long-term care expenses, unexpected health expenses and many more. Adequate liquidity partly depends on what financial products are available to provide coverage for a variety of risks.

[4] For an overall overview of retirement risks and their management, see Society of Actuaries, *Managing Post-Retirement Risks, Strategies for a Secure Retirement*, 2020. https://www.soa.org/resources/research-reports/2020/post-retirement-strategies-secure-chart/

Society of Actuaries' research has shown that many Americans at all ages are financially fragile and lack adequate emergency funds.[5] The first step is to have an adequate emergency fund. Recent thinking is that this might be enough liquid assets to cover expenses for six to 12 months.

For many, probably the majority of the retired population if we exclude the top quintile, the value of their house exceeds the value of other financial assets at retirement. A house that is paid for is also a possible resource to help fund retirement. Home equity can be used by downsizing to a smaller house, or taking a reverse mortgage, or refinancing. A reverse mortgage can be arranged so that funds are available if needed. This could be used to supplement income flooring.

My view is that it is advisable to consider the entire picture when deciding how much income floor is needed and how to achieve it.

Social Security Issues

For the average person, Social Security represents the majority of the lifetime retirement income they will receive. Social Security monthly income benefits are inflation-adjusted annuities. They are paid for life and increase each year for the cost-of-living. The benefits are calculated based on the age at which a person retires, their work history and, if they are married, the benefit situation of their spouse.

Benefits are calculated at "full retirement age." The benefits are increased for each month after that until age 70 at about 8% per year. Benefits are reduced for each month payment starts before full retirement age. The increase from delaying retirement is greater than what would be produced by current market rates for annuities. The reduction for retirement before full retirement age is also greater than what would be produced by current market rates. The increases and reductions are set by law. (The magnitude of the adjustment factors is in part due to the economic environment when the Social Security legislation was passed that set the current benefit structure.) The online discussion repeatedly focused on delaying Social Security benefits as a way to get a larger benefit that will increase with inflation. This was one of the few points on which there was general agreement.

Role of Employee Benefit Plans and Plan Sponsors

Income from a defined benefit plan can be a valuable part of an income floor. Some plans offer a lump sum option instead of income. Caution is urged in selecting the lump sum. The Society of Actuaries has a Decision Brief enabling the reader to understand some of the trade-offs involved in the choice.

The discussion suggested that actuaries should be more involved in defined contribution plans, and their design. Employees have been accustomed to the strong promotion of default options in 401(k) and other employer-sponsored retirement savings programs. Default options commonly used include auto-enrollment, auto-escalation, and investment defaults, but not defaults for income creation during the payout period. More attention is needed on plan structures and the payout period. Some financial products offer the potential to build an income option with a guarantee into a target date fund and allow

[5] Society of Actuaries, *Financial Perspectives on Aging and Retirement Across the Generations*, 2018, https://www.soa.org/resources/research-reports/2018/financial-perspectives-aging-retirement/

the plan participant in a 401(k) to buy deferred income, which can be activated at different times. This is an interesting design for promoting income as an option in a 401(k).

Conclusion

Having a plan that will provide lifetime income to cover minimum expenses is a very good idea. Social Security does much of this for many people. More work is needed to understand all of the issues this goal entails and how to help consumers develop and implement such plans. The SOA discussion indicated acceptance of the idea of income flooring but some disagreement about how to get there. And consumers often don't plan and may not prefer longer term solutions, particularly in light of the many risks they face and a desire to hold on to assets. This essay does not focus on policy changes that can promote more income options in retirement, but this is also an important topic moving forward. Policy influences the way employee benefit plans and financial products are structured and information is provided to plan participants and consumers.

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Thinking About Using Assets During Retirement

Anna M. Rappaport

In the first half of 2020, the COVID-19 pandemic changed the week-by-week lives of the vast majority of Americans. In June 2020, several months after the pandemic started, the question is whether it will also change our longer-term thinking about retirement and how to use our assets in retirement. This essay updates a “Perspectives from Anna” column I wrote in 2019 bringing together SOA research and how it influences the use of assets during retirement.

I have been thinking about managing accumulated assets during the post-retirement period for more than 20 years. Over the last few years, I have become more focused on people’s financial fragility and emergency funds. As a result of the research and discussions in the Society of Actuaries’ Committee on Post-Retirement Needs and Risks, I have gradually changed some of my thinking about the use of annuities and assets during the post-retirement period.

Much of my career was spent as a retirement consultant in a large firm where most of our clients had defined benefit plans. Many of those clients also had defined contribution plans. For those people who had both types of plans, the idea was the defined benefit plans would provide income in addition to Social Security and the defined contribution plans would provide a pool of assets. This worked well for people with long careers under both types of plans, but not so well for many others.

I have always been a strong proponent of lifetime income, longer-term thinking and planning, informed decision-making, and risk management. For many years, I had an expectation that longer-term thinking was a key part of retirement planning and that people could be expected to think about the long term. I thought that annuities would be a very good retirement solution for many people. Focus groups, in-depth interviews and surveys conducted by the Society of Actuaries have changed my thinking about what is realistic for many people.

Some Characteristics of the U.S. Retirement System

Economic security during retirement can come from Social Security, employer plans, personal resources and continued work during retirement.

- Social Security is the largest share of retirement income for many Americans. For some, Social Security is the only source of income.
- Social Security replacement income ratios are higher for lower income earners.
- Social Security claiming age is extremely important. The amount of monthly income is about 75% greater for those who claim at age 70 vs. those who claim at age 62.
- For married couples, the Social Security benefits claimed by the higher earner also affect the benefits of the survivor if the higher earner dies first. This can be extremely important to many widows.
- Many people do not have employer-sponsored benefits. Lower income individuals are less likely to have such benefits.
- Of the people who were employed by employers who offered retirement programs, those with long service did much better than those with sporadic employment. Defined benefit plan benefits are generally better for those people with long service, and defined contribution plan values are generally greater for those people who have long participation in one or more plans.
- Personal savings can be a big part of retirement security, but many people do not have financial assets much beyond the amounts provided through employer-sponsored benefits or their home equity.

What SOA Research Told Us About Retirees

In a series of focus groups and surveys, retirees told the SOA how they thought about retirement planning and income. Some key findings include:

- Many people do not think long-term. It is common for people to plan by looking at their current regular bills and cash flow and try to get them into balance. Many people felt they were OK if they could pay their regular bills over the next couple of years.
- Some people do not do any formal planning.
- Many people prefer to hold on to their assets rather than developing a systematic plan to use them during retirement.
- Many people do not plan for significant unexpected expenses or shocks. They commonly said, "I will deal with it when it happens."
- Even more do not plan for long-term care.
- People are resilient and some are willing to make significant reductions in spending when necessary.
- When we think about the combination of holding on to assets and not doing risk management, the implied plan is that the assets they hold can be used for emergencies if necessary.
- Family is often a huge source of help when help is needed. Help is often hands-on, and it is not clear how people without family manage through some of the challenges that require everyday help. There is little planning for such help.
- When people have a major long-term care event requiring paid care, it can be a huge problem. If they spend down their assets, they may become eligible for Medicaid.

Retirees Are Faced with Big Trade-Offs

Retirees who want to use their assets systematically in retirement are faced with many options and important and complex trade-offs.

- Using assets gradually over time by systematically withdrawing from an asset account provides the retiree the flexibility to change their mind later. It preserves liquidity for the remaining balance. However, investment and longevity risk remain with the retiree. Investment downturns at the wrong time can create major problems for a retiree.
- Buying a life annuity transfers the investment and longevity risk to an insurance company, but without flexibility. The decision is irrevocable and there is no liquidity.
- There are also options that combine these two strategies and blend some liquidity and some guarantees. For example, while a pure life annuity has no return of capital on death, some annuities have limited return of capital on death, based on their provisions. Combinations of strategies can be used.
- There is another trade-off between spending and doing more now vs. saving for later. I often remember that it is important to "do it while you can." If retirement plans include physically ambitious activities, it is important to remember that abilities often change. And couples never know how long both will be capable (or even there) to pursue their interests.

Analyzing the Trade-Offs

Understanding what is involved in the trade-offs of asset use is complex and the analysis is not easy. The challenges are even greater when one realizes that there are many different income options available. In partnership with the Stanford Center on Longevity, the Society of Actuaries sponsored several projects on different forms of lifetime income and a framework for analysis and measurement of the trade-offs. The analysis used a form of "efficient frontier" particularly focused on the payout period. In my view, anyone who wants to compare income options and understand the pros, cons and trade-offs should look at this work. The reports were authored by Steve Vernon, Wade Pfau, and Joe Tomlinson and can be found at https://www.soa.org/research/topics/research-post-retirement-needs-and-risks/#income. Some of this work is also summarized in the 2018 *Securing Future Retirements Essay Collection*, https://www.soa.org/essays-monographs/2018-securing-future-retirements/.

The first report sets up a framework for using income options in defined contribution plans. One of the reports focuses on the analysis of income options that are suitable for use in a 401(k) or other employer-sponsored defined contribution plan. Another of the reports focuses on options that are suitable for individuals including the use of reverse mortgages. One of the reports focuses on the legal framework which could be used by plan sponsors to incorporate income options into defaults. A fifth report focuses on the use of a strategy that combines late claiming of Social Security with Required Minimum Distributions. That strategy provides for accumulating and using a transition fund to help the individual defer Social Security until they reach the maximum Social Security claiming age. The authors demonstrate why they believe this type of option would be a suitable default option in an employer-sponsored plan and I agree with them. They also provide indications of how to use the option as a starting point and to tailor it to individual needs. Actuaries interested in retirement income planning should study this work and see how it fits in.

I believe that there is a lot of personal preference involved in these trade-offs and that a scientific answer, such as those provided by the papers, is helpful, but it is still up to the individuals to choose what works best for their personal situation.

The Risks and the Early Stages of the SOA Research

The SOA research started about twenty years ago with the identification of post-retirement risks, and the construction of a risk chart titled "Managing Post-Retirement Risks."[1] In 2020, the SOA published the fourth edition of the risk chart. Some risks can be protected against by insurance and/or financial products, but others cannot. The complexity of the risks and methods of protecting against them may serve as a barrier to formal risk management. The cost of risk protection is also a barrier. The financial products may cover one or more risks but most likely, not all risks.

Another of the earlier stages of the SOA research focused on the assets held by middle-income people both nearing and in retirement. That work, "Segmenting the Middle Market", used data from the Federal government's Survey of Consumer Finances. The important findings from that survey were that for the mass middle income population, the value of non-financial assets, primarily housing, was substantially greater than the value of financial assets. The results of that study raised major questions about what retirement income options are feasible for the mass middle-income population. For many of them, there were not significant financial assets that could be invested and spent down. For me, this work changed my outlook, so that whenever we thought about a retirement financial topic, it was important to ask where housing fit into the discussion.

[1] Managing Post-Retirement Risks was written before the COVID-19 pandemic, but all of the same risks continue. For information on how COVID-19 is linked to retirement risks, see the SOA report "Impact of COVID-19 on Retirement Risks" https://www.soa.org/resources/research-reports/2020/covid-19-retirement-risk/.

Putting This Together – Where Am I Today?

Successful management of the post-retirement period remains an important topic. These are some things that I think are important:

- There is a lot of value to having a longer-term plan, but many people fail to do this. Employers and the media should stress the value of having a longer-term plan.
- For middle-income Americans, Social Security is a vital part of their retirement income, and it will be the sole source of income for some of them.
- Late claiming of Social Security is often an advantageous strategy. It is important that everyone evaluate their options, and not just make a choice. In the evaluation, don't forget to consider tax issues, to use your actual earnings history if you are near retirement, and for couples, remember that the evaluation needs to focus on both people.
- People with mortgages should explore the possibility of paying them off before they retire. Better tools would help people blend this into the decision-making process at this life stage. Paying off the mortgage reduces regular monthly expenses, but consideration must still be given to property taxes, homeowner's insurance and repairs and maintenance costs.
- Everyone needs easily accessible emergency funds. Many people have not thought about unexpected expenses and how to provide for them. COVID-19 reinforced the importance of emergency funds.
- People who do not have adequate retirement income to retire at their planned retirement, often age 65, and manage as they wish, may have a variety of strategies available to them. Working longer is a strategy available to most of them, and more needs to be done to help individuals and encourage employers to support better job options. Reducing expenses is another strategy. These are the best bets for people who reach retirement age without enough assets. Saving early is important.
- For people with defined benefit plans, these plans serve as an additional source of guaranteed income beyond Social Security. If they offer a variety of payout options, care is needed in the decision about the payout option. The SOA offers a decision brief to help with this.
- For people without defined benefit plans but with assets, there are a variety of options: Delaying Social Security to age 70 and then withdrawing the Required Minimum Distribution (RMD) at age 72 will be satisfactory for many people.
- For those who want income in excess of the RMD and who have assets, there are a variety of options for generating income and major trade-offs involved in the choice. I hope that the work done by Steve Vernon and jointly sponsored by the SOA and the Stanford Center on Longevity will lead to the development of new user-friendly tools and easier default options to help people make these choices efficiently.
- The work from Steve Vernon demonstrates that a thoughtful systematic withdrawal plan from assets that are significantly invested in stocks can produce higher lifetime income than an annuity most of the time, but not always. And we can't predict in advance when "not always" happens. This is why the research suggests people are better off with a diverse portfolio of retirement income.
- One of the newer forms of annuities is a deferred annuity starting payments at a high age, such as age 85. This increases income at age 85 and supports a broader range of choices earlier in retirement. These products have had limited market acceptance to date.
- Having a plan for long-term care financing is important, whether it includes long-term care insurance or not. Those who do not have insurance need more savings to pay for expenses as they are incurred. COVID-19 will likely cause many people to think about care options more carefully as they do long-term planning. The SOA has a decision brief to help people think about long-term care financing.
- It is important not to forget about health insurance. Medicare is a big part of the picture after age 65, but there are still ongoing decisions that are needed. The SOA has a decision brief to help

people think about their choices. COVID-19 may change the health care decision process going forward.

- For people with significant housing equity and not a lot of financial assets, a reverse mortgage might help. It also may help to sell the house and downsize to a less expensive house. More people may be using multi-generational households in the future.
- As we think about these issues, we need to remember that many people are not planning for the longer term. A big challenge for actuaries and retirement planners is understanding what people actually do and how they think. The solutions that are offered need to include options for those people who do not plan for the longer term.
- I value guaranteed lifetime income highly, but I recognize that people are in many different situations and that the choices they make will not always focus on guaranteed income. People with larger amounts of assets may also not focus specifically on annual income. They may rather think more about the progression of the assets if they spend what they want. Trying to hold on to assets is a popular strategy that has worked out well for many people. It gives them some flexibility to deal with a variety of risks.
- We all need to work to help people plan effectively for the post-retirement period and develop strategies to fill in the gaps when it looks like they will not have enough lifetime income.

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The 5 Most Important Retirement Income Decisions

Steve Vernon

Part One of the series "Research That Matters Today"

It's been well documented that many older workers approaching retirement have only modest retirement savings.[1] As a result, middle-income pre-retirees can't afford to make big mistakes regarding how to deploy their retirement savings and build a retirement income portfolio.

Pre-retirees will need to make critical decisions that help them squeeze the most retirement income from their financial resources over a potentially long retirement. Studies have shown that they often feel uncertain about these decisions; economic turmoil, such as the downturn caused by the pandemic of 2020, only serves to increase their uncertainty.

Two recently published research reports prepared by the Stanford Center on Longevity (SCL), in collaboration with the Society of Actuaries (SOA) provide valuable insights into these decisions.[2,3] These reports identify and analyze a straightforward retirement income-generating strategy that can work effectively for most middle-income retirees and can be implemented using virtually any traditional IRA or 401(k) plan. It's called the Spend Safely in Retirement Strategy, or the Spend Safely Strategy for short.

One of these reports—Viability of the Spend Safely in Retirement Strategy—develops a decision framework that pre-retirees can use to make critical retirement decisions, including how to build their portfolio of retirement income. From this decision framework, here are the five most important decisions regarding retirement income that most middle-income pre-retirees should address:

1. When and how to retire (whether to work part time for a period of time)
2. When to start Social Security benefits
3. How to deploy retirement savings to generate retirement income
4. Which living expenses to reduce in order to live on less income in retirement, including the cost of housing (which is often retirees' largest living expense), and
5. Whether to deploy home equity by realizing capital gains and reinvesting the proceeds to generate retirement income, or by purchasing a reverse mortgage

Let's explore each one of these decisions below, drawing upon analyses from the two SCL/SOA research reports.

Decision #1: When and How to Retire

Figure 1 shows a graph from the *Viability of the Spend Safely in Retirement Strategy* report that projects total retirement income in the initial year of retirement at various retirement ages for a hypothetical 62-year-old married couple. Their household earnings are $100,000 per year, and they have $350,000 in retirement savings. This assumed savings amount is higher than the average and median savings levels accumulated by current older workers.[1]

The analysis considers five scenarios:

1. Both members of the couple retire completely at age 62, and both immediately begin Social Security benefits and drawing down retirement savings.

2. Both keep working part time until their Social Security Full Retirement Age (66 and 6 months for this couple), then both start Social Security and drawing down their retirement savings. “Working part time” is defined here as earning enough to pay for their current living expenses but not continuing to contribute to their retirement savings.
3. Both continue working full time until their Social Security Full Retirement Age, then both start Social Security and drawing down their retirement savings. In this scenario, the hypothetical couple continues to contribute 10% of their pay to retirement savings.
4. Both keep working part time until age 70, then both start Social Security benefits and drawing down retirement savings.
5. Both continue working full time until age 70, then both start Social Security benefits and drawing down retirement savings.

Figure 1

DELAYING RETIREMENT CAN SIGNIFICATNLY INCREASE INITIAL TOTAL RETIREMENT INCOME

Source: *Viability of the Spend Safely in Retirement Strategy*

Note that this couple’s projected total annual retirement income almost doubles when they delay retirement, from $37,585 when retiring at age 62 to $70,755 when retiring at age 70.

Although this specific example was for a married couple with assumed levels of earnings and savings, this example illustrates concepts that most likely will apply to many situations, including that of single retirees.

Note also that the amounts in Figure 1 represent the retirement income this couple can expect in the initial year of retirement. In future years, their Social Security income will increase due to cost-of-living adjustments, whereas the income from savings drawdown will depend on future investment earnings. In other words, the blue bars represent the portion of total retirement income that’s risk-protected, and the red bars represent the portion that’s subject to investment, inflation, and longevity risks.

For the example in Figure 1, the annual amount of retirement income generated by savings was calculated by assuming the retired couple would withdraw amounts equal to the IRS required minimum distribution (RMD) rates. The same methodology was used to calculate their retirement income before the age the actual RMD rules are required (currently age 70, changing to age 72 in 2021). There are also other viable methods of generating retirement income; these will produce different amounts of retirement income in the initial year of retirement and throughout retirement.

Decision #1, Continued: Whether to Work Part Time in Retirement, at Least for Awhile

With Scenario 2 in Figure 1, both members of the couple deploy a downshifting strategy, working just enough from age 62 to age 66-1/2 to cover their current living expenses, which allows both Social Security and savings to grow. Under Scenario 3, both members of the couple continue working full time and contributing to savings. Note that there isn't a significant difference in the eventual retirement income between these two scenarios: $51,526 vs. $53,031. This result illustrates that most of the advantage of continuing to work results from the delay of starting Social Security and taking withdrawals from savings. Continuing to contribute to savings, while definitely helpful, adds relatively less to the eventual retirement income. Scenario 4 compares downshifting from age 62 to 70 with Scenario 5, working full time until age 70, with similar results.

These analyses show the potential advantage of a downshifting strategy for older workers who don't want to or can't continue working full time, but who haven't saved enough for complete retirement.

Decision #2: When to Start Social Security Benefits

Social Security benefits provide the most risk protection of all sources of retirement income, protecting against longevity risk, inflation risk, investment risk, and cognitive risk. When a middle-income worker optimizes their Social Security benefits through a careful delay strategy, typically a very large percentage—often two thirds, three-quarters, or more—of their total retirement income is risk-protected. Comparing the relative sizes of the blue and red bars in Figure 1 illustrates these outcomes.

As a result, it makes sense to maximize this valuable source of retirement income. To help with this goal, pre-retirees can use one of several online programs that help analyze the optimal age at which to start Social Security benefits.

Decision #3: How to Deploy Retirement Savings to Generate Retirement Income

The baseline *Spend Safely Strategy* uses the IRS required minimum distribution rates to calculate the annual income that's generated from retirement savings. This strategy has a number of straightforward refinements and adjustments that can customize the baseline strategy to reflect specific goals and circumstances that retirees might have.

For example, retirees might choose to use a Social Security bridge strategy to increase the amount of their retirement income, as well as the portion of their total retirement income that Social Security will deliver and is risk protected. A Social Security bridge strategy uses retirement savings as a temporary substitute for the estimated income a retiree will ultimately receive from Social Security until they actually start their Social Security benefits. It can enable a worker to retire before the optimal age at which to start Social Security benefits.

Let's see how a Social Security bridge strategy could increase the total retirement income in Scenario 3, where the couple works full-time until age 66-1/2. In this example, the husband of the couple would use a bridge strategy to delay Social Security until age 70. In this case, the total annual retirement income would increase from $53,031 to $57,637, without changing the retirement date.

Another refinement addresses retirees who might feel more comfortable with additional guaranteed, lifetime retirement income to supplement their Social Security income. In this case, they can use a portion of their savings to purchase a cost-effective single premium immediate annuity (SPIA) through an annuity bidding service.

To continue the current example for Scenario 3, if the married couple adopted a Social Security bridge strategy *and*, with remaining funds, purchased a SPIA with a 100% joint and survivor annuity, their total annual retirement income would further increase from $57,637 to $63,892 (using annuity purchase rates from ImmediateAnnuities.com in mid-June 2020). This amount is more than $10,000 higher than the base retirement income amount for Scenario 3.

While these two refinements have significantly increased total retirement income, they also reduce the amount of wealth that retirees can access if their circumstances change. Pre-retirees should consider this result carefully when deciding how much savings to devote to a Social Security bridge payment or to purchasing an annuity.

Other retirees may want to invest substantially in stocks for the potential to grow their retirement income. Since a large portion of their retirement income is already risk protected by Social Security, they might feel comfortable assuming some calculated investment risk. The SCL/SOA research report, *Viability of the Spend Safely in Retirement Strategy*, contains historical analyses that illustrate this basic retirement investing dilemma: Most of the time, *but not always*, retirees can potentially increase their retirement income by investing in stocks.[2]

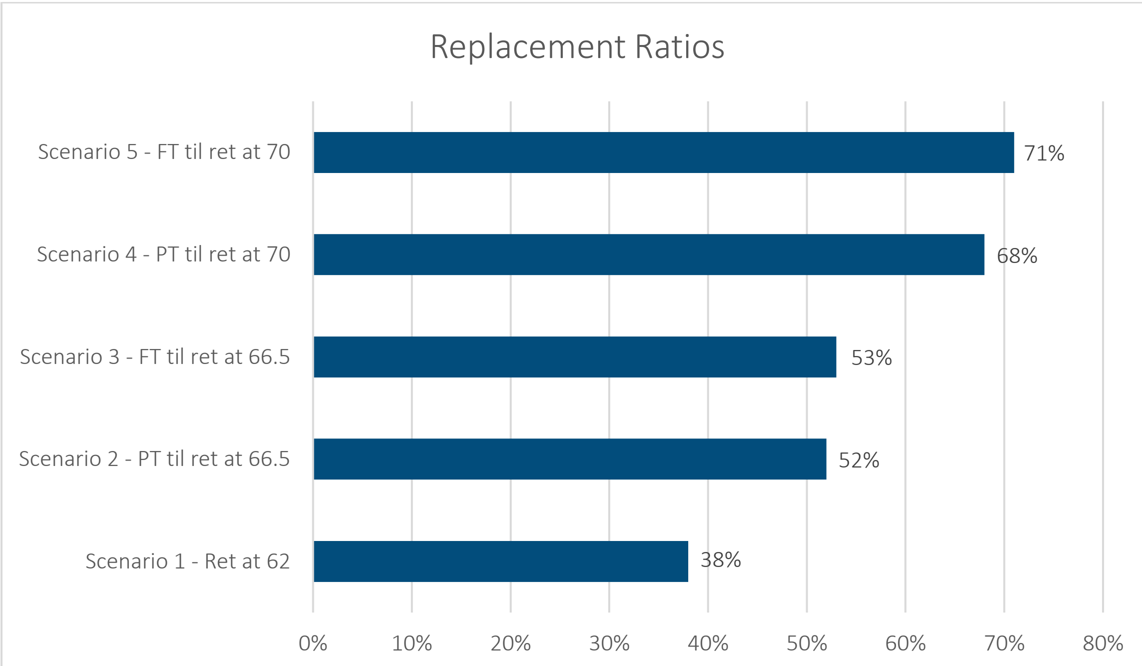
Some retirees might have other goals that can be reflected in their strategy to generate retirement income, such as a desire to travel during the early years of their retirement while they're still physically fit, the desire to help adult children and their families financially, or the desire to donate to charities. In any of these situations, retirees can refine their retirement income strategy to accommodate these goals without jeopardizing their long-term financial security.

Decision #4: Which Living Expenses Can Be Reduced to Fit Decreased Income in Retirement

Conventional retirement planning wisdom advocates that retirees need a retirement income that replaces 70% to 80% of their pre-retirement income to continue their standard of living in retirement. Yet most older workers haven't accumulated sufficient savings to achieve this goal.

Figure 2 shows that the hypothetical couple described earlier won't approach these goals unless they both work until age 70.

Figure 2
WORK LONGER OR REDUCE YOUR SPENDABLE INCOME?



Source: *Viability of the Spend Safely in Retirement Strategy*

Remember that this hypothetical couple has more retirement savings than most American workers their age. As a result, most older workers face a tough choice: work longer than they planned, reduce their standard of living, or do some combination of the two. To help matters, they can also explore alternative methods to generate retirement income from their savings, as illustrated by the previous example.

If a retiree needs to reduce living costs, housing often represents the largest target for most people. By relocating, retirees might also achieve other goals, such as moving to a home or neighborhood that will be more supportive in their later years.

Decision #5: Whether to Deploy Home Equity

Most retirees have more wealth in their homes compared to their retirement savings.[4] If retirees' Social Security benefits and income generated by savings aren't sufficient to pay for their living expenses in retirement, they may need to explore ways to deploy their home equity. One straightforward method is to sell their home, realize a capital gain, downsize to a less expensive home, and then deploy the net proceeds to generate retirement income.

Another possibility is to use home equity to purchase a reverse mortgage. The SCL/SOA report, *Optimizing Retirement Income by Integrating Retirement Plans, IRAs, and Home Equity*, analyzes and compares three different methods to use a reverse mortgage to enhance retirement security.[3] Any solution to deploy home equity is highly dependent on a retiree's financial circumstances, preferences for housing, and willingness to incur the costs of a reverse mortgage.

Pre-Retirees and Retirees Need Help

The analyses and insights presented in this article can help older workers make the five important retirement income decisions noted earlier. There are several other important decisions that don't involve retirement income; they're beyond the scope of this essay.

Ideally, pre-retirees would address these decisions as they transition into retirement. However, the decisions have high stakes for retirees' financial security for the rest of their potentially long lives. And these issues are complex, making many of the decisions presented here beyond the skills of most pre-retirees and retirees. They're going to need help.

Employers can help their older plan participants by offering retirement income options in their defined contribution plans, delivering communication materials about retirement income strategies, and offering part-time positions to older workers to enable them to downshift and delay starting Social Security benefits and drawing down retirement savings. Parts Two, Three, and Four in this series explore these ideas further.[5, 6, 7]

Financial institutions and advisers can incorporate these analyses and insights into their products and services as well. Building financial security for long retirements is a serious challenge, and we all have roles that we can play to help.

Steve Vernon, FSA, is a Research Scholar, Stanford Center on Longevity, and co-author of the SOA-sponsored research report *Viability of the Spend Safely in Retirement Strategy,* which forms the foundation for the ideas in this series of essays. Vernon is also the author of a consumer-facing book based on this research: *Don't Go Broke in Retirement: A Simple Plan to Build Lifetime Retirement Income*. He can be reached at steve.vernon@restoflife.com.

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The SCL/SOA reports and essays identified below include the analyses that support the conclusions discussed in this article and also address the implementation issues and refinements to the *Spend Safely Strategy*. The last reference listed is a consumer-friendly book designed to help middle-income pre-retirees and retirees understand and implement the *Spend Safely Strategy.*

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Retirement Income Planning in a DC World

Steve Vernon

Part Two of the series "Research That Matters Today"

Older workers face a series of critical decisions as they approach retirement[1]:

- When can they retire?
- How will they decide if they have enough savings to be able to afford to retire?
- How can they generate reliable retirement income from their Social Security benefits and savings?
- Which living expenses can they reduce in order to live on a reduced budget?

These decisions are more complex, and come with higher stakes, than the savings and investing decisions these workers made throughout their working years. How can plan sponsors help their pre-retirees make effective decisions? How can ordinary workers retire in a defined contribution (DC) world?

A significant body of research completed between 2013 and 2019 by the Stanford Center on Longevity (SCL), collaborating with the Society of Actuaries (SOA), provides insights into these important questions.[2,3,4,5,6,9] Three of these reports identify and analyze a straightforward retirement income strategy that can work well for most middle-income pre-retirees and can be implemented in virtually any DC plan or IRA. It's called the *Spend Safely in Retirement Strategy,* or the *Spend Safely Strategy* for short.

The economic turmoil we've experienced in 2020 reinforces the need for a straightforward retirement income strategy that generates a reliable income stream. This turmoil has left retirees and those nearing retirement concerned about their economic future and often confused about what to do next. With the right resources, employers can help them make informed and effective retirement planning decisions that are critical in uncertain times.

Introducing the *Spend Safely in Retirement Strategy*

The most recent SCL/SOA report (2019) analyzes the *Spend Safely Strategy* in detail.[2] This strategy has two steps:

Step 1. Optimize Social Security benefits by delaying the start of benefits for as long as possible, but no later than age 70. There's no financial advantage to delaying the start of benefits beyond age 70.

Pre-retirees can use one of two possible ways to delay starting Social Security benefits:

1. If possible, work part time, earning enough income to replace the Social Security benefits that are being delayed, or
2. Use a portion of retirement savings to fund a Social Security bridge payment, which temporarily substitutes for the estimated income they'll receive from Social Security until they actually start their Social Security benefits.

   SCL/SOA research demonstrates that a Social Security bridge payment can generate more retirement income than other retirement income generators.[4,5]

Step 2. Implement a straightforward strategy to generate retirement income from savings to supplement Social Security benefits. To accomplish this goal, invest retirement savings in a low-cost balanced, target date, or stock index fund. Then use the IRS required minimum distribution (RMD) rates to determine the amount to withdraw from savings each year. Use the same RMD methodology to determine annual withdrawals before the age when the rules actually apply (which was increased from age 70 to 72 by recent legislation).

The 2017 SCL/SOA report analyzed and compared 292 different retirement income strategies, using stochastic forecasts and efficient frontiers, analytical techniques that many large pension plans use to devise funding and investment strategies.[3] The *Spend Safely Strategy* compared favorably to these 292 strategies using eight different metrics described in the report. Those metrics included:

- the average inflation-adjusted amount of retirement income received throughout retirement,
- protection against inflation, and
- the average inflation-adjusted amount of wealth that can be accessed throughout retirement.

The 2019 SCL/SOA report also analyzed the *Spend Safely Strategy* for retirees in "average," "above average," and "poor" health, as defined in the report.[2] It concluded that the *Spend Safely Strategy* was viable for all three health categories. However, retirees who've received an actual diagnosis of a life-shortening disease might need a solution that's customized for their circumstances, which would recognize the financial needs of a spouse, among other factors.

Finally, it's important to recognize that the *Spend Safely Strategy* isn't rigid; the 2019 SCL/SOA report discusses several possible refinements to the strategy to personalize it to individual situations.[2] For example, older workers who aren't able to delay Social Security benefits until age 70 will still realize significant advantages by delaying benefits to their full retirement age or late 60s.

How Can Defined Contribution Plan Sponsors Help?

Plan sponsors can help their plan participants implement the *Spend Safely Strategy* by offering a basic retirement income menu in their DC plan, whether that's a 401(k), 403(b), or 457 savings plan. With such a menu, participants could allocate their savings among various retirement income options and implement these solutions within their plan by simply "checking the box."

A robust retirement income menu would include at least these three options:

1. A fixed monthly installment payment for a specified period to fund a Social Security bridge payment
2. Monthly installment payments using the IRS RMD or other withdrawal strategies, coupled with a low-cost balanced, target date, or stock index fund. These payments would be paid indefinitely, but remaining funds could be redeployed at any time.
3. An annuity to supplement Social Security with additional guaranteed lifetime income

A straightforward way to deliver the third option—an annuity—would be to facilitate an IRA rollover to an online annuity bidding service. Another possibility would be to implement annuities that are delivered in-plan, if the plan sponsor decides that would be advantageous to their participants.

Under the retirement income menu, the default payout option would be the IRS RMD rates, starting at age 70 or 72 when the rules actually apply, coupled with the plan's qualified default investment alternative (QDIA). SCL/SOA research discusses how the design of the retirement income menu and default payout option can minimize any potential liability exposure a plan sponsor might have.[6, 7]

Plan sponsors can also help their participants by providing communications materials that help pre-retirees navigate their most critical retirement income decisions; this material should also clearly explain how the retirement income menu can support effective decisions. Parts Three and Four of this series explore these ideas in more detail.[7, 8] Plan sponsors can also help by creating part-time positions for their older workers to enable them to downshift from their full-time jobs but continue working in order to delay taking Social Security benefits.

Why Should Plan Sponsors Help?

Employees have traditionally looked to employers to help them with their retirement benefits and economic security plans. In a DC world, they receive a lot of help before retirement, but they're often on their own once they retire and leave the workplace. COVID-19 and the accompanying economic turmoil have created a great deal of insecurity and confusion about retirement security, which will probably last long after the health risks are under control. Fortunately, employers can take actions that will help employees develop a plan and alleviate much of the confusion. This is important because:

- Communication materials from plan sponsors can help older workers decide when they can afford to retire. If pre-retirees are unsure about this decision, they might delay retiring indefinitely. A retirement income menu can help an employer better manage an aging workforce.
- Retirement income solutions that use institutional pricing have the potential to increase retirement income by 10% to 20% compared to retail solutions, a result estimated by earlier SCL/SOA research.[9] Implementing a retirement income menu can result in a more efficient use of retirement plan contributions made by employers and their workers.
- A retirement income menu represents an inexpensive plan improvement that also elevates the plan from a simple savings plan to a true retirement plan.
- It helps reduce per-capita administrative costs by retaining retirees' assets in the DC plan.
- Employers can retain institutional knowledge by continuing to employ older workers and retirees.
- The enhancements discussed in this essay are the right thing to do for older workers and retirees. They also set a good example to younger workers on how the employer treats their workers at any age.

In recent years, plan sponsors have enhanced their plans to boost retirement savings through auto-enrollment, low-cost investment funds, and default investment solutions. The time has come to take the next step in the evolution of DC retirement plans. DC plan sponsors can now use respected research to help their pre-retirees make and implement critical retirement decisions.

Steve Vernon, FSA, is a Research Scholar, Stanford Center on Longevity, and co-author of the SOA-sponsored research report *Viability of the Spend Safely in Retirement Strategy,* which forms the foundation for the ideas in this series of essays. Vernon is also the author of a consumer-facing book based on this research: *Don't Go Broke in Retirement: A Simple Plan to Build Lifetime Retirement Income*. He can be reached at steve.vernon@restoflife.com.

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Consider a *Default Decision Process* for Retirement Income Options in DC Retirement Plans

Steve Vernon

Part Three of the series "Research That Matters Today"

The hunt is on to find a default retirement income option in defined contribution (DC) savings plans. Plan sponsors and their professional advisers are emboldened by default enrollment, auto escalation, and investment options that have successfully boosted participation and savings in DC plans. As a result, they want to tap the power of defaults and inertia to design a retirement income option that can effectively turn savings into reliable income for retiring participants. To be dramatic, default retirement options are the current "holy grail" of retirement!

But what if the holy grail was instead a *default education and decision process* that enables participants to make informed and effective decisions about deploying their savings in retirement?[1] This process would complement and support a thoughtful retirement income menu that a DC plan sponsor could implement that includes a strategic default retirement income option.[2]

There are critical differences between designing broad-based defaults for the accumulation phase and designing broad-based defaults for the payout phase. These differences involve protecting the plan sponsor from litigation, competing perspectives about effective retirement income options, and the practical difficulty that comes with designing a "one-size-fits-all" retirement income solution.

Let's explore these differences before reviewing the details of a default decision process.

The Elephant in the Room

Given the litigious climate surrounding DC savings plans, plan sponsors are understandably reluctant to offer innovative plan features, including payout options. With this backdrop, let's examine the differences between the accumulation and payout phases.

Plan sponsors can minimize their legal exposure by following legislative and regulatory guidelines for auto enrollment, auto escalation, and default investment options. Unfortunately, there are no specific legislative and regulatory guidelines for any default retirement income option, except for one. The single option with such support involves:

- Investing assets in the plan's qualified default investment alternative (QDIA) that's applicable for retirees, which already has legislative and regulatory support, and
- Using the IRS required minimum distribution (RMD) rates to calculate the annual amount of retirement income distributed to retirees (the RMD is required by law and generates substantial penalties for noncompliance).

If you look closely at the fine print in the legal plan documents of many DC plans, they already include this default payout option—it's just not promoted to plan participants. With such a default payout option, participants can make a positive election for a different form of payment if they decide that such an election would better meet their goals and circumstances.

This default option has a very important advantage for plan sponsors: protection from litigation. And this option can also appeal to retirees: It's supported by substantial research as a viable payout option when combined with optimizing Social Security benefits, compared to many other possible retirement income solutions.[3,4,5]

Since the RMD is required at age 70 (age 72 starting in 2021), this default option also incents and potentially engages pre-retirees to make positive elections that might better meet their goals and circumstances, such as starting retirement income at an earlier age.

Competing Perspectives on Payout Options

For the accumulation phase, it's extremely common to offer pooled investment funds to DC plan participants. There aren't any serious competitors to this method of delivering investment options to participants, and DC plans have decades of experience with pooled investment funds.

For the payout phase, however, there are competing perspectives on the best use of retirement savings. Insurance companies want to sell annuities, whereas investment firms want to sell solutions with invested assets. Each perspective has a compelling rationale that's supported by respected research.

It's not too hard to imagine a lawsuit brought by an aggressive attorney against an unfortunate plan sponsor who designates one of these payout options as the plan's default, with respected expert witnesses opining on either side of the issue. There is substantial and respected research that can support the viability of either annuities or investment solutions.

A One-Size-Fits-All Option Is Difficult in the Payout Phase

In the accumulation phase, few people would argue that saving more money is a bad thing, which helps justify auto enrollment and auto escalation. In addition, respected and established research supports the use of default investment options that can apply during the long investment horizon of workers accumulating savings for retirement. And now we have at least a decade of experience with auto enrollment, auto escalation, and default investment options, with apparent success.

However, designing a one-size-fits-all default retirement income option is much more complicated than designing defaults for the accumulation phase. Ideally, an optimal payout solution would consider a number of factors that can be unique to each pre-retiree, such as:

- the level of guaranteed income the participant might receive from Social Security and pension benefits,
- the resources of a participant's spouse, if applicable,
- whether the participant or spouse will work part time for a while,
- the level of basic and discretionary living expenses, and
- the participant's preferences for addressing investment, inflation, and longevity risk in retirement.

Once again, it's not hard to imagine a plan sponsor that implements a default retirement income option (whether an annuity or investment solution), then finds themselves involved with litigation where an expert witness "proves" the default wasn't appropriate for the specific retiree's circumstances.

A carefully designed retirement income menu can provide the tools that help pre-retirees use their DC accounts to customize a portfolio of retirement income that meets their unique goals and circumstances. With such a menu, retiring participants could allocate their savings among at least three distinct options, as follows:

1. A fixed monthly installment payment for a specified period to fund a Social Security bridge payment.

2. Monthly installment payments using the IRS RMD rates or other withdrawal percentages, coupled with investing in a low-cost balanced, target date, or stock index fund. These payments would be paid indefinitely, but remaining funds could be redeployed at any time.
3. An annuity to supplement Social Security with additional guaranteed lifetime income. Such an annuity could be delivered through an IRA rollover to an annuity bidding platform or through an in-plan annuity.

This menu is designed to address the variety of goals and circumstances that retiring participants might have. The RMD default option described previously helps minimize the plan sponsor's legal exposure.

The retirement income menu takes advantage of a substantial body of research conducted by the Stanford Center on Longevity (SCL) and sponsored by the Society of Actuaries (SOA) on viable retirement income strategies.[3,4,5,6,7,8] This research demonstrates that one of the most efficient uses of retirement savings is to fund a Social Security bridge payment that enables older workers to maximize their Social Security benefits. This same research demonstrates the viability of using the RMD as a payout option, coupled with a fund that invests substantially in equities to help protect against inflation. Participants who desire more risk-protected retirement income can buy an annuity or invest in fixed-income investments offered by the plan.

Now let's turn our attention to an education and decision support process that can help plan participants use the tools in the retirement income menu to customize their retirement income strategy.

The Default Process: Guiding Participants to Make Informed Decisions

Plan sponsors could design and communicate a process for participants who apply for retirement and want to deploy their DC accounts. Here's the basic idea: If a participant wants to access their DC accounts, they're first defaulted into a guided education and decision process that helps them navigate the decisions they should make to deploy their accounts in retirement. These participants can always opt out of the process and make a positive election to deploy their accounts.

Such a default process wouldn't be too different from mandatory briefings that are prevalent in today's work environment, such as briefings on safety rules, sexual harassment, nondiscrimination, and other employer policies. The important difference is that a participant can opt out of the retirement decision process.

Because of the importance and complexity of their ultimate decisions, the retirement education and decision process might take a few sessions to complete. It could ask participants to check when they've completed a segment to show their progress toward completion. Given the high stakes of their decisions, such a process should be a good use of their time.

It's important that the education and design process isn't biased by compensation or fees that a financial firm, insurance company, or adviser might receive. The process should be supported by respected and substantial research.

The Process Starts with Education

The process would start with an overview of the risks that retiring participants face and should address through their retirement income portfolio. These risks include:

- the risk of living a long time (longevity risk)
- stock market crashes
- inflation

- cognitive decline and diminished ability to manage investments
- taxes
- political

The educational process would emphasize that there's no risk-free retirement income option. Even Social Security, which addresses more of the above risks than other retirement income generators, is subject to political risk (in theory, Social Security benefits could be reduced by the federal government in the future). Diversification is the classic strategy to protect against various risks in the accumulation phase, and for that reason, diversification of retirement income sources can be appropriate for the payout phase as well.

The educational process would also describe how the plan's payout options address various risks and deploy different retirement income strategies. For example, the process would educate participants on the advantages and features of a Social Security bridge option, systematic withdrawals from invested assets, and annuities. It would also help participants understand the importance of the age at which they choose to retire and the potential advantages of delaying retirement. The goal is to help participants make informed decisions about allocating their savings to meet their life goals and protect against the risks they're most concerned about.

The process would alert pre-retirees to the information they should gather to make well-informed decisions, such as their expected Social Security benefits, any pension benefits they expect to receive, retirement savings account balances, financial resources of their spouse or partner, expected living expenses, etc.

The Retirement Income Planning Decision Tree

The next step is to guide participants through the decisions they need to make. Here's a rudimentary "decision tree" that illustrates the basic steps of such a process:

1. Select a target retirement age/date.
2. Do you anticipate working part time in retirement? If so, for how long, and how much annual income to you expect?
3. When do you want to start Social Security benefits? The process could include an online optimization analysis that's readily available.
4. If you decide to delay Social Security after you retire, how will you enable this delay? Through part-time work? By building a Social Security bridge fund?
5. Decide how much savings to set aside for either a Social Security bridge fund, an emergency fund, and any other adjustments, such as a travel fun bucket.
6. Do you want more guaranteed income to supplement Social Security? If so, buy enough annuity to make you feel comfortable. Possibly cover a substantial portion of basic living expenses with guaranteed sources of retirement income.
7. For remaining funds, determine withdrawal and investment strategies. Defaults can be QDIA + RMD, although the plan could offer other withdrawal strategies coupled with investment funds in the plan. Withdrawals before the age when the RMD applies would use the same methodology.
8. Does your retirement income cover your expected living expenses? If yes, you might be done!
9. If not, do you want to explore other retirement income generators or sources of income, such as deploying home equity? Can you examine how to reduce your living expenses?
10. If you're still short, you may need to rethink your target retirement age and start over at Step #1.

This list illustrates the basic process and steps. An actual application, whether an app or computer-guided process, could contain more steps and robust information.

A key part of the process would be convincing participants that it's well worth their time and effort. It would remind them of other significant life events that required a lot of time and attention, such as earning their basic education or learning new job skills. At this stage of their lives, this process is equally important!

While this process might be a lot of effort for plan sponsors, there are numerous reasons why a plan sponsor might want to help.[2, 9] For example, this process could help plan sponsors manage an aging workforce; it could also be promoted as a low-cost plan improvement.

Could this process be a lot of effort for pre-retirees? Yes! But the stakes are high—their financial security for perhaps one-fourth to one-third of their total lifespan. Most people value truthfulness and authenticity when they're facing important life decisions. We shouldn't take shortcuts or sugarcoat the seriousness of these decisions.

Steve Vernon, FSA, is a Research Scholar, Stanford Center on Longevity, and co-author of the SOA-sponsored research report *Viability of the Spend Safely in Retirement Strategy,* which forms the foundation for the ideas in this series of essays. Vernon is also the author of a consumer-facing book based on this research: *Don't Go Broke in Retirement: A Simple Plan to Build Lifetime Retirement Income*. He can be reached at steve.vernon@restoflife.com.

References

The SCL/SOA reports and essays identified below include the analyses that support the conclusions discussed in this essay and also address the implementation issues and refinements to the strategies described herein. The last reference listed is a consumer-friendly book designed to help middle-income pre-retirees and retirees understand and implement straightforward retirement income strategies.

1. *The 5 Most Important Retirement Income Decisions*, by Steve Vernon, FSA. First in the series "Research That Matters Today," Society of Actuaries, July 2020.
2. *DC Plan Sponsors Can Improve Critical Retirement Income Planning*, by Steve Vernon, FSA. Second in the series "Research That Matters Today," Society of Actuaries, July 2020.
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4. *Viability of the Spend Safely in Retirement Strategy*, by Wade Pfau, Ph.D., Joe Tomlinson, FSA, and Steve Vernon, FSA. Society of Actuaries, May 2019.
5. *Optimizing Retirement Income in Defined Contribution Retirement Plans: A Framework for Building Retirement Income Portfolios,* by Wade Pfau, Ph.D., Joe Tomlinson, FSA, and Steve Vernon, FSA. Society of Actuaries, May 2016.
6. *How to "Pensionize" Any IRA or 401(k) Plan,* by Steve Vernon, FSA. Stanford Center on Longevity, March 2018.
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8. *The Next Evolution in Defined Contribution Retirement Plan Design: A Guide for DC Plan Sponsors to Implementing Retirement Income Programs,* by Steve Vernon, FSA. Society of Actuaries, September 2013.
9. *Retirement Income Statements That Educate and Don't Confuse,* by Steve Vernon, FSA. Fourth in the series "Research That Matters Today," Society of Actuaries, July 2020.
10. *Don't Go Broke in Retirement: A Simple Plan to Build Lifetime Retirement Income,* by Steve Vernon, FSA. *Rest-of-Life* Communications, Summer 2020.

Retirement Income Statements that Educate and Don't Dangerously Mislead

Steve Vernon

Part Four of the series "Research That Matters Today"

An important challenge in the retirement industry is to help 401(k) plan participants understand the amount of retirement income that their savings can realistically generate in retirement. The underlying assumption is that most plan participants overestimate the value of their savings; if they really understood how much retirement income their savings *might* generate, they would increase their contributions.

To address this lack of awareness, many retirement professionals propose distributing statements to 401(k) participants that show estimates of the retirement income they might receive from their accounts. This retirement income statement would complement the familiar statement of account balances that participants currently receive. Presumably a retirement income statement would also help pre-retirees think in terms of retirement income instead of simply focusing on account balances, which might lead to more informed retirement decisions.

In December 2019, Congress responded to these proposals in the SECURE Act. This new law will require 401(k) plans to provide their participants with an estimate of the retirement income their accounts might generate. Future regulations will provide guidelines on how plan sponsors and administrators would prepare these statements.

While it's certainly a noble goal to help workers understand how their savings might convert into retirement income, the devil is in the details. If plan sponsors and administrators aren't careful with the design of retirement income statements, they could end up misleading pre-retirees and, in the process, enabling inappropriate decisions. This essay addresses some of the challenges with designing retirement income statements and suggests a design that could lead to more informed retirement income decisions by pre-retirees.

Traps for the Unwary

A retirement income statement has the potential to create traps for the unwary. Here's the problem: The amount of *estimated* retirement income can vary substantially from the *actual* amount of retirement income plan participants might receive when they retire, depending on how they deploy their savings to generate income.

There are a few important reasons for this discrepancy. For example, when preparing retirement income estimates, 401(k) administrators often assume participants will buy a fixed annuity with their account balance. But most retirees don't spend all of their account balance on an annuity. Fixed annuities often generate more immediate income than most other retirement income generators. So, if participants don't buy annuities with their savings, they would actually receive lower amounts of retirement income compared to the estimates.

There are two more challenges that occur with these retirement income statements. The first involves the fact that in order to prepare these estimates, 401(k) administrators must make an assumption about the age when participants will retire. But this age could be different from participants' actual retirement age.

In addition, plan sponsors must make assumptions regarding the rate of return that participants' accounts will earn between the date of the statement and their assumed retirement date. Again, the actual amount earned could be very different from the assumed rate of return. The differences between these two assumptions and participants' actual experience mean the retirement income statements could miss the mark, sometimes significantly.

I've worked closely with older friends and relatives who've received retirement income statements from their 401(k) plans. They typically go right to "the number" and don't read all the fine print. And they often think their plan is like a pension plan and assume the *estimated* retirement income is the *actual* amount of retirement income they'll receive.

Sometimes a little bit of knowledge can be dangerous. Even if plan participants understand that they really don't have a traditional pension plan, they might interpret the retirement income estimate as a recommendation of the amount they can safely withdraw from their accounts during retirement. But if the retirement income statement is based on the assumption that plan participants will buy an annuity and they don't do that, one possible outcome is that many retirees will run out of money before they pass away.

Of course, when 401(k) administrators prepare retirement income statements, they protect themselves from liability by including paragraphs of fine print that describe how they prepared the statements. The fine print typically identifies the actuarial methodology, mortality tables and interest rate assumptions they used to prepare the retirement income statements. Almost no one other than an actuary would read and understand this fine print. Most plan participants don't even bother to try.

Here's the bottom line: Participants shouldn't blindly count on receiving the amount of estimated income they see in their retirement income statement. They need to look at more than just "the number" so they don't make uninformed financial decisions.

The fact is, there are many ways to generate retirement income from savings. Ideally, as participants approach retirement, they'll spend the time to do their homework and learn about various ways to convert their savings into retirement income. Then they'll make informed decisions about the best age at which to retire and how to best deploy their savings, recognizing their goals and preferences.

Yes, it will take more time for plan participants to undertake this learning. But given what's at stake—their financial security for 20 years or more—it's well worth their time.

Let's see how a retirement income statement could be designed to grab pre-retirees' attention and encourage them to investigate their options, while minimizing the confusing fine print.

A Retirement Income Statement that Educates

Let's assume that Jane Smith is a 50-year-old 401(k) plan participant with $100,000 in savings. The following is a sample two-page retirement income statement designed to educate pre-retirees on issues regarding converting their savings into income. It would also encourage them to learn more.

Please keep in mind that this sample just presents some basic concepts for communicating about retirement income. Plan administrators could embellish these statements beyond these basic ideas.

Sample retirement income statement: page 1

Jane: don't plan for retirement withou understanding this critical information

How much retirement income could your savings generate? Understanding possible answers to this critical question will help you make important retirement decisions, such as how much to save for retirement, when you can afford to retire, and how to deploy your savings in retirement. To help you learn more, this statement includes two estimates of the amount of retirement income that your savings might generate.

Jane, our records show that you've accumulated $100,000 in savings as of January 1, 2021, and that you're age 50 on that date. To prepare this estimate, we assumed that you would retire at age 65 and would still have $100,000 in savings to generate retirement income.

⇒ If you buy an annuity, we estimate you'll receive **$458 per month**, guaranteed by an insurance company for the rest of your life.

⇒ If you invest your savings and elect a monthly installment method, we estimate you'll receive **$260 per month** that could be paid indefinitely**.**

Your retirement income will be larger than these amounts if you continue to contribute to your account and if your savings grow with investment earnings. The above estimates don't include Social Security benefits, which would add to your total retirement income.

It's important that you understand how we prepared these estimates. Please see the section titled "Details about these estimates." Please keep reading to learn more about planning for income in your retirement.

There's a wide range of possible retirement income amounts you might receive

The reality is there are many viable ways to turn your 401(k) account into a stream of lifetime income when you retire. These different methods each have their pros and cons, and they each produce significantly different amounts of retirement income. That's why we prepared two estimates of your retirement income using different retirement income generators.

What are your next steps?
Jane, we strongly encourage you to learn more about different methods for generating retirement income from your savings. To help you, please see our online guide, *Learn About Retirement Income Generators (RIGs).* We also encourage you to use our online *Retirement Income Modeler.* With this tool, you can see how your retirement income might change due to various decisions that you might make, as described on the next page. For example, you can see how future contributions and investment earnings could increase your retirement income.

It might take you some time to read these materials and use our modeling tools. However, it's a great use of your time. Your financial security in retirement depends on decisions you make, and these are serious decisions. You could live 20 years or more in retirement, so take the time you need to make informed decisions!

Sample Retirement Income Statement: Page 2

How could your eventual retirement income be different from these estimates?

Your actual retirement income could increase or decrease compared to these estimates, due to the following factors:

- Investment income that your accounts earn until you retire would increase the amount of retirement income you might receive. However, if your account loses money, you could receive less retirement income.
- Continuing to contribute to your accounts while you're working will increase the amount of retirement income you might receive. However, withdrawing or borrowing from your accounts before retirement could decrease the amount of retirement income you might receive.
- Retiring before age 65 would decrease the amount of retirement income you'd receive, since it would be paid for a longer period compared to retiring at age 65. On the other hand, retiring after age 65 could increase your retirement income.
- If you buy an annuity that continues payments to a spouse or partner after you die, your eventual retirement income could decrease.
- Selecting different methods to generate retirement income would generate different amounts of retirement income.

Details about these estimates

To estimate the annuity payment you might receive, we assumed you would buy an annuity called a "single premium immediate annuity," and is payable only for your life. We used annuity purchase rates that insurance companies were charging in the Fall of 2020 from the website ImmediateAnnuities.com. There are other types of annuities you could buy that might generate different amounts of retirement income.

With installment payments, there's no guarantee that the estimated payment amount will continue for the rest of your life. Your actual payments will depend on investment income your account earns throughout retirement, how much you withdraw during retirement, and how long you (and your spouse or partner, if applicable) might live.

To estimate the monthly amount of installment payment you might receive, we used the method the IRS uses to determine the required minimum distribution (RMD) that applies at age 72. While these rules don't apply to you at age 65, the IRS methodology is one of several reasonable installment methods you could use to generate retirement income from your savings. The RMD method starting at age 72 is the default form of payment under our 401(k) plan, if you don't make a positive election. There are several other reasonable installment payment methods that would generate different amounts of retirement income.

End of Sample Statement

Discussion and Conclusions

The reality of retirement planning in a defined contribution world is that plan participants assume the responsibility for making their retirement income last for life. This is a serious responsibility, and it doesn't make sense to take short cuts or sugarcoat the seriousness of this responsibility.

The main goal of the retirement income statement discussed in this essay is to encourage participants to learn more about their retirement planning decisions. It helps avoid the traps for the unwary mentioned in this essay by showing the range of possible retirement income amounts. There isn't any complicated fine print that describes actuarial methods and assumptions that only actuaries would understand.

This design also serves the original purpose for providing retirement income statements, by giving participants estimates of how much income their accounts could generate.

It would be a mistake simply to distribute retirement income statements without providing resources for participants to learn more. The retirement income statement described here should be part of a robust program to educate participants on the issues that come with generating income in retirement and, in particular, the importance of the age at which participants retire.[1] Such a program should include a basic primer on the features and pros and cons of different retirement income generators and an online retirement modeling tool. It would also show participants how they could learn about Social Security benefits and how to estimate these benefits.

Plan sponsors would deploy marketing and behavioral economics strategies to encourage plan participants to take the necessary time to learn more about their retirement decisions.

There are many good reasons why plan sponsors would benefit from providing this information to their participants, as discussed in Parts Two and Three of this series.[2,3]

There's a substantial body of research conducted by the Stanford Center on Longevity (SCL) and sponsored by the Society of Actuaries (SOA) on retirement income strategies.[4,5,6,7,8,9] Let's use this research to help plan participants make the best possible retirement income planning decisions in a defined contribution world.

Steve Vernon, FSA, is a Research Scholar, Stanford Center on Longevity, and co-author of the SOA-sponsored research report *Viability of the Spend Safely in Retirement Strategy,* which forms the foundation for the ideas in this series of essays. Vernon is also the author of a consumer-facing book based on this research: *Don't Go Broke in Retirement: A Simple Plan to Build Lifetime Retirement Income*. He can be reached at steve.vernon@restoflife.com.

References

The SCL/SOA essays and research reports identified below include the analyses that support the conclusions and strategies discussed in this essay. The last reference listed is a consumer-friendly book designed to help middle-income pre-retirees and retirees understand and implement straightforward retirement income strategies.

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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, Seshardri, 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,

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[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.

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