

THE PEAK 65 GENERATION: CREATING A NEW RETIREMENT SECURITY FRAMEWORK

BY JASON J. FICHTNER, PHD

INTRODUCTION

With the US experiencing the greatest retirement surge in its history, the country's public and private sector retirement systems have become obsolete. The old metaphor of the three-legged stool of retirement planning — employer pensions, personal savings and Social Security — no longer holds:¹

Fewer private-sector employers offer a traditional defined-pension retirement plan providing protected income that is guaranteed throughout retirement, meaning more Americans enter retirement with Social Security as their only means of protected income, leaving many exposed to financial insecurity.²

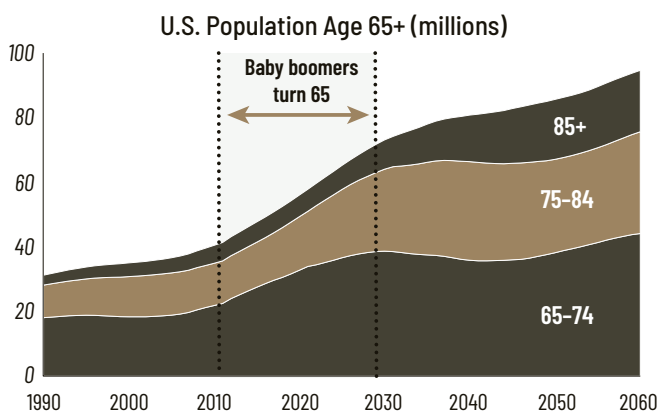
A steady low-interest rate environment is making it impossible for retirees to generate risk-free new income from their retirement savings that even keeps pace with inflation. This leaves equities and bonds as the only option for meaningful income generation on savings and creating higher levels of ongoing risk for retirement income management. Gone are the days when risk-free certificates of deposit and money market funds could deliver reliable, protected income that outpaced inflation.

A large percentage of people are claiming Social Security benefits early and missing out on the full benefits they could receive if they delayed claiming for just a few more years, depriving them of a much more robust, fully-protected income stream throughout their retirement.

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As a result of these changes in our nation's retirement system, many Americans lack sufficient, reliable and protected retirement income that will last for the rest of their lives. It's time for a new retirement security framework that focuses on the need for sufficient protected income in retirement. This will require policy changes by employers and the government.

The elderly population is growing rapidly and living longer



Source: <https://www.pgpf.org/sites/default/files/PGPF-Chart-Pack.pdf>

¹ <https://www.ssa.gov/history/stool.html>

² A Survey by the Alliance for Lifetime Income estimates that 60% of households do not have a source of protected income outside of Social Security. See: <https://www.allianceforlifetimeincome.org/feature/landmark-study-finds-number-of-protected-households-rises-and-five-profiles-of-americans-planning-for-retirement/>

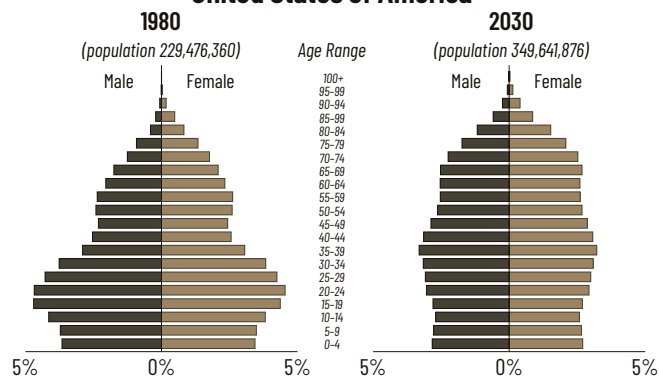
The baby boom generation are those born after World War II, from 1946 to 1964. There are currently an estimated 73 million people in the boomer generation.³ The boomer generation can also be called the Peak 65 generation, because in approximately three years the US will have more 65-year-olds than ever before. Right now more than 10,000 people turn 65 every day, a number that will increase to more than 12,000 a day as the nation approaches its Peak 65 moment around 2024.⁴ By the year 2030, all those of the boomer generation will have reached at least age 65.⁵ That year, one-fifth of the US population will have reached age 65, the traditional age associated with retirement.⁶ Also by 2030 the number of those age 65 and older will be larger than the number of children in the United States.⁷ These demographic changes will have major implications for the country's fiscal finances, as well as the retirement security for the boomer generation and the generations that follow.⁸

plan as their *only* retirement account, as compared to 4% in 2020.⁹ Today, only 20% of all civilian workers participate in a defined-benefit pension, with a large portion of those workers employed in federal, state and local governments.¹⁰

Unfortunately, for those workers who still have access to a traditional defined-benefit pension plan, the news is not all good, as many of the remaining pension plans are underfunded. An Urban Institute online reference cites reports from the Pew Charitable Trusts and Boston College Retirement Center that “Inadequate contributions have left pension plans underfunded by at least \$1 trillion and possibly by as much as \$3 to \$4 trillion depending on modeling assumptions.”¹¹ Further, a report by Equitable estimates that due to the economic effects of Covid-19, only Tennessee's state pension plan will retain “its resilient funded status in 2020.”¹² An article published by Pensions & Investments reports that “Of the 181 public plans tracked by the Center for Retirement Research at Boston College, National Association of State Retirement Administrators and the Center for State and Local Government Excellence, 31 have funding ratios that are below 60%.”¹³ The financing problems are not just focused on public pensions; even some remaining private sector plans have funding problems.¹⁴

The effective elimination of defined-benefit plans, which distribute protected income in retirement, in favor of defined-contribution plans (e.g., 401(k), 403(b), etc.), means that millions of Americans lack sufficient protected income required for a financially secure retirement. In other words, they lack the tool necessary to adequately protect against market risk, health risk, and longevity risk. It's important to note that there are only three types of protected lifetime income available in the US today — pensions, Social Security, and annuities. An index created by the Center for Retirement Research at Boston College estimates that approximately 50% of

Percentage of Population by Age Range, United States of America

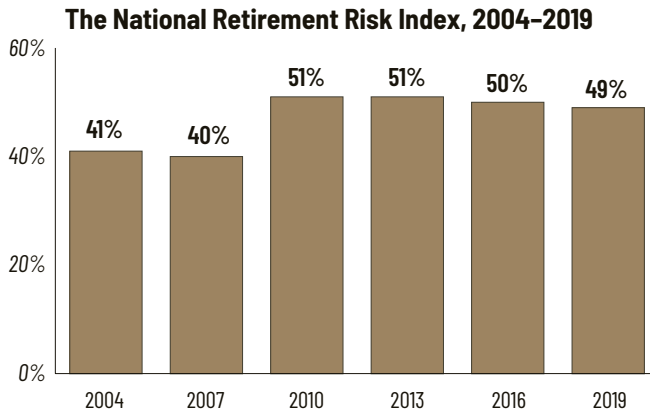


Source: <https://www.populationpyramid.net/united-states-of-america/>

When people in the Peak 65 generation entered the labor market in 1980, 60% of private sector workers relied on the protected income offered through a pension

- 3 <https://www.census.gov/library/stories/2019/12/by-2030-all-baby-boomers-will-be-age-65-or-older.html>
- 4 <https://finance.yahoo.com/news/americans-retiring-increasing-pace-145837368.html>
- 5 <https://www.census.gov/library/stories/2019/12/by-2030-all-baby-boomers-will-be-age-65-or-older.html>
- 6 <https://www.aarp.org/home-family/friends-family/info-2018/census-baby-boomers-fd.html>
- 7 <https://www.aarp.org/home-family/friends-family/info-2018/census-baby-boomers-fd.html>
- 8 <https://link.springer.com/article/10.1057/s11369-018-0066-4>
- 9 https://money.cnn.com/retirement/guide/pensions_basics.moneymag/index7.htm?iid=EL
- 10 Bureau of Labor Statistics, National Compensation Survey: Employee Benefits in the United States, March 2020. <https://www.bls.gov/ncs/ebs/benefits/2020/home.htm>
- 11 <https://www.urban.org/policy-centers/cross-center-initiatives/state-and-local-finance-initiative/projects/state-and-local-backgrounders/state-and-local-government-pensions>
- 12 <https://equable.org/state-of-pensions-2020-national-pension-funding-trends/>
- 13 <https://www.pionline.com/defined-benefit/underfunded-public-plans-facing-new-round-woes>
- 14 <https://www.pionline.com/pension-funds/funded-status-us-corporate-plans-edged-2019-report>

households are “at risk” of not having enough to maintain their standard of living in retirement.¹⁵



Source: <https://crr.bc.edu/briefs/the-national-retirement-risk-index-an-update-from-the-2019-scf/>

Not surprisingly, lower-income households are most at risk. The following table shows the percentage of households “at risk” at age 65 in 2016 and 2019, further categorized by low-, middle- and high-income.

Wealth group	2016	2019
All	50%	49%
Low	73%	73%
Middle	49%	45%
High	28%	29%

Source: <https://crr.bc.edu/briefs/the-national-retirement-risk-index-an-update-from-the-2019-scf/>

It’s not just those households today that are at risk of not being able to maintain their standard of living in retirement. The following table shows the percentage of households “at risk” at age 65 by their age group in 2016 and 2019. Fifty-eight percent of those who were age 30–39 in 2019 are “at risk” of not being able to maintain their standard of living when they turn 65.

Age group	2016	2019
All	50%	49%
30–39	57%	58%
40–49	54%	48%
50–59	40%	42%

Source: <https://crr.bc.edu/briefs/the-national-retirement-risk-index-an-update-from-the-2019-scf/>

Over the past few decades, Americans have been well-informed on the need to save for retirement.¹⁶ However, much of the focus has been on the accumulation side of the retirement equation.¹⁷ And for good reason, as this was the retirement planning phase in which many Americans found themselves. Workers now have an abundant amount of retirement savings vehicles to choose from, including target-date funds that automatically rebalance the portfolio asset mix between equities and bonds as a person gets older and closer to retirement.¹⁸ However, due to a decline in defined-benefit pension plans, there is now a need for a focus on the decumulation phase of retirement.¹⁹ As the Peak 65 generation approaches its zenith, the universe of retirement security stakeholders that so fervently sought to address the generation’s need to save — through education, public policy and product innovation — must now address its need to manage those saved assets in a way that protects their standard of living. Employer-sponsored, defined-contribution plans are now the primary manner for people to save for their retirement,²⁰ though many still lack access to an employer-sponsored plan. Therefore, even in a world where employer provided pensions are going away, the employer still has a major role in helping people save for their retirement.²¹

A new retirement security framework recognizes the role of employers and focuses on recreating what was so valuable about defined-benefit retirement plans, namely distributing protected income throughout retirement, while avoiding the downsides of high-cost and employer underfunding, and even bankruptcy, that made traditional pension plans unsustainable. The goals of the new retirement security framework call for the use of annu-

15 <https://crr.bc.edu/special-projects/national-retirement-risk-index/>

16 <https://americasaves.org/>

17 <https://www.thebalance.com/what-is-the-10percent-savings-rule-2388583>

18 <https://www.finra.org/investors/learn-to-invest/types-investments/retirement/target-date-funds-find-right-target-you>

19 <https://www.forbes.com/sites/stephenchen/2019/09/30/why-decumulation-is-the-new-accumulation/?sh=207fa8cc24ed>

20 <https://www.americanbenefitscouncil.org/pub/e613e1b6-f57b-1368-c1fb-966598903769>

21 <http://www.pensionrights.org/publications/statistic/how-many-american-workers-participate-workplace-retirement-plans>

ities on top of Social Security. It is the best approach to enable households to protect their financial security in retirement by creating their own personal pension plan.

THE CHANGING RETIREMENT LANDSCAPE

Traditionally, retirement savings was thought to come from three main sources: an employer-provided, defined-benefit pension plan; personal savings; and Social Security. This is the so-called three-legged stool of retirement security. One could easily assume using this framing that one-third of income in retirement should come from each of these three sources. In fact, Social Security was designed to replace about 40% of income in retirement for the average worker.²² Therefore, for someone with an employer-provided, defined-benefit pension, that would mean two-thirds of their income in retirement was “protected” through some sort of annuity — a combination of Social Security and a regular distribution from a pension. Research by the Pension Rights Center estimates that the median income for retirees aged 65 and over (no longer receiving income from work) and receiving income from both a pension and Social Security is twice the income of those just receiving income from Social Security alone.²³

Retirement benefit type	Median income, 2014
Social Security only	\$15,871
Social Security and private pension	\$36,270
Social Security and a federal pension	\$38,806
Social Security and Railroad Retirement, state, local government or military pension	\$37,789

Source: <http://www.pensionrights.org/publications/statistic/income-pensions>

However, Social Security is now the principal source of income for most retirees. According to the Social Security Administration (SSA), among elderly beneficiaries,

Social Security provides 50% or more of income for 50% of married couples and 70% of unmarried persons.²⁴ Yet this wasn’t always the case. Today, in order to recreate the income protection from a pension, some financial planners recommend around 25% of your retirement assets be in an annuity, not including Social Security benefits.²⁵ As a rule of thumb, retirement assets should be able to provide roughly 70–75% of pre-retirement income.²⁶ But one-size does not fit all.²⁷ Some low-income households won’t require any additional annuitization beyond Social Security.²⁸ However, for many middle- and high-income earners, some additional annuitization beyond Social Security is necessary to help mitigate risk and maintain their standard of living in retirement.

Social Security retirement benefits are progressive, replacing a higher percentage of a worker’s pre-retirement income for lifetime lower-wage workers than higher-wage workers. For example, according to the SSA, on average, for those claiming Social Security benefits at their full-retirement age, the replacement rate percentage ranges from as much as 78 percent for very low earners, to about 28 percent for high earners, with 42 percent for medium earners.²⁹ Hence, if a goal is to have roughly two-thirds of retirement income derived from protected sources, then many retirees either currently lack, or will lack, sufficient protected income in retirement to address known risks.

Economic insecurity is also on the rise. While age 65 is the age long considered by people as the age for retirement, most Americans begin retiring sooner. Sixty-one percent of retirees exit the workforce before age 65 — often sooner than they planned according to research conducted by the Transamerica Center for Retirement Studies.³⁰ As the number of people approaching 65 grows, the country finds itself on the leading edge of a

22 <https://www.ssa.gov/benefits/retirement/learn.html>

23 <http://www.pensionrights.org/publications/statistic/income-pensions>

24 <https://www.ssa.gov/news/press/factsheets/basicfact-alt.pdf>

25 <https://money.usnews.com/investing/investing-101/articles/things-you-need-to-know-now-about-annuities>

26 <https://crr.bc.edu/working-papers/what-replacement-rates-do-households-actually-experience-in-retirement/>

27 <https://www.forbes.com/sites/kotlikoff/2018/06/22/the-70-replacement-rate-in-retirement-is-rubbish/?sh=2715a0757917>

28 Note: Many low-income retirees are not homeowners and continue to rent throughout retirement. An unrelated study by the Urban Institute on replacement rates of unemployment insurance during the Covid-19 pandemic found that a 70% replacement rate would leave many low-income workers unable to pay for basic living expenses such as rent. Hence, low-income households may need close a 100% replacement rate or more during retirement in order to maintain the living standards they had during working years. See: <https://www.urban.org/urban-wire/moving-70-percent-income-replacement-unemployment-insurance-benefits-will-disproportionately-hurt-low-income-renters>

29 <https://www.ssa.gov/pubs/EN-05-10024.pdf>

30 www.transamericacenter.org/docs/default-source/retirees-survey/retirees_survey_2015_report.pdf (slide 22).

historic retirement boom. The Covid-19 pandemic has resulted in an estimated 4,000,000 workers prematurely retiring. Further, according to research by the Alliance for Lifetime Income, nearly half (47%) of all retirees retired as the result of circumstances beyond their control, not because they reached the age they identified as their goal achieved, reached a certain savings amount, nor because they wanted to pursue hobbies.³¹ According to the Pew Research Center, 28.6 million boomers reported being out of the labor force due to retirement in the third quarter of 2020.³² This represents a 3.2 million increase from the same quarter in 2019.

A sudden job loss, for example due to a recession, could affect retirement behavior. As Bosworth and Burtless note, “At ages past 60 and especially past 65... reduced employment levels caused by a weak job market very quickly translate into reduced labor force participation rates” (Bosworth, 2010). An employment shock, such as a sudden loss of a job and a labor market with high unemployment, might hasten the decisions of when to retire and when to begin receiving Social Security benefits. A Congressional Research Service study found that older workers who are unemployed have a higher incidence of withdrawing from the labor market (United States Congress, 2007). When they do so, they replace earnings with obvious sources of income, such as pensions, personal savings, and Social Security benefits. According to some studies, unemployment among older workers contributes significantly to the probability of retirement, as the previously mentioned research by Pew notes, these impacts appear to be amplified in the economic climate created by the pandemic.³³

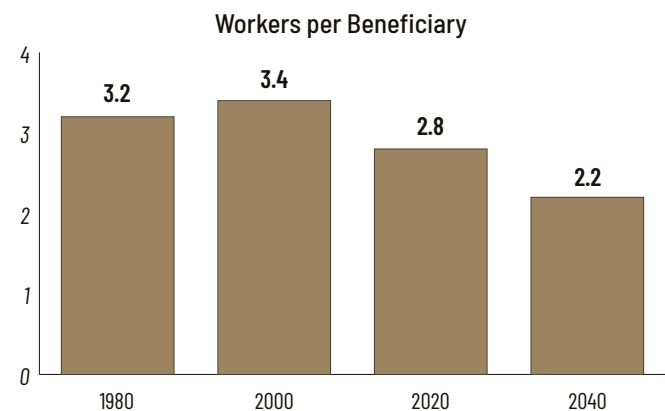
Though the decision to start receiving Social Security benefits can be contemporaneous with retirement, electing to receive benefits is not necessarily a predictor of leaving the workforce (Bosworth, 2010). In actuality, the decision on whether to stop work can be completely independent from the decision to begin collecting Social Security benefits. For example, a worker might choose to stop working but delay receipt of Social Security benefits, to take advantage of higher monthly benefit amounts

that accrue the later one waits to claim (up to age 70). Or a worker might decide to elect retirement benefits as early as 62, receiving a permanently reduced monthly benefit for life, yet continue to work full or part-time for continued income support.

SOCIAL SECURITY

It is also possible that many people think that Social Security will meet their retirement annuity needs. But there are risks in relying on Social Security for all of one’s retirement income. The ratio of the number of workers supporting the system through payroll taxes to the number of people receiving benefits will decline, stressing Social Security’s finances.

As the population ages, fewer workers will be paying taxes to support each Social Security beneficiary



Source: <https://www.pgpf.org/sites/default/files/PGPF-Chart-Pack.pdf>

According to the Social Security Trustees, the combined trust funds face a financial shortfall of \$16.8 trillion in present value through 2094 and \$53.0 trillion over an infinite horizon.³⁴ Further, the Social Security trust funds will be depleted and unable to finance full benefits in 2035³⁵ — a mere 11 years after the Peak 65 moment. Separately, the retirement trust fund will be depleted in 2034, but the disability trust fund will run out in 2065. Although the date of depletion for the combined trust funds varies somewhat from year to year based on

31 <https://www.allianceforlifetimeincome.org/feature/retirement-reset-press-release/>

32 <https://www.pewresearch.org/fact-tank/2020/11/09/the-pace-of-boomer-retirements-has-accelerated-in-the-past-year/>

33 <https://www.pewresearch.org/fact-tank/2020/11/09/the-pace-of-boomer-retirements-has-accelerated-in-the-past-year/>

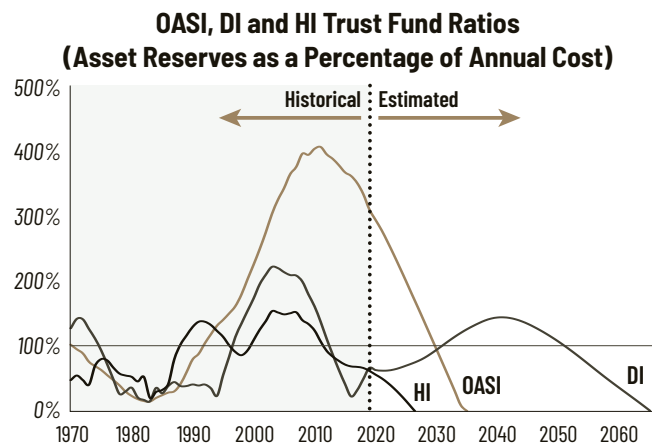
34 It is important to note that the Social Security program has two legally separate trust funds. The OASI and DI trust funds are legally separate because they are designed to serve different purposes and different populations. The Old-Age and Survivors Insurance (OASI) trust fund provides benefit payments to retired workers, their spouses, some children, and the survivors of deceased workers. The Disability Insurance (DI) trust fund provides benefits to disabled workers, their spouses and children. Social Security paid out \$1 trillion in benefits during 2019, almost one-quarter of the entire \$4.4 trillion federal budget. Of these benefits, 86% came from the OASI trust fund and 14% from the DI trust fund.

35 <https://www.ssa.gov/oact/tr/2020/>

economic conditions, for the last 20 years the Trustee reports have consistently estimated that the combined trust funds will be exhausted between 2037 and 2042.

	OASI	DI	OASDI	HI
First year cost exceeds income excluding interest	2010	2041	2010	2008
First year cost exceeds total income	2021	2047	2021	2018
Year trust fund reserves are depleted	2034	2065	2035	2026

Source: <https://www.ssa.gov/oact/TRSUM/tr20summary.pdf>



Source: <https://www.ssa.gov/oact/TRSUM/tr20summary.pdf>

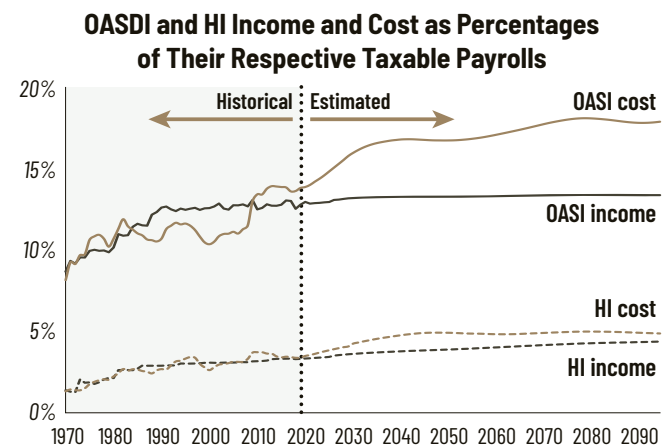
The financial problems of the Social Security program are real and will require real changes to benefit levels, taxation or a combination of the two. That said, trust fund depletion does not mean bankruptcy. Social Security does not have legal borrowing authority, so when the trust funds are depleted the program can only pay out in benefits what it receives in tax revenue. That's different from bankruptcy, which would imply that the program cannot pay benefits at all. However, unless Congress takes action to reform Social Security, the program will only be able to pay approximately 75% of estimated benefits when the retirement (OASI) trust fund runs out of assets in 2035. For disability (DI), trust fund exhaustion in 2065 will reduce the payout to about 90% of scheduled benefits.

There's a large caveat, though, with respect to the 2020 Social Security Trustees' report; it was finalized before

the economic effects of the current Covid-19 pandemic could be taken into account. The 2021 report is not due out until April 2021 at the earliest. However, some organizations have attempted to estimate how the pandemic will impact the Social Security trust funds. Using the 2008 financial crisis as a proxy, the Bipartisan Policy Center estimates that if the financial impact of the pandemic is similar to that experienced as a result of the 2008 Great Recession, the Social Security OASI trust fund depletion date would hasten to 2030 – within the next 10 years (or within six years of “Peak 65”), while the DI trust fund depletion date would be dramatically sooner – moving up from 2065 to 2024.³⁶

But the Social Security financing problem is already here. Payroll tax revenue alone is no longer sufficient to cover Social Security's cost. The government will have to borrow money from the private sector to continue paying interest on the bonds held in the trust funds. Starting this year in 2021, it is likely Social Security will begin to redeem the trust fund bonds, at which time the government will have to borrow even more from the private markets. Though the borrowing need will increase gradually, the need to borrow an additional \$2.9 trillion, the value of Social Security trust funds at the end of 2019, from the private market will be harder and harder over time.

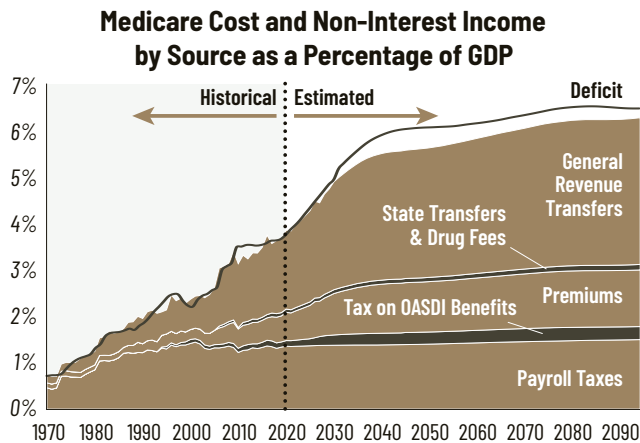
Of the \$27 trillion in gross federal debt, Social Security holds \$2.9 trillion of the total \$6 trillion in government-held debt.³⁷ The additional \$3 trillion in debt from other government obligations will also have an effect on the nation's ability to borrow from the private markets.



Source: <https://www.ssa.gov/oact/TRSUM/tr20summary.pdf>

36 <https://bipartisanpolicy.org/explainer/covid19-social-security/>

37 As of February 2021: https://www.treasurydirect.gov/govt/reports/pd/pd_debttothepenny.htm



Source: <https://www.ssa.gov/oact/TRSUM/tr20summary.pdf>

Additionally, Social Security is not the only entitlement program facing financial difficulty. The Medicare program also faces a funding shortfall, with the most recent estimates suggesting that the Hospital Insurance (HI) trust fund could be depleted in 2026.³⁸ Though Social Security will redeem the trust fund bonds gradually, the increased borrowing needs of the federal government to finance the nation's entitlement programs will expand dramatically. The financing needs of the Medicare program will compete with the funding needs of the Social Security system, further straining the country's ability to borrow money from the private sector. Health care costs could also likely increase for retirees as well. According to the Congressional Budget Office, spending on Social Security and Medicare will consume 75% of all mandatory spending and almost half of the entire federal budget (49%).³⁹

Though it is more than likely that more of the burden for paying for the trust fund depletion will fall on higher earners, the impact will be felt across generations and income levels. Higher-income wage earners may be subject to additional income taxes during their working years. Retirees may face higher taxes on earnings and may also be asked to pay for a greater share of health expenses. Younger generations of workers face the possibility of a triple risk of higher payroll taxes before retirement, lower retirement benefits, and higher healthcare costs. Hence, for many households, it may be financially

prudent to plan on additional protected income in retirement other than Social Security to fill the protected income gap, maintain their standard of living and mitigate these risks.

NEW SECURITY FRAMEWORK AND THE ROLE OF PROTECTED INCOME

While Social Security is in need of financial support, the program is, and will remain, the bedrock of retirement security for the vast majority of Americans. Much of the focus of the *current* retirement security framework has been on the accumulation side of the equation.⁴⁰ Efforts to improve access to retirement savings vehicles and education on the importance of saving for retirement should continue to expand unabated. But a new security framework must include a focus on how protected income can provide the security necessary to maintain a given standard of living in retirement, and how to expand access and lower barriers to obtaining greater levels of protected income.

Employer-provided, defined-benefit pension plans were designed to provide protected income in retirement to maintain living standards and avoid market risk. The new reality is that due to a decline in defined-benefit pension plans, there is now a need for a focus on the decumulation phase of retirement. Employer-sponsored, defined-contribution plans, which are now the primary manner for people to save for their retirement,⁴¹ can be used to provide protected income in retirement on top of Social Security.⁴² The global pandemic as a result of Covid-19 has brought additional light on the shortfalls and challenges facing retirement systems and the need to build better retirement systems going forward (Mitchell, May 2020).

The Bipartisan Policy Center houses the Funding Our Future initiative, which consists of member organizations "dedicated to making a secure retirement possible for all Americans."⁴³ The Funding Our Future initiative has a new take on the three-legged stool. The "Three Pillars to Strengthen American Retirement Security" consist of Social Security, making saving easier for all Americans, and, very important to the new retirement security

38 <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds>

39 <https://www.cbo.gov/publication/56991>

40 <https://www.thebalance.com/what-is-the-10percent-savings-rule-2388583>

41 <https://www.americanbenefitscouncil.org/pub/e613e1b6-f57b-1368-c1fb-966598903769>

42 <https://www.usaretirement.org/millions-american-workers-still-lack-access-401k>

43 <https://fundingourfuture.us/about/>

framework, “transforming nest eggs into a lifetime of income.”⁴⁴ As further noted, “Longer life expectancies and the erosion of traditional pensions have stretched savings. Americans need more straightforward ways to make their savings last and turn them into a lifetime of income.”⁴⁵

This new retirement security framework recognizes the role of employers and focuses on recreating what was so valuable about defined-benefit retirement plans, namely distributing protected income throughout retirement, while avoiding the downsides of high-cost and employer underfunding, and even bankruptcy, that made traditional pension plans unsustainable. Through the use of annuities on top of Social Security, households can create their own personal pension plan.

Individuals face numerous risks in preparing for retirement. Will disability or layoffs stop people from working as long as they had planned and hence reduce their ability to accumulate wealth? Will assets earn the expected rate of return over time? Will a household face unexpected or uninsured health care costs, including those associated with long-term care? Will people face mental or physical declines that require expensive daily assistance or a move to a new residence? Will members of the household live longer than expected and generate higher saving needs to maintain the same living standards? Will a person lose important sources of income in retirement because a spouse or partner dies prematurely? Will children have unexpected financial needs?

Many of these concerns relate to adequate insurance against the risks associated with disability, rate of return, inflation, health care costs, health status, lifespan and children’s circumstances as opposed to adequate saving, but the two issues are strongly related and are part of retirement preparation. If people do not have adequate savings or adequate insurance against the

risks they face in retirement, they could become destitute and thus need federal assistance. In the absence of well-functioning insurance markets, people to some extent will need to save more to self-insure and be in a position to mitigate some of the negative consequences of bad, uninsurable outcomes. These concerns highlight the valuable role of insurance markets and the use of options that are designed to reduce these risks, such as life insurance, retirement annuities, and long-term care insurance. When calculating the value of an annuity, recent research by the Center for Retirement Research at Boston College estimates that when the insurance value of annuities is taken into consideration “...the wealth equivalence measure suggests that everyone gains from purchasing annuities.”⁴⁶

A common, intuitive and flexible approach to measuring retirement security focuses on replacement rates. A replacement rate is a ratio of post-retirement income to pre-retirement income. The target replacement rate that a household should aim for is one that will at least allow replicating pre-retirement living standards in retirement. It is essential to emphasize that 100% is not a natural benchmark for an adequate replacement.⁴⁷ The typical advice of financial planners is to target a replacement rate of between 70–75%.⁴⁸

Suppose a worker earns \$100 in gross wages and has \$62 left after paying work expenses, the mortgage, retirement saving contributions, health insurance, payroll taxes, and federal and state income taxes. Suppose the worker reaches age 65, pays off the mortgage, and retires. At retirement, the worker no longer needs to make payments for work expenses, the mortgage (hopefully), 401(k) contributions, and payroll taxes, while income taxes fall by perhaps one-third as income declines and because of the current benefits in the tax code for the elderly. That means the worker would only need \$70 per year in retirement to replace the living

44 <https://fundingourfuture.us/>

45 <https://fundingourfuture.us/>

46 <https://crr.bc.edu/briefs/what-is-the-value-of-annuities/>

47 It should be noted that it is possible for a household to meet the adequate saving standard even if it does not save very much in financial forms. In the example above, if Social Security and a defined-benefit plan replaced two-thirds of the worker’s wages in retirement, very little additional saving beyond this would be required to maintain pre-retirement living standards in retirement. However, many low-income retirees are not homeowners and continue to rent throughout retirement. An unrelated study by the Urban Institute on replacement rates of unemployment insurance during the Covid-19 pandemic found that a 70% replacement rate would leave many low-income workers unable to pay for basic living expenses such as rent. Hence, low-income households may need close to a 100% replacement rate or more during retirement in order to maintain the living standards they had during working years. See: <https://www.urban.org/urban-wire/moving-70-percent-income-replacement-unemployment-insurance-benefits-will-disproportionately-hurt-low-income-renters>

48 <https://crr.bc.edu/working-papers/what-replacement-rates-do-households-actually-experience-in-retirement/>

standard that \$100 provided during working years. This is how one arrives at a 70 percent replacement rate.⁴⁹

An individual’s monthly Social Security benefit depends on the age at which they claim. Workers who claim before their full retirement age (FRA) accept reduced monthly benefits for the rest of their lives. As a result of legislation passed in the 1980s, the FRA is gradually increasing and will reach age 67 for workers born in or after 1960. People can claim as early as age 62 (the early eligibility age, or EEA), and the earlier someone claims, the greater the benefit reduction. Conversely, someone who delays claiming benefits until after their FRA, up to age 70, receives “delayed retirement credits” in the form of permanently higher monthly benefits. Delaying claiming is equivalent to purchasing additional annuity income — income for the rest of one’s life — at the cost of forgoing early benefits. As will be discussed later, one strategy for how protected income could be used to gain additional Social Security benefits would be to purchase a term annuity as a “bridge” between stopping work and claiming Social Security at either the full retirement age or age 70 in order to maximize Social Security monthly benefits.

The figure below displays the monthly benefit amounts at various claiming ages for a hypothetical worker eligible to receive \$1,000 per month at the FRA of 67. By claiming at age 62 instead of age 70, the beneficiary lowers their monthly benefit by 44%. Another way of looking at this is by focusing on the gain in delaying claiming. The age 70 monthly benefit amount in this example is 77% higher than the age 62 amount. This additional benefit lasts for the rest of the beneficiary’s life.

Example of claiming age on monthly benefits

If benefits are claimed at age	The monthly amount would be
62	\$700
63	\$750
64	\$80
65	\$867
66	\$933
67 (FRA)	\$1,000
68	\$1,080
69	\$1,160
70	\$1,240

Source: Author’s calculations based on SSA.

The various claiming options are essentially a menu of annuities available to a beneficiary. The adjustments to monthly benefits by claiming age are meant to be actuarially neutral — meaning that a beneficiary who lives a life of average length would cost the program roughly the same amount in total lifetime benefits (adjusted for inflation) regardless of when they claimed.⁵⁰ Lower monthly benefits from claiming early will lead to lower lifetime benefits for those who live longer than average. Alternatively, those who live shorter lives than average will receive smaller lifetime benefits if they delay claiming. Regardless of expected benefit amount, anyone who claims later secures the longevity insurance of a higher monthly benefit.

Claiming age can affect a household’s financial security in retirement, especially for those who live longer than average. The Social Security Administration projects that an average 62-year-old man will live to age 82, that 54% of 62-year-old men will live beyond age 82, and that 15% will reach 92.^{51,52} Similarly, SSA estimates that 50% of 62-year-old women will live beyond age 85, and

49 For a more detailed discussion of replacement rate measures, including pros and cons of various measures, see: “How Will Retirement Saving Change by 2050? Prospects for the Millennial Generation,” by Gale, Gelfond and Fichtner. Brookings Institution. 2019. <https://www.brookings.edu/wp-content/uploads/2019/03/How-Will-Retirement-Saving-Change-by-2050.docx.pdf>

50 Despite the goal of actuarial neutrality, the benefit adjustments for early claiming are outdated and no longer actuarially neutral. The adjustments were last updated in 1983, and over the past 20 years, two factors — increased life expectancy and declining interest rates — have steadily steepened the early claiming penalty. Rising life expectancy straightforwardly increases the number of annuity payments a claimant can expect to receive and, consequently, compounds the lifetime penalty from early claiming. Lower interest rates have depressed the return on bonds held by the Social Security trust funds, making delayed claims somewhat more expensive to the program.

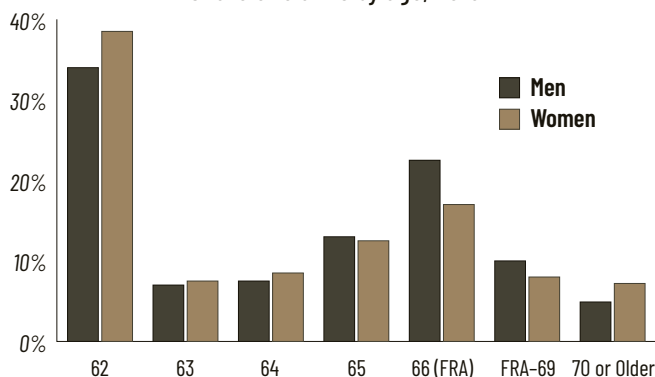
51 Note that while men and women have different average life expectancies, variation also exists across racial and ethnic groups. For example, Black men and women have shorter life expectancies than white men and women, while Hispanic individuals have longer projected average life expectancies than white or Black individuals of the same sex. See Elizabeth Arias and Jiaquan Xu, National Vital Statistics Reports, Vol. 68, No. 7, June 24, 2019. Available at: https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_07-508.pdf.

52 U.S. Social Security Administration, “Actuarial Life Table,” n.d. Available at: <https://www.ssa.gov/oact/STATS/table4c6.html>.

14% will live to at least 95.⁵³ As an example of longevity risk, if a person claims Social Security benefits early and outlives other financial assets, they may have to live on only their reduced monthly benefit for the rest of their lives. The losses are particularly acute for women and healthier Americans (often higher-income) who receive the same annual income increase from deferral but can expect to receive this income over more years than the average American.

A large body of evidence has confirmed that it is financially advantageous for most Americans to wait beyond the EEA to claim Social Security.⁵⁴ Yet most individuals continue to claim early⁵⁵

Most Claim Social Security Early
Share of claims by age, 2018



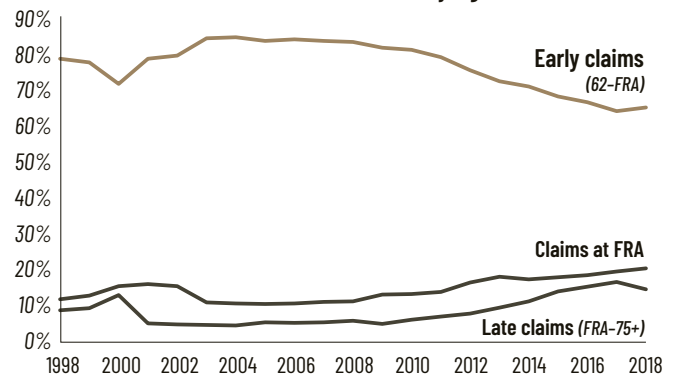
Note: Social Security disability benefits automatically convert to retirement benefits when the beneficiary reaches FRA. Those conversions are excluded from these data. These data show the distribution of claiming ages in a single year. They are therefore different from the Government Accountability Office (GAO) numbers cited in the text, which track the claiming ages of a cohort over several years.

Source: Social Security Administration⁵⁶

A 2016 Government Accountability Office report notes that 62 is the most frequent claiming age for Social Se-

curity retirement benefits, with 42% of men and 48% of women from the 1945 birth cohort claiming at that age. Of that cohort, only 28% of men and 23% of women waited until their FRA of 66.⁵⁷ Over the past decades, the shares of men and women who claim early have both been falling. In fact, Americans are generally working longer and claiming later, two trends that will help build more secure retirements.⁵⁸ While these trends are encouraging, most people still claim early and many of these decisions seem to be suboptimal.⁵⁹

Social Security Claiming
Share of annual claims by age



Note: Data reflect the increase in the FRA from 65 to 66 during this period. Social Security disability benefits automatically convert to retirement benefits when the beneficiary reaches FRA. Those conversions are excluded from these data. This SSA analysis looks at claims in a given year rather than by cohort. Therefore, the data accurately reflect, but understate, the trend in claim ages. See Alicia H. Munnell and Anqi Chen, *Trends in Social Security Claiming*, CRR working paper No. 15-8, 2015. Available at: https://crr.bc.edu/wp-content/uploads/2015/05/IB_15-8.pdf.

Source: Social Security Administration⁶⁰

The income losses from early claiming are quite large. A study published by United Income estimates that today's older Americans will lose a total of \$3.4 trillion in potential income because of early claiming, with

53 U.S. Social Security Administration, "Actuarial Life Table," n.d. Available at: <https://www.ssa.gov/oact/STATS/table4c6.html>.

54 Svetlana Pashchenko and Ponpoje Porapakkarm, *Accounting for Social Security Claiming Behavior*, CRR Working Paper No. 2018-8, Center for Retirement Research at Boston College, 2018. Available at: http://crr.bc.edu/wp-content/uploads/2018/09/wp_2018-8.pdf.

55 U.S. Social Security Administration, *Annual Statistical Supplement To The Social Security Bulletin, 2019*, Table 6.B5, November 2019. Available at: <https://www.ssa.gov/policy/docs/statcomps/supplement/2019/supplement19.pdf>.

56 U.S. Social Security Administration, *Annual Statistical Supplement To The Social Security Bulletin, 2019*, Table 6.B5, November 2019. Available at: <https://www.ssa.gov/policy/docs/statcomps/supplement/2019/supplement19.pdf>.

57 Michael J. Collins, et al., *Social Security: Improvements to Claims Process Could Help People Make Better Informed Decisions about Retirement Benefits*, GAO Working Paper No. GAO-16-786, U.S. Government Accountability Office, 2016. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2862645.

58 Patrick J. Purcell, "Employment at Older Ages and Social Security Benefit Claiming, 1980-2018," Social Security Administration Research and Statistics Note No. 2020-0, 2020. Available at: <https://www.ssa.gov/policy/docs/rsnotes/rsn2020-01.html>.

59 U.S. Social Security Administration, *Annual Statistical Supplement To The Social Security Bulletin, 2019*, Table 6.B5, November 2019. Available at: <https://www.ssa.gov/policy/docs/statcomps/supplement/2019/supplement19.pdf>.

60 U.S. Social Security Administration, *Annual Statistical Supplement To The Social Security Bulletin, 2019*, Table 6.B5, November 2019. Available at: <https://www.ssa.gov/policy/docs/statcomps/supplement/2019/supplement19.pdf>.

an average lifetime loss of \$95,000 per household. The researchers also find that only 4% of older Americans claim at the age that would maximize their wealth. Separately, only 4% wait to claim until age 70, though this research finds that about 57% of older Americans could expect to build more lifetime wealth if they waited to claim until then. Meanwhile, over 70% currently claim prior to age 64, even though only 6.5% of people would build more wealth by claiming before then. Strikingly, the study estimates that the poverty rate for Americans over age 70 would be nearly cut in half (from 13% to 7%) if all older Americans claimed Social Security at the ages that would maximize their lifetime income.⁶¹ Therefore, if people need to claim Social Security before either their Social Security FRA or age 70, many people could benefit by purchasing a term annuity instead of claiming Social Security early. This strategy would serve as a “bridge” to claiming later (FRA or age 70) in order to maximize Social Security monthly benefits and the inflation-protected annuity value of Social Security.

POLICY CONSIDERATIONS

Traditional defined-contribution retirement plans are designed for asset accumulation during working years to provide income in retirement. Meanwhile, as discussed earlier, the number of people covered by a defined-benefit plan continues to decline. Besides Social Security, this leaves annuities as the only other retirement income option that offers protected income that is guaranteed. Hence, annuities will become even more important as individuals increasingly save in defined-contribution plans.

Broad access to efficient protected income solutions

In order to foster an environment that is favorable to focusing on the role protected income needs to play in the financial security of retirees, the government and employers need to work together.⁶² The government could enact regulations to promote annuities and/or remove regulations that are barriers to annuitization. For-

tunately, Congress passed the Setting Every Community Up for Retirement Enhancement Act of 2019 (Secure Act), which greatly improved the environment for creating a new security framework focusing on the importance of protected income in retirement.⁶³ The Secure Act provided a provision that made it easier for a retirement plan sponsor to offer an annuity option in a defined-contribution plan. This helps employers to offer an annuity option, traditionally associated with defined-benefit pensions, within a defined-contribution retirement plan. A bipartisan effort is underway to pass “Secure Act 2.0,” which would potentially offer additional proposals to improve retirement security.⁶⁴

Bridge to maximum Social Security benefits

Providing adequate protected income for America’s retirees, however, will depend on more than broad access to protected income options through employer-sponsored retirement plans. While there are many income needs that are shared by most retirees, the design of any one individual’s income plan and the protected income solutions it requires are in fact highly personal and particular. This is true not only because we all have our own personal vision and understanding of what a full life in retirement means, but also because of the number of variables involved in a retirement income plan. Fortunately, there are multiple annuity options available that can be tailored to individual needs.⁶⁵

One of those variables that merits consideration and action to improve outcomes is an individual’s Social Security claiming strategy and the steps he or she decides to take to enable maximum benefit claiming. If a person retires before their Social Security full retirement age, one option would be to purchase an annuity as a “bridge” between retiring and claiming Social Security that would provide a source of protected income for a fixed number of years to allow the person to file for Social Security later, either at their FRA or at age 70 to maximize their monthly Social Security benefits.^{66,67} Another option is the use of longevity annuities, which help insure against the risk of outliving one’s assets by paying

61 Fellowes, Fichtner, Plews and Whitman. “The Retirement Solution Hiding in Plain Sight: How Much Retirees Would Gain by Improving Social Security Decisions,” United Income, June 2019. Available at: <https://unitedincome.com/library/the-retirement-solution-hiding-in-plain-sight/>.

62 For a good discussion of the roles governments, employers and plan sponsor can take from a public policy perspective, see: “Building Better Retirement Systems in the Wake of the Global Pandemic.” Olivia S. Mitchell. NBER Working Paper #27261. May 2020. <https://www.nber.org/papers/w27261>

63 <https://www.akingump.com/en/news-insights/president-trump-signs-secure-act-into-law.html>

64 <https://finance.yahoo.com/news/secure-act-2-0-turbocharge-100000116.html>

65 <https://www.protectedincome.org/annuities/how-an-annuity-works-signature-series/>

66 <https://retirementincomejournal.com/article/building-a-bridge-to-social-security/>

67 <https://retirementincomejournal.com/wp-content/uploads/2021/01/CRR-How-Best-to-Annuitize-DC-1-21.pdf>

out a stream of income starting approximately 10 years after the annuity is purchased.

Better education and disclosure framing

The information that people receive, and the form that it takes, can also influence how people make financial choices. Typically, disclosure statements from defined-contribution plans focus on accumulated balances. Employers and plan sponsors could design better benefit statements.⁶⁸ The Secure Act, which became law at the end of 2019, requires employers to provide plan participants with an estimate of the lifetime income that their accumulated retirement savings will provide.⁶⁹ These illustrations give people a better understanding of the implications of their saving choices and research shows are already having a positive impact on savings rates.⁷⁰ The Social Security statement also provides an estimate of the monthly benefit a person can expect to receive.⁷¹ This type of framing is necessary to help people understand the role protected income can play in helping them achieve a financially secure retirement. However, policymakers, employers and other stakeholders shouldn't be satisfied with a one-time change to disclosure practices. Participant behavior should be closely monitored and integrated with new research-based framing practices to improve disclosure and education efficacy over time.

Maximize protected income in a low-rate environment

It has also become harder to earn a risk-free rate of return on existing assets, as the nation is currently experiencing a low-interest rate environment where the returns on fixed-income assets are at historical lows. If such an environment continues for decades, equity premiums will be more important and variable annuities may be more attractive than fixed annuities. Variable annuities could be a good option for those individuals who are undersaved because they would get the benefits of capital accumulation on a tax deferred basis. Those potentially higher returns could allow them to accrue a higher annuity payout than going with a fixed annuity that offers a guaranteed interest rate and a fixed payment. Recent analysis has also shown that in low-

rate environments annuities become a relatively more efficient means of generating retirement income when compared to potential substitutes like bonds, due in large part to annuities' use of mortality credits and risk pooling.⁷² Employers, plan sponsors and government should work together to develop public policies that aim to improve access and availability to as many options as possible that would help people save for and have an adequate financially secure retirement.

Utilize "trial annuities" to encourage better plan participant behavior

At the market level, firms could encourage employee saving in a variety of ways. In fact, a 2021 survey by the Bipartisan Policy Center finds that many workers want their employers to help them save.⁷³ Besides establishing sophisticated automatic saving plans that enroll workers, raise contributions gradually over time (perhaps associated with annual raises), and allocate contributed funds to diversified investments with low costs, they can develop more attractive annuity options. As average American life expectancy should continue to increase, it becomes imperative that individuals properly allocate their resources so they do not exhaust them before the end of life. Annuities may help ensure that households have a constant stream of protected income.

One such option has been called a "trial annuity."⁷⁴ Trial annuities would automatically use part of a new retiree's saving to purchase a two-year annuity. Trial annuities are designed to get workers "over the hump" of being willing to try taking their retirement income in the form of an annuity without having to commit themselves ex ante to a lifetime contract. Unless workers actively decide to opt out of the plan after two years, the trial annuity would either renew for another two years or become permanent. Under such an arrangement, consumers would be given more information about how to use their retirement income properly. Because defined-contribution plans are already so widespread, many more people would enter the annuity market, potentially lowering the costs of providing such a plan. This would help mitigate the potential adverse selection problem associated with annuities, where those that live

68 https://www.rand.org/content/dam/rand/pubs/working_papers/WR900/WR951/RAND_WR951.pdf

69 <https://www.dol.gov/agencies/ebsa/about-ebsa/our-activities/resource-center/fact-sheets/pension-benefit-statements-lifetime-income-illustrations>

70 https://www.tiaa.org/public/pdf/the_tiaa_retirement_insights_survey.pdf

71 <https://www.ssa.gov/myaccount/statement.html>

72 <https://www.forbes.com/sites/wadepfau/2020/04/08/is-buying-an-annuity-in-a-zero-interest-rate-environment-a-good-idea>

73 <https://bipartisanpolicy.org/blog/new-bpc-survey-shows-americans-need-better-ways-to-save-for-emergencies/>

74 <https://www.tiaa.org/public/offer/products/annuities/retirement-plan-annuities/income-test-drive>

longer are those that typically buy annuities, thus raising the cost to insurers of selling annuities. Increasing the pool of those buying annuities diversifies the risk pool and lowers the cost. This is similar to how health insurance policies work.⁷⁵ Companies can continue to increase automatic enrollment in retirement plans.

Make professional financial advice a workplace benefit

Finally, since many workers are asking their employers to help them save and plan for retirement, employers should consider offering professional advice as a workplace benefit to their workers.⁷⁶ This benefit need not be solely designed to help employees discuss retirement options. Employees are seeking professional financial advice on a wide variety of issues, including saving for emergencies, a home, education and even help with basic financial literacy and developing a monthly budget. It is an important component of the new retirement security framework that employers take an active role in helping their workers save for events that occur during their working lives, as well as helping them to have a financially secure retirement.

Lastly, annuities can be very confusing to consumers.⁷⁷ While recent research has found that over half of consumers only somewhat understand the terms and language used when talking to a financial professional — generally speaking, the challenge is particularly acute when discussing annuities.⁷⁸ The same research found that 64% of consumers found annuities to be the most difficult financial product to understand because of how they are described. Fortunately, today there are numerous educational guides and materials publicly

available and designed to address this difficulty — from simple language glossaries to recommended questions to ask a financial professional when considering an annuity.^{79,80,81,82,83,84} Additionally, financial professionals will need to help clients understand their retirement income options.

CONCLUSION

The US is currently experiencing the greatest surge in new retirees in the country's history and fewer employers offer a traditional defined-pension retirement plan that provides much-needed protected income guaranteed throughout retirement. The old retirement system no longer fits the needs of today's American workforce. The result is that more Americans are currently at risk of entering retirement with Social Security as their only means of protected income, leaving many exposed to financial insecurity. Additionally, younger generations are arguably more "at risk" given the financial problems facing both Social Security, Medicare and the nation's increasing national debt (both in nominal terms and as a share of GDP). As we approach the greatest surge in the number of people age 65 and over, now is the time to adopt a new retirement security framework.

The old metaphor of the three-legged stool of retirement planning no longer holds (employer pension, personal savings and Social Security). Many Americans lack sufficient, reliable, and protected retirement income that will last for the rest of their lives. It's time for a new retirement security framework that focuses on the need for sufficient protected income in retirement.

75 <https://www.investopedia.com/terms/a/adverseselection.asp>

76 <https://www.businessinsider.com/personal-finance/you-may-be-missing-out-on-a-big-work-perk-financial-planning>

77 https://images.ctfassets.net/qd21fa23g7v7/hiaBkKjbWPD1cl3PCXNV0/cd521470881745a7e0b13c11f42d5af7/FINAL_ALI_2020_PLI_Study_and_Segmentation_Report_For_Release_10-26-2020.pdf

78 <https://resources.protectedincome.org/pdf/Annuities-Language-Discussion-Guide-ALI-020921.pdf>

79 <https://www.allianceforlifetimeincome.org/feature/alliance-principles/>

80 <https://www.protectedincome.org/retirement-tools/annuities-language-glossary/>

81 <https://www.protectedincome.org/annuities/outliving-your-income-expert-series/>

82 <https://www.protectedincome.org/annuities/how-an-annuity-works-signature-series/>

83 <https://www.aarp.org/retirement/retirement-savings/info-2020/learn-about-annuities.html>

84 <https://www.protectedincome.org/annuities/questions-to-ask-when-considering-an-annuity-article/>

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POSTSCRIPT

WHY DON'T MORE PEOPLE BUY ANNUITIES NOW?

Planning for a financially secure retirement necessitates estimating numerous factors, including interest rates, inflation, expected spending on housing, travel, health care, etc. It also requires estimating how long you expect to live and, therefore, how long you'll need your retirement assets to last. Annuity products can provide protected income in retirement or guaranteed income that lasts as long as you live. These annuity products provide income protection and retirement security. Why consumers choose, or choose not, to annuitize (i.e., elect to create this stream of protected income) has been subject to considerable research.

The role that consumer behavior and the estimation of longevity plays into insurance has been discussed for decades (*Yaari, 1965*). Given that annuities provide such powerful income protection, economists have long questioned why so few people either choose to purchase an annuity or under-annuitize their wealth at retirement, even though the economic rationale for annuitization is strong (*Brown, 2007*). Popularly called the “annuity puzzle,” the literature suggests numerous reasons why demand for annuities has historically been lower than predicted, even though from the viewpoint of a rational economic actor, annuities should be much more popular.

For example, how the information to purchase an annuity is discussed, or framed, can have a major effect on the decision to annuitize. If consumers evaluate an annuity product using what is termed an “investment frame” that focuses on potential investment return and risk, then annuities may appear to be an inferior investment. However, if instead an annuity product is evaluated using a “consumption frame” where the product protects a person's ability to have a guaranteed level of income to support consumption, then annuity products are quite attractive. Research by Brown, et al. (*Jeffrey R. Brown, Jeffrey R. Kling, Sendhil Mullainathan, Marian V. Wrobel, 2008*), supports the hypothesis that a consumption frame is superior to an investment frame and contributes to more desirable economic outcomes for retirees. In one experiment, the researchers found that 72% preferred a life annuity over a savings account when the

choice is framed in terms of consumption, while only 21 percent prefer it when the choice is framed in terms of an investment (*Jeffrey R. Brown, Jeffrey R. Kling, Sendhil Mullainathan, Marian V. Wrobel, 2008*).

Additional research suggests that consumers have difficulty valuing annuities and therefore reveal a preference for lump sums, which also helps to explain the lower-than-expected demand for annuity products (*Brown J. R., 2013*). Similar research conducted a few years later expanded upon the difficulty consumers have valuing annuity products (*Brown J. R., 2019*). In the 2019 research, the authors drew on a survey of approximately 4,000 US adults and designed an experiment to vary the degree of complexity in presenting information. The authors find causal evidence that increasing the complexity of the annuity choice reduces the ability of people to value an annuity. Further, the authors find that the ability to value an annuity increases when the experiment was designed in a manner to induce people to think jointly about the annuitization decision as well as how quickly or slowly to spend down assets in retirement. Receiving a lump sum from a defined-contribution plan potentially exposes the recipient to risk, as the retiree now has to manage that money throughout the rest of their retirement and exposes themselves to market risk, inflation risk, longevity risk, etc.

The amount of assets at retirement also plays a role in the decision whether or not to purchase an annuity (*Banerjee, 2017*). Research suggests that those at the top and the bottom of the savings distributions tend to purchase annuities because they expect to live longer and have enough wealth to leave as a bequest even after purchasing an annuity. Higher levels of savings have a large positive effect on the decision to purchase an annuity. However, those at the bottom of the savings distribution are more likely to run out of money, not counting Social Security, and are more inclined to purchase an annuity.

It is also possible that people have a bequest motive that makes annuitization less appealing. In other words, those that would like to leave their assets upon death as a bequest to a family member or charity, may be less inclined to pay a lump sum upfront for a stream of income payments when that lump sum could instead be used as

a bequest upon death. Research by Lockwood explored the role bequest motives play in the low use of annuities, finding that the evidence suggests bequest motives play a central role in limiting the demand for annuities (*Lockwood, 2012*).

Further exploring the annuity puzzle, there is now additional literature exploring the behavioral economics of retirement saving and trying to understand why annuities remain less popular with the public than predicted, even though annuities can solve many of the complex problems and risks people face in retirement, such as when to retire and how much to spend in retirement (*Benartzi, 2011*). Economists now stress that both behavioral and institutional factors play an important role in whether or not people choose to purchase an annuity.

The decline of traditional, defined-benefit plans that paid out a stream of income payments during retirement should only increase the interest in annuities, as people seek to mirror the lifetime benefit payment feature of a pension with the assets accumulated in a defined-contribution plan. Research by Brown, Poterba and Richardson focus on the annuity decisions made by defined-contribution participants in plans administered by TIAA (*Brown J. R., September 2019*). The authors research reveals some interesting findings. For example, the “fraction of first-time retirement income claimants who selected a life-contingent annuitized payout stream dropped from 54% in 2000 to 19% in 2017. Over the same

period, there was a sharp increase — from 9% to 58% — in the fraction of retirees making no withdrawals until the age at which they needed to begin required minimum distributions (RMDs).” The authors also found that the closer a person was to age 70, the less likely they were to purchase an annuity. Further, their research suggests that both the falling nominal interest rates since the year 2000 and the rising age at which people start to claim income from their retirement plans have further led to a decline in annuitization.

The Alliance for Lifetime Income’s Retirement Income Institute has published several “Insights” that summarize many of the key research articles discussed in this paper. The Insights are short summaries of the primary articles that make up the vast literature available on annuities. These Insights are available to the public at no charge and can be downloaded by visiting the Institute’s website (<https://www.allianceforlifetimeincome.org/retirement-income-institute>).

Ultimately, a new retirement security framework must account for the dramatic reduction in protected income for America’s retirees — as a result in the decline of traditional pensions — while taking steps to address the behavioral barriers to annuitization created by the defined-contribution framework. Only then will the US have a retirement system that provides adequate financial security for its older population.