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# Paving the Way to Optimized Retirement Income

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June 2023



Bipartisan Policy Center

**BlackRock**

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## AUTHORS

### **Jason Fichtner**

Vice President and Chief Economist, BPC

### **Shai Akabas**

Executive Director, Economic  
Policy Program, BPC

### **Rachel Snyderman**

Director, Economic Policy Program, BPC

### **Emerson Sprick**

Senior Economic Analyst, BPC

### **Matt Soifer**

Managing Director and Head of Distribution,  
Retirement Group, BlackRock

### **Nick Nefouse**

Managing Director and Head of  
Retirement Solutions, BlackRock

### **Partha Mamidipudi**

Managing Director and Head of Human Capital  
Research, Retirement Solutions, BlackRock

### **Allison Lessne**

Director of Strategic Initiatives,  
Retirement Group, BlackRock

### **Kate Tan**

Director of Research, Retirement  
Solutions, BlackRock

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## ACKNOWLEDGMENTS

This publication is a joint product of the Bipartisan Policy Center and BlackRock. The authors are grateful to Michael Finke for his input. Erin Meade at BPC and Rebecca Meskin, Robert Crothers, and Stacey Tovrov from BlackRock provided helpful feedback.

# Table of Contents

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**4 EXECUTIVE SUMMARY**

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**7 CHALLENGES TO OPTIMIZING RETIREMENT INCOME**

---

**10 AN OPTIMIZATION FRAMEWORK**

13 Case Study

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**20 POLICY OPTIONS TO FACILITATE OPTIMIZATION**

20 Accumulation: Building Assets for Retirement

22 Decumulation: Generating Income from Assets

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**25 CONCLUSION**

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**27 ENDNOTES**

# Executive Summary

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With Americans living longer than ever and the average retirement age largely unchanged, many households struggle to make their assets last through retirement.<sup>1</sup> Financial advice often focuses on boosting personal savings rates and maximizing return on investment during savers' working lives, known as the accumulation phase of retirement planning. Equally important, however, is the *decumulation* phase, when households seek to generate sufficient income in retirement to meet their spending needs.

To do this, savers and retirees must treat retirement as a phase of life rather than a destination and develop a retirement income toolkit made up of multiple potential income sources and strategies that will diversify and increase retirement income. Ensuring this toolkit remains robust throughout the entire decumulation process requires active planning throughout the accumulation phase and keen attention to critical decisions, including when to retire and claim Social Security benefits.

Through a close examination of the literature and a quantitative analysis using BlackRock's proprietary life cycle model, this paper presents the following framework to help individuals determine how they can generate adequate income from their accumulated assets:

- 1. Determine retirement objectives.** Although individual objectives vary, savers and retirees must understand and articulate what financial success in retirement looks like for them, weighing such diverse factors as wealth and personal preferences, risk tolerance, and bequest motives.
- 2. Consider key risk factors.** Savers face a wide variety of risk factors throughout their lives, including longevity, declining health, market volatility, behavioral biases, and disparate access to financial guidance. These risks combine and manifest differently over time, but they typically correspond to three broad phases of the retirement planning journey: early career, near retirement, and retirement.
- 3. Formulate a holistic strategy.** Optimizing income in retirement requires considering career earnings as well as income from Social Security, part-time work in retirement, and other sources, while also accounting for key risk factors and their evolving significance. Three principles for decumulation can help focus this strategy: (1) maximizing spending ability, (2) maximizing spending certainty, and (3) addressing longevity risk.

Our analysis demonstrates how a holistic approach to retirement income benefits savers. We look at how a few steps—adding guaranteed income,

adjusting asset allocation over time, and delaying one’s retirement date—can potentially generate more retirement income and decrease risk. While personal circumstances dictate the exact magnitude of any spending increase and risk reduction, we demonstrate through an illustrative case study how each of these tools can improve the outcomes individuals achieve in retirement, as summarized in **Table 1**.

- Adding guaranteed lifetime income combined with a more aggressive asset allocation (“Strategy 1”) generates 29% more annual spending ability from one’s retirement savings (excluding Social Security) and reduces downside risk by 33% when compared to a standard retirement portfolio of 60% fixed income and 40% equities (“Base Case”).<sup>a</sup> In the first year of retirement alone, this strategy increases spending from retirement savings by 35% as the guaranteed income stream affords individuals more flexibility to spend early in retirement. (The modeled guaranteed income products incorporate actuarial and capital market assumptions, absent fees.)
- Incorporating Social Security benefits into our model to analyze total income and spending in retirement underscores the power of delaying retirement and the claiming of Social Security benefits. (We refer to this delay *combined with* Strategy 1 as “Strategy 2”). A delay from age 65 to age 67 generates the income to support 16% more annual spending than Strategy 1 alone and further reduces downside risk by 15%. In total, then, Strategy 2 results in 22% higher average spending throughout retirement than the Base Case with a 21% decline in downside risk.
- The increased spending generated by both strategies extends well beyond the average life span, providing a significantly higher spending floor into a retiree’s 90s and beyond.

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<sup>a</sup> There are many ways to measure downside risk; for simplicity, this analysis uses the worst 5% of spending outcomes (i.e., the saver has a 95% chance of spending at least this much over the first 15 years) as a benchmark. We use undiscounted spending in real dollars.

**Table 1: Strategies 1 and 2 Substantially Increase Spending Ability in Retirement While Simultaneously Reducing Risk**

		Strategy 1 change from Base Case	Strategy 2 change from Strategy 1	Strategy 2 change from Base Case
<b>Excluding Social Security benefits</b>	Average annual spending	29%	*	*
	Downside risk	-33%	*	*
<b>Including Social Security benefits</b>	Average annual spending	5%	16%	22%
	Downside risk	-5%	-15%	-21%

\* We do not model the effects of delaying retirement and delaying Social Security claiming separately; thus, we cannot demonstrate the impact of Strategy 2 when excluding Social Security benefits.

Not all Americans, however, have access to the same opportunities and tools.<sup>2</sup> Meanwhile, employers, the financial services industry, and other private-sector stakeholders often feel constrained by unclear or outdated rules in their efforts to expand access. Policymakers have an important role to play by collaborating with the private sector—on policies such as minimizing early withdrawals from retirement accounts, known as plan leakage; expanding guaranteed lifetime income products and home equity tools to support consumption; and promoting optimal times to start collecting Social Security benefits—to advance broad and equitable financial security. The recent enactment of a package of retirement security provisions, dubbed “SECURE 2.0” (following the 2019 Setting Every Community Up for Retirement Enhancement “SECURE” Act), demonstrates progress in this area as well as Congress’s continued commitment to addressing these problems. Placing greater emphasis on optimizing the decumulation phase can help savers, retirees, and policymakers chart a path forward.

# Challenges to Optimizing Retirement Income

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“[T]HE INDIVIDUAL’S DECUMULATION PHASE... IS THE NASTIEST, HARDEST PROBLEM I’VE EVER LOOKED AT.”<sup>3</sup>

— William F. Sharpe, winner of the 1990 Nobel Memorial Prize in Economic Sciences

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Although imperfect, the proverbial “three-legged stool” of retirement—Social Security, private pensions, and personal savings and investment—has historically supported many Americans. But longer periods of retirement, Social Security’s financial challenges, and the decline of defined benefit (DB) plans in favor of defined contribution (DC) plans have disrupted that model.<sup>4</sup>

Every retiree’s financial situation is unique, the product of a lifetime’s worth of decisions and characteristics. Savings, career length, hours worked in old age, caregiving responsibilities, taxes, market performance, gender and race, socioeconomic background, health, and countless other factors determine one’s retirement finances. The total of these factors, plus the uncertainty of mortality, compound the complexity of determining optimal retirement spending.

**Lifetime earnings:** The primary constraint savers face in preparing for retirement is the amount they earn during their working lives. For those with just enough income to cover basic needs, saving is virtually impossible; saving *enough* poses a challenge even to those with higher incomes. Many people believe that delaying retirement or working during retirement will compensate for a lack of savings, but countless other factors, from unanticipated health problems to shifting macroeconomic conditions, can interfere with that plan. Although a recent survey showed that 68% of savers expect paid work to be at least a minor source of income in retirement, only 22% of current retirees report having labor income.<sup>5</sup>

**Longevity:** Longevity is unpredictable, and individuals routinely underestimate how long they will live.<sup>6</sup> In part, this is because each additional year of life increases the likelihood that a person has traits that positively affect longevity (such as good cardiovascular health), meaning one’s life expectancy increases as they age. For example, a woman’s life expectancy at age 65 is 20.7 more years—or living until 85.7. If she reaches age 75, however, her life expectancy is

13.1 more years—or living until age 88.1.<sup>7</sup> Mitigating longevity risk is especially challenging because the tools available to address it diminish over time as labor options become increasingly limited and assets are spent down.<sup>b</sup>

**Demographic inequities:** Disparities along racial, ethnic, gender, and income lines pervade many of these challenges. For example, Black Americans on average have shorter life expectancies and more health issues than white Americans.<sup>8</sup> Women and Black and Hispanic workers on average earn less than their white male counterparts, putting them at a significant disadvantage from the beginning of their careers as they try to save.<sup>9</sup> Unequal access to the tools that facilitate financial success further hamstrings historically marginalized communities and those with low incomes.<sup>10</sup> Far fewer Black and Hispanic households have retirement accounts, own homes, or have non-retirement investments than white households.<sup>11</sup> Meanwhile, tax subsidies for asset-building disproportionately benefit the highest-income households.<sup>12</sup>

Moreover, financial literacy—the basic knowledge and skills required for sound financial decision-making—varies widely across socioeconomic groups in the United States.<sup>13</sup> On average, women receive lower scores than men on financial literacy questionnaires, and Black and Hispanic Americans receive lower scores than white Americans.<sup>14</sup> Similarly, those with low incomes are less financially literate than those with high incomes.<sup>15</sup>

**Declining health:** Health care costs increase exponentially after age 50, as age-related health issues emerge and the likelihood of conditions requiring long-term care, such as dementia, rises.<sup>16</sup> Fidelity has estimated that a 65-year-old retired couple will need, on average, \$300,000 to cover medical costs in retirement, while other research finds that individuals who reach age 85 have yet to face 36% of their total lifetime health care costs—or around \$170,000 in 2021 dollars.<sup>17,18</sup> Expectations about annual health care expenses, however, barely change as individuals age past 65, suggesting that older people underestimate medical spending.<sup>19</sup> Importantly, these are average figures; individual circumstances are likely to be meaningfully different, creating further potential risk.

**Market performance:** Asset allocation throughout one's life, including in retirement, makes a sizable impact on financial security in old age. Individuals routinely overestimate the likelihood of significant downturns in equity valuations, potentially leading to overly conservative portfolio choices during their working years.<sup>20</sup> Market volatility also poses a risk during retirement; returns that are even modestly lower than projected, especially early in retirement, can severely reduce the retirement security of those with overly optimistic expectations. Moreover, although older investors tend to have more investment knowledge and experience

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<sup>b</sup> Preliminary data from 2020 and 2021 show that life expectancy for 65-year-olds fell by around one year during the COVID-19 pandemic. The extent to which this decline will persist remains unclear, and many Americans must still prepare for retirements that will last much longer than retirement in the past.



than younger investors, research shows that, on average, older investors earn a 3% to 5% lower return on a risk-adjusted basis than their younger counterparts—even accounting for other factors such as a more conservative portfolio in retirement—due to cognitive decline that accelerates notably near age 70.<sup>21</sup>

**Behavioral biases:** Even as the shift from DB to DC plans has increased the role of personal responsibility and decision-making in preparing for retirement, a growing body of research demonstrates a disconnect not only between what people should do and what they want to do but also between intentions and actions.<sup>22</sup> In deciding how much to save and in what to invest, for instance, people are reluctant to stray from default options. This poses a serious risk to workers when their employer puts little thought into their retirement plan options, but it also presents significant opportunities for the private sector and government to improve financial outcomes by improving plan defaults.

In addition, people often use mental shortcuts to make decisions instead of rigorously evaluating the situation. Often, these shortcuts are helpful, allowing individuals to judge situations reasonably well without overwhelming their cognitive faculties. In complex situations, however—such as the decumulation challenge—these shortcuts can do more harm than good, as small changes in context and framing can create meaningful and potentially unintended outcomes. For example, the Social Security Administration (SSA) spent years framing the decision of when to claim benefits using a “break-even analysis” that characterized claiming later than age 62 as a risky gamble that would take many years to pay off—even though most retirees will ultimately receive greater lifetime benefits if they delay claiming to a later age.<sup>23</sup> Research has shown that this framing caused many retirees to claim benefits earlier than they would have otherwise, as the advice tapped into a widespread aversion to risk.<sup>24</sup>

**Inflation:** Even moderate inflation can significantly affect purchasing power, with 3% inflation—the historical average—eroding the value of a dollar by more than 50% over 25 years.<sup>25</sup> As seen in 2021 and 2022, the effects of high inflation are far worse, especially for those living on fixed incomes.<sup>26</sup> In response to a BlackRock survey conducted in the spring of 2022, 87% of workplace savers reported worrying about inflation, while 69% of plan sponsors said they were concerned about inflation eroding the retirement savings of their participants.<sup>27</sup>

Virtually everyone faces at least some of these challenges—longevity, lifetime earnings, disparate access, declining health, market performance, behavioral biases, and inflation—especially as they approach retirement. At the same time, many of these risks are impossible to predict or manage, raising the specter of underspending early in retirement to save for later years or, alternatively, running out of money. Developing a holistic, clear-eyed, personalized approach to optimizing retirement income is essential, especially as these risks fluctuate in importance and severity throughout one’s life, between individuals, and across gender, race, and socioeconomic factors.

# An Optimization Framework

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“IT IS RARE TO FIND SOMEONE WHO HAS SPENT MUCH TIME DETERMINING THE OPTIMAL SAVINGS RATE, GIVEN ALL THE UNCERTAINTIES ABOUT FUTURE RATES OF RETURN, INCOME FLOWS, RETIREMENT PLANS, HEALTH, AND SO FORTH. INSTEAD, MOST PEOPLE ATTEMPT TO COPE WITH COMPLEXITY BY ADOPTING SIMPLE HEURISTICS, OR RULES OF THUMB, TO AID DECISION-MAKING. SIMPLE HEURISTICS OFTEN LEAD TO COUNTERPRODUCTIVE BIASES, HOWEVER.”<sup>28</sup>

— **Richard H. Thaler, winner of the 2017 Nobel Memorial Prize in Economic Sciences, and Shlomo Benartzi, Distinguished Senior Fellow at the Wharton Behavior Change for Good Initiative**

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Optimizing retirement income requires examining one’s entire financial life, including accumulation, portfolio choices, and decumulation. Rather than considering retirement assets, home equity, Social Security benefits, and other savings and assets separately, savers and retirees need help developing strategies that incorporate these elements as dynamic components of a single portfolio.

**Savings rate:** Saving is critical, especially for younger workers. How much one saves ultimately determines how much one can spend in retirement, and compound growth has its longest runway early in life. Failing to accumulate sufficient assets dramatically curtails options for optimizing income in retirement. The rise of DC plans over DB plans has shifted responsibility for how much to save and how to invest from the employer to the employee—in some cases, without sufficient guidance or support for those making the decisions.

**Investment strategies:** As soon as individuals begin saving for retirement, they can leverage portfolio allocations to take the right amount of risk at the right time to optimize results. Choice of investment strategy remains important even after reaching the decumulation phase, as continued growth of capital is important to sustain one’s desired spending level.

**Retirement date:** When not forced by factors such as health and employment circumstances, the choice of when to retire is a powerful tool for optimizing the

decumulation phase.<sup>29</sup> At retirement, an individual likely has limited (if any) future earnings to offset investment losses and faces the longest retirement time horizon possible; a loss at that point has the greatest capacity to affect a saver's ability to sustain spending through retirement.<sup>30</sup> Retiring later means one's assets have more time to grow and a shorter retirement to sustain, potentially allowing an individual to spend more in their remaining years. Similarly, part-time work can reduce reliance on savings by subsidizing current spending.

**Spending flexibility:** Even after one retires, important decisions remain. Flexibility to adjust spending, particularly with regard to discretionary spending and during periods of market downturn, can meaningfully impact the success of an individual's retirement strategy.

**Social Security claiming date:** Social Security retirement benefits are designed to replace only around 40% of pre-retirement earnings for the average beneficiary, and this replacement rate is heavily affected by when a person decides to claim Social Security.<sup>31</sup> To maximize benefits, individuals can consider delaying claiming for as long as possible (up to age 70), with monthly benefits 76% higher at age 70 than at 62, the earliest claiming option.<sup>32</sup> Unfortunately, close to 60% of beneficiaries start collecting Social Security benefits before the full retirement age of 67, with the most popular claiming age being 62.<sup>33</sup>

**Guaranteed income:** Well-designed guaranteed lifetime income products, which provide retirees with a reliable stream of income, can help mitigate longevity risk and the impact of market volatility on spending. DC plan sponsors and participants are increasingly considering in-plan options that convert fixed sum savings to stable lifetime income.<sup>34</sup> In-plan annuities, however, are currently available in fewer than 10% of plans, and even where available, uptake is low, indicating that more work needs to be done both from a product and experiential perspective.<sup>35</sup>

**Home equity:** Homeownership can provide a major source of retirement security for people who lack substantial retirement savings but own their residence. In fact, for many retirees, a home is their most valuable asset: Half of homeowners ages 62 or older hold most of their net worth in home equity.<sup>36</sup> A house can be used both as an investment and to support consumption. If the home is paid for at retirement, the retiree no longer owes mortgage or rent payments, freeing up retirement income for other purposes. In other cases, however, an outstanding mortgage creates a greater amount of mandatory expense that might threaten retirement security.

## Putting It Into Practice

The sheer breadth of decumulation tools and strategies available to retirees can be daunting, leading some to feel that optimizing their strategy is beyond their abilities. The following three steps can serve as a starting point for savers and retirees seeking to generate adequate income in retirement from the assets accumulated during their working lives.

- 1. Determine retirement objectives:** Many savers (or even retirees) cannot articulate what financial success in retirement looks like for them. Without clarity around retirement objectives, understanding the challenges one must surmount and creating a plan to overcome them is virtually impossible. Each saver's goal will depend on their circumstances and preferences.
- 2. Consider key risk factors:** All retirees must address the risk of outliving their assets, but as previously outlined, savers face a wide variety of risk factors throughout their lives. Academic research and surveys with retirement participants consistently show that these risk factors often correspond to three broad phases of the retirement planning journey.<sup>37</sup> During the early-career years, low earnings—and therefore low ability to save and invest—often pose the greatest challenge. As savers near retirement, market volatility comes to the fore. Finally, retirees often struggle to spend sustainably from their portfolios.
- 3. Formulate a holistic strategy:** Optimizing income in retirement requires considering career earnings as well as income from Social Security, part-time work in retirement, and other sources, in tandem with the key risk factors that change over time. BlackRock has put forward a set of decumulation principles—maximizing spending ability, maximizing spending certainty, and addressing longevity risk—that provides a foundation on which savers can build their own specific goals and decision-making framework.<sup>38</sup>

## CASE STUDY

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To analyze the impact of using different combinations of tools available to retirees, we present a case study of a saver who is seeking to improve the success of the decumulation phase of their retirement journey. In this example, aware that their savings balance alone cannot guarantee a stable retirement, the saver looks to deploy other tools in their personal decumulation toolkit. At the same time, the saver takes a holistic view of their retirement picture, understanding that adjusting one element of an overall retirement strategy can create the need (or opportunity) to change another.

We ran 100,000 simulations reflecting various economic conditions (such as investment returns, annuity prices, inflation rates, and labor earnings) for a 35-year-old saver with an annual income of \$44,000, a 5% savings rate, and a current retirement account balance of \$19,000.<sup>c</sup> For each simulation, we project asset class returns and annuity prices (absent fees) by year, starting at age 35. Next, we analyze the impact of deploying three retirement strategies: a base case and two enhanced strategies that use different tools to help maximize spending ability, maximize certainty, and address longevity risk in retirement. Importantly, differences in personal circumstances, including income and savings rates, will determine the extent to which different tools can improve stable retirement spending outcomes.<sup>39</sup> **Table 2** outlines those three strategies.

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<sup>c</sup> These inputs roughly represent a typical 35-year-old U.S. worker, per data from the Employee Benefit Research Institute and the Census Bureau. The trends shown later in this analysis generally hold under a variety of reasonable assumptions.

**Table 2: A Decumulation Baseline and Two Cumulative Portfolio Strategies\***

Strategy	Decumulation Period Asset Allocation		Guaranteed Income Product?	Social Security Claiming Age/ Retirement Age	Portfolio Strategy Details
	Equity	Fixed Income			
<b>Base Case</b>	40%	60%	No	65	Asset allocation de-risks from age 35 to retirement, shifting away from equities.
<b>Strategy 1:</b> <ul style="list-style-type: none"> <li>• Add guaranteed lifetime income</li> <li>• Adjust asset allocation to reflect holistic view of finances</li> </ul>	50%	50%	Yes	65	<p>Saver gradually purchases a series of deferred annuities from age 55 to retirement at 65.** Upon retirement, the deferred annuities (which have an estimated value representing 30% of the saver's account balance) commence paying guaranteed income.†</p> <p>Saver changes asset allocation from 40% equity to 50% equity at retirement considering the additional security provided by the guaranteed income.</p>
<b>Strategy 2:</b> <ul style="list-style-type: none"> <li>• Add guaranteed lifetime income</li> <li>• Adjust asset allocation to reflect holistic view of finances</li> <li>• Delay retirement from 65 to 67</li> </ul>	50%	50%	Yes	67	In addition to the changes above, saver delays retiring and claiming Social Security benefits from age 65 to age 67. Accordingly, the deferred annuities commence income payments at 67.

\* Assumptions based on BlackRock's standard life cycle model.

\*\* We calculate the value of the modeled deferred annuities using a proprietary BlackRock annuity pricing model, which considers actuarial and capital market assumptions. Fees are not included in the modelling.

† Incorporating guaranteed income could be implemented in other ways. This method reduces the point-in-time risk by purchasing the annuities over time. When assessing the overall benefits of Strategy 1, the implementation method used is less important than the actual incorporation of guaranteed income (i.e., the demonstrated increase in mean spending still holds regardless of what implementation approach is used).

The **Base Case** represents a typical U.S. retiree who begins claiming Social Security benefits at age 65 and has 40% of assets in equities and 60% in fixed income (such as bonds).

**Strategy 1** first adds a guaranteed lifetime income product, in the form of deferred annuities purchased over time, to their retirement strategy. Then, Strategy 1 adjusts the asset allocation in retirement to reflect a holistic approach. Having a portion of their future income needs fully guaranteed by the annuities frees up this retiree to increase their equity allocation from 40% to 50%. Nonetheless, overall retirement income risk remains relatively neutral, as the 50% equity allocation is applied to only 70% of total assets (due to the 30% allocation to the annuities).

**Strategy 2** builds on Strategy 1 by delaying the age at which our individual retires and claims Social Security benefits from 65 to 67. (Social Security's full retirement age is 67 for beneficiaries born in 1960 or later.) For those able to use this strategy, delaying retirement and benefit claiming has three benefits: It can simultaneously increase the size of one's nest egg at the time of retirement (by enabling additional years of saving), shorten the decumulation period, and increase the size of the monthly Social Security benefit. Among all retirement decisions, the choice of when to retire and claim Social Security often has the single greatest impact on one's financial security.

We now examine the Base Case and the two additional strategies using the decumulation principles—maximizing spending ability, maximizing spending certainty, and addressing longevity risk.

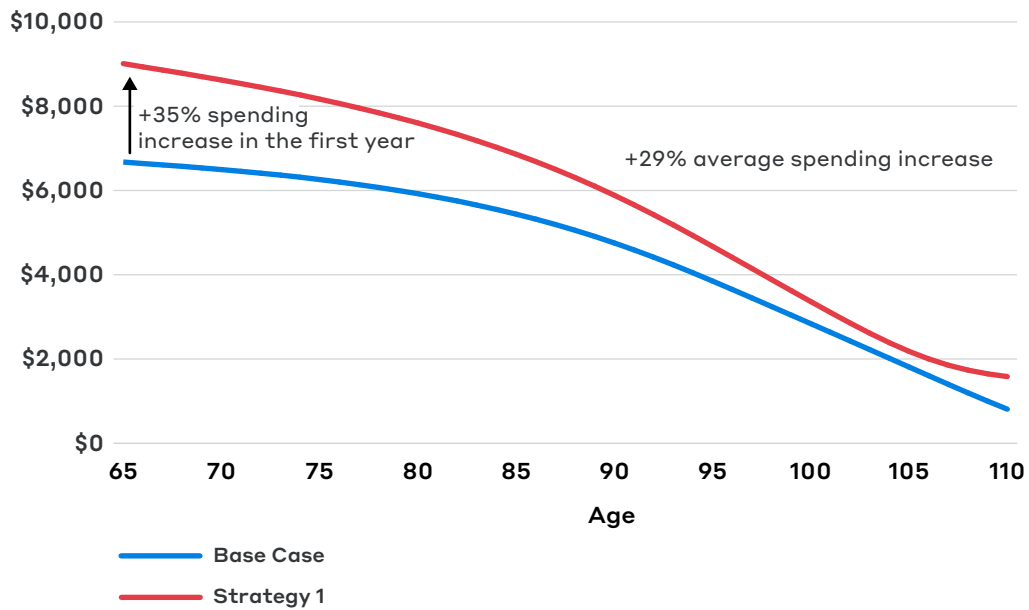
**Maximizing spending ability and addressing longevity risk:** Figure 1 shows mean spending financed by retirement savings alone for each year in retirement under the Base Case and Strategy 1. Since Social Security benefits are the same for each, we exclude them in Figure 1 to emphasize the effect of Strategy 1, which increases spending potential and mitigates longevity risk. Although the outcomes vary by age, introducing a lifetime income stream and adjusting asset allocation increases spending from retirement savings by 35% in the first year of retirement and by an average of 29% annually throughout retirement. This increased spending extends well beyond the average life span, providing a significantly higher spending floor than the Base Case well into a retiree's 90s and beyond.

Strategy 1 generates most of its spending increase and longevity risk mitigation benefits with its annuities rather than its asset allocation change. This reflects the fact that guaranteed lifetime income streams accomplish two goals simultaneously:

1. Reducing the pressure to underspend early in retirement to save for later years (which may never materialize), allowing for more flexibility to spend in early years.
2. Providing a higher and more reliable spending floor throughout retirement regardless of how long that period lasts.

**Figure 1: Incorporating Guaranteed Lifetime Income Increases Spending from Retirement Savings by 35% at Age 65**

Mean annual spending throughout retirement **from retirement savings alone**, excluding Social Security benefits (undiscounted real dollars)

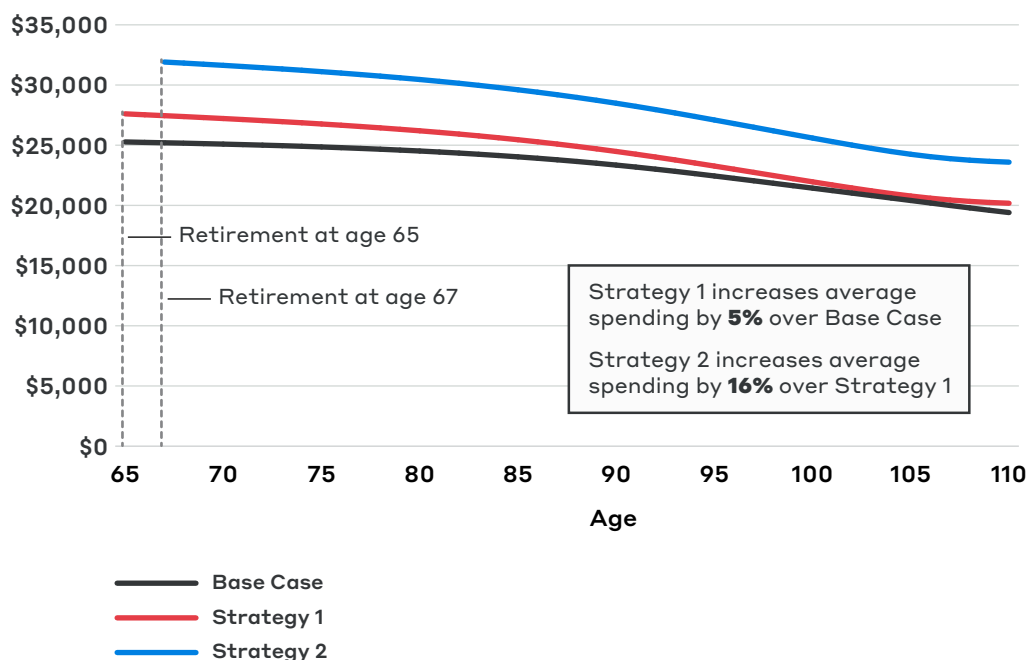


In **Figure 2**, we include Social Security benefits, showing that Strategy 1 increases *total* spending by 9% in the first year of retirement and by 5% on average throughout retirement. Including Social Security allows us to demonstrate the impact of Strategy 2 on total spending ability. When added to Strategy 1, delaying retirement and the claiming of Social Security benefits by two years, from age 65 to age 67, allows for 16% more spending throughout retirement than Strategy 1 alone. This yields a total spending increase over the Base Case of 22% throughout retirement and of 27% at age 67—nearly \$7,000 annually for our case study's saver.



**Figure 2: Delaying Retirement and Social Security Claiming Allows for Additional Spending Increases**

Mean annual spending throughout retirement from retirement savings **and** Social Security benefits (undiscounted real dollars)

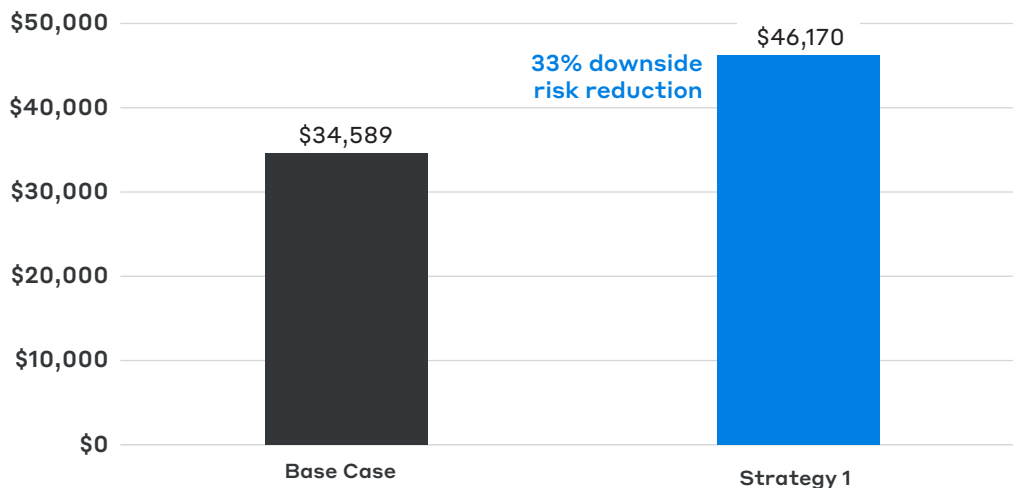


**Maximizing spending certainty:** Figures 3 and 4 illustrate the downside risk, or the floor on cumulative spending over the first 15 years of retirement.<sup>d</sup> Figure 3 compares Strategy 1 to the Base Case, considering only spending financed by retirement savings (i.e., excluding Social Security). Figure 4 compares the Base Case to both strategies and includes Social Security-financed consumption. (Note that the Y-axis scales differ.) Previously, we saw that both strategies increased spending ability in retirement. Now we see that greater downside risk does not accompany these increases. In fact, by adding guaranteed income and adjusting asset allocation, a retiree *decreases* downside risk to retirement savings-financed consumption by 33%.

<sup>d</sup> There are many ways to measure downside risk; for simplicity, this analysis uses the worst 5% of spending outcomes (i.e., the saver has a 95% chance of spending at least this much over the first 15 years) as a benchmark. We use undiscounted spending in real dollars.

**Figure 3: Adding Guaranteed Lifetime Income Raises the Floor on Retirees' Spending by 33%**

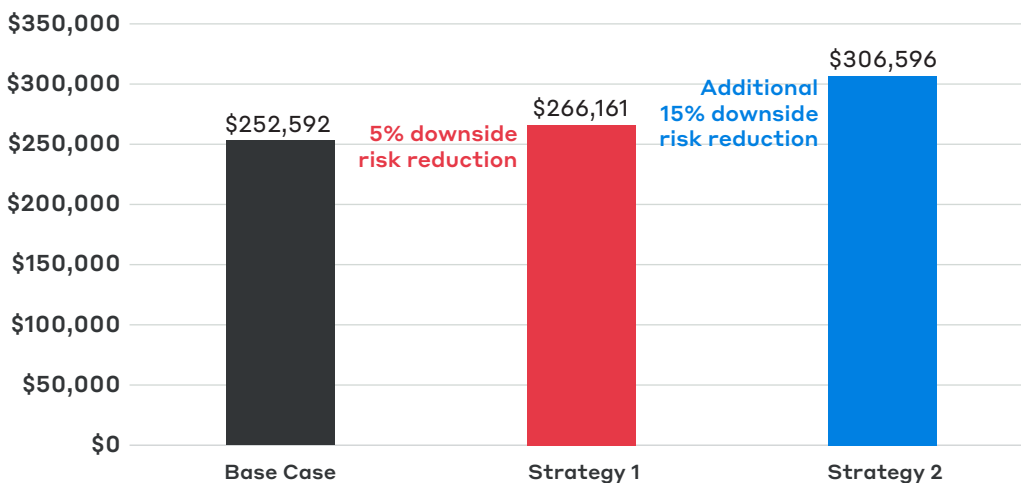
Cumulative spending **from retirement savings alone** (excluding Social Security benefits) at the fifth percentile of modeled outcomes over the first 15 years of retirement (undiscounted real dollars)



Considering a complete picture of spending that includes Social Security benefits, Strategy 1 decreases downside risk by 5%. Strategy 2 decreases downside risk by 15% over Strategy 1 alone and by 21% over the Base Case.

**Figure 4: Delaying Retirement and Social Security Claiming Further Decreases Downside Risk**

Cumulative spending from retirement savings **and** Social Security benefits at the fifth percentile of modeled outcomes over the first 15 years of retirement (undiscounted real dollars)



Another metric used to assess spending certainty is the dispersion per \$1 of annual spending.<sup>e</sup> A larger dispersion indicates more uncertainty around each \$1 of expected spending—an important metric because retirement strategies could affect both expected spending and spending volatility. Although we do not illustrate this metric here, we note that the level of dispersion (uncertainty) around the time of retirement is similar in all cases but that the uncertainty rises quicker under the Base Case (versus either Strategy 1 or 2), leading to a large difference in later years.<sup>f</sup> This is due to guaranteed lifetime income streams inherently reducing spending volatility, potentially leading to greater financial stability.

**Bottom line:** An optimal retirement income strategy considers the totality of the retirement income toolkit. Taking a whole-portfolio approach that protects against multiple risk factors allows for comprehensive solutions that help to increase the chances of meeting the saver’s ultimate financial objectives.

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e Dispersion per \$1 of annual spending is the standard deviation of modeled annual spending outcomes (excluding Social Security) divided by the mean of annual spending outcomes.

f Dispersion rises over time under all strategies, largely due to inflation and market return uncertainty.

# Policy Options to Facilitate Optimization

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“UNFORTUNATELY, WE HAVE FAILED TO CREATE AN EASY PROCESS THAT HELPS RETIREES TO BETTER PERSONALIZE THEIR INCOME PLANS. IT’S LIKE BEING STUCK IN A SHOE STORE WITH THOUSANDS OF OPTIONS, BUT THERE’S NO ONE TO HELP YOU FIND A PAIR THAT FITS. IN THE 21ST CENTURY, WE CAN AND SHOULD CREATE A PROCESS THAT HELPS AMERICANS SAVE AND SPEND IN WAYS THAT FIT THEIR CURRENT FINANCIAL CIRCUMSTANCES AND FUTURE FINANCIAL DREAMS.”<sup>40</sup>

— **Shlomo Benartzi, Distinguished Senior Fellow at the Wharton Behavior Change for Good Initiative**

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Individual responsibility and private-sector offerings often take center stage in retirement planning, but policymakers also have an important role to play. Congress has demonstrated leadership on this front, most recently with passage of the SECURE Act in 2019 and SECURE 2.0 in 2022.<sup>41</sup> Work remains, however, to further improve retirement security, especially for the nearly one-third of U.S. workers who lack access to a workplace retirement plan.<sup>42</sup>

## ACCUMULATION: BUILDING ASSETS FOR RETIREMENT

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To truly optimize income and spending in retirement, an individual must optimize saving and investing during their working life—and prevent retirement account leakage.<sup>43</sup> Thus, improving savings outcomes, including by increasing participation in DC plans, and ensuring access to tools that help savers preserve their funds until retirement, should remain a priority for policymakers.

Two of the most powerful mechanisms to increase retirement plan participation and savings accumulation are automatic enrollment and automatic escalation. In 2021, the participation rate for 401(k)-type plans with

automatic enrollment reached 93%, compared with 66% of eligible employees who participate in plans that require workers to take action to enroll.<sup>44</sup> Moreover, savers rarely opt to change their contribution level after enrollment, and 3% of pay—the most common default savings rate for automatic-enrollment plans in 2021—is insufficient.<sup>45</sup> In response, SECURE 2.0 ensures that starting in 2025, nearly all new DC plans will be required to automatically enroll eligible employees (with the option for the employee to opt out) at between 3% and 10% of wages, and to increase that amount automatically by 1 percentage point per year until at least 10% (and not more than 15%).

Today, 401(k) plans are permitted to invest in U.S. bank-maintained collective investment trusts (CITs), highly regulated investment vehicles that have the potential to provide many benefits to plan sponsors and participants saving for retirement. Benefits can include pricing flexibility, the potential for customization, and access to a broad range of asset classes and investment strategies. Most 403(b) plans, however, cannot invest in CITs. Although SECURE 2.0 took a step toward solving this problem by amending the tax code, Congress must still change securities laws to provide 403(b)-plan sponsors with the same ability as 401(k)-plan sponsors to select the investment vehicle they believe can generate the best outcomes for their participants.<sup>46</sup>

SECURE 2.0 also included important provisions to address retirement plan leakage, a crucial concern during the accumulation phase. Evidence shows that when individuals without liquid savings face an urgent financial need, they often raid their retirement accounts: For every \$1 that people under age 55 contribute to retirement accounts, roughly 40 cents leak out through early distributions.<sup>47</sup> This is costly for future retirees, as it triggers fees and penalties and causes workers to lose out on compounding growth. But robust short-term savings can provide a buffer against costly early withdrawals from retirement savings,<sup>48</sup> and SECURE 2.0 also made progress on this front.

Following the passage of that legislation, DC plan sponsors will soon be able to offer, and automatically enroll savers in, emergency savings accounts linked to savers' retirement plans. Plan participants can contribute up to \$2,500 to these tax-preferred pension-linked emergency savings accounts and can access the money penalty-free at any time.<sup>49</sup> Employers will also have the option to allow plan participants to withdraw up to \$1,000 per calendar year (beginning in 2024) for emergency personal expenses, which the participant must replenish before a subsequent emergency distribution is allowed during any of the following three years.<sup>50</sup>

Although these policy improvements are laudable, opportunities exist for lawmakers to further disincentivize plan leakage. Such solutions would further promote plan portability to prevent cash-outs, particularly when workers change jobs—an act with potentially significant consequences for retirement income. According to one recent survey, 21% of workers who had a 401(k) at a

job that they quit in 2020 or 2021 cashed out their account.<sup>51</sup> Simplifying the process for transferring retirement savings from plan to plan could help many avoid losing valuable retirement assets.

SECURE 2.0 also included important provisions aimed at increasing access to retirement savings plans for employees of smaller businesses. The legislation permitted the use of starter 401(k) plans (or safe harbor 403(b) plans) for those employers not currently sponsoring a retirement plan. It also increased the three-year start-up tax credit to 100% of administrative costs (with specified annual maximums) for employers with up to 50 employees.

Moving forward, policymakers must further prioritize those without access to a workplace savings plan. They could do this by allowing employers—especially those without retirement savings plans—to automatically enroll their workers into stand-alone emergency savings accounts, which would reach more savers and protect more assets. Additionally, in recent years, innovative public policy at the state level has led to legislation and pilot programs seeking to reduce saving inequality by requiring and providing a streamlined way for employers not currently offering a plan, especially small businesses, to automatically enroll workers in a publicly-provided retirement savings account.<sup>52</sup> A federal solution to increase access, or a state program harmonization effort, could be preferable to this patchwork of state laws, maximizing access to workplace retirement savings in a manner that would be less burdensome for businesses.<sup>53</sup>

## **DECUMULATION: GENERATING INCOME FROM ASSETS**

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### **Public-Private Solutions**

Both the SECURE Act and SECURE 2.0 provided regulatory certainty and flexibility for plan sponsors and participants interested in incorporating guaranteed lifetime income products into their decumulation strategy.<sup>54</sup> Now, Congress and federal agencies can prioritize educating individuals and employers on the new rules, evaluating their implementation and impact, and determining whether additional changes are necessary.

Further clarity would be helpful in several respects. Certain insurance products can help individuals accomplish an invaluable goal: delaying claiming Social Security retirement benefits to secure a larger monthly benefit for life. By relying on retirement savings for several years, individuals can use an annuity as a “bridge” to later claiming of Social Security benefits. This strategy has significant potential to improve retirement security, as Social Security is a life

annuity that increases annually with inflation—a rare feature in the private market.<sup>55</sup> Regulatory support can help plan sponsors feel more comfortable educating their participants about options that could help them delay claiming Social Security.

Regulators and policymakers have made important efforts to encourage innovation in lifetime income products, yet more can be done to fuel this shift. These actors have historically played an important role in contributing to innovation and serving as a sounding board for industry constituents. Continued—or even elevated—levels of engagement could lead to further product innovation to better prepare participants for spending in retirement.

SECURE 2.0 also included significant changes to required minimum distribution (RMD) rules. Over 10 years, it will increase the age at which individuals must regularly withdraw savings from retirement accounts from 72 to 75.<sup>56</sup> Even at that age, however, retirees with few assets might want to retain the funds in these accounts to use for emergencies or one-time expenses while covering recurring expenses with Social Security or pension benefits.<sup>57</sup> Exempting anyone with relatively modest retirement savings (e.g., under \$100,000) from these required minimum distributions could simplify rules for and provide more options to some retirees.

Looking beyond retirement accounts, for some older homeowners, home equity may be an important decumulation asset in their retirement planning. The most obvious approach for homeowners to convert this large stock of net worth into retirement income is to downsize to a cheaper residence. But many older Americans are reluctant to move and instead seek to generate income from their house by, among other strategies, tapping into a home equity line of credit or taking out a reverse mortgage.<sup>9</sup> Congress and executive branch agencies could strengthen programs that support and advise consumers on these products, as well as consider whether changes are needed to strengthen consumer protections and improve the functionality and cost-effectiveness of these products.

## Social Security

The federal government could more actively help Americans make better-informed decisions regarding when to claim Social Security retirement benefits. One study estimated that current retirees will collectively miss out on \$2.1

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<sup>9</sup> Recent trends in mortgage debt, however, complicate this strategy for many homeowners. Over the past three decades, the share of households headed by someone over the age of 75 that has housing debt has more than quadrupled, from 6% to 28%, while the same share has increased from 22% to 38% for households headed by someone ages 65 to 74. The debt burden has also skyrocketed: From 1989 to 2019, in inflation-adjusted dollars, the average housing debt of older households doubled for those headed by someone over age 75 and more than tripled for those headed by someone ages 65 to 74. Board of Governors of the Federal Reserve System. “Home-secured debt by age of reference person,” Survey of Consumer Finances, 1989 - 2019, accessed September 2022. Available at: [https://www.federalreserve.gov/econres/scf/dataviz/scf/table/#series:Home\\_Secured\\_Debt;demographic:agecl;population:5,6;units:have;range:1989,2019](https://www.federalreserve.gov/econres/scf/dataviz/scf/table/#series:Home_Secured_Debt;demographic:agecl;population:5,6;units:have;range:1989,2019).

trillion in additional wealth because they did not claim Social Security benefits at their (life expectancy-informed) optimal age.<sup>58</sup>

Indeed, confusion about Social Security abounds. Only 36% of near-retirees surveyed recently answered at least nine of 12 questions correctly when quizzed on basic knowledge of Social Security benefits.<sup>59</sup> Another survey found that more than two-thirds of Americans do not realize that Social Security benefits are protected against inflation, and nearly half mistakenly believe that if they claim early, their benefit will automatically go up once they reach their full retirement age.<sup>60</sup> Additional data indicate that workers commonly misunderstand that delayed claiming leads to permanently higher benefits, how benefits are calculated, and how spousal and survivor benefits work.<sup>61</sup> Research suggests that these misperceptions lead some people to start collecting benefits earlier than optimal.<sup>62</sup>

Although financial circumstances cause some older Americans to claim benefits as soon as they become available, many could get more protected monthly income in retirement from Social Security by delaying claiming. Unfortunately, SSA's choice architecture—the context in which people make claiming decisions—often works against optimization. For instance, research shows that the terminology used to describe potential claiming ages—such as “early eligibility age,” “full (or normal) retirement age,” and “delayed retirement credits” (the monthly benefit increase that beneficiaries can receive if they delay claiming after full retirement age, up to age 70)—enhances the attractiveness of claiming benefits at a younger age despite the reduced monthly benefits that result from early claiming.<sup>63</sup>

These outcomes suggest that the Social Security Administration could significantly improve claiming decisions with relatively simple information and framing reforms. As the Bipartisan Policy Center outlined in a 2020 report, SSA could enhance its communication with Americans by widely distributing Social Security statements and improving “my Social Security” online tools to better emphasize the importance of claiming age and longevity insurance and to present information more clearly and consistently.<sup>64</sup> The experience of Americans who visit SSA field offices in person could also be improved and standardized.

To address the adverse effects of the poor framing of claiming decisions, SSA could revise the official names of claiming ages to better reflect the implications of claiming at those times (for instance, by renaming the early eligibility age as the “minimum benefit age”). It could also leverage existing research and perform its own studies to determine how to best frame choices (for example, by presenting benefit changes as gains versus losses or by using older ages as a benchmark).<sup>65</sup> Finally, regardless of when a claimant begins receiving benefits, SSA could add new steps to the claiming process to ensure that individuals fully understand the trade-offs their decision entails.<sup>66</sup>



# Conclusion

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Individuals face complex challenges when it comes to both accumulating and decumulating retirement assets. Although most of the focus for planners and the industry has been on the accumulation phase, today's savers and retirees need more education, tools, and support for the decumulation phase.

Although financial outcomes play out on an individual level, our nation's current retirement security challenges result from a combination of personal, private-sector, and public-sector factors. To address some of the more pervasive national challenges, the public and private sectors should jointly focus on:

1. Treating retirement as a phase, not a destination, with retirement spending as the main goal. Decumulation solutions and retirement spending options play an important role in generating retirement income. Stakeholders must focus on educating plan sponsors and participants on the role of these solutions as part of a holistic approach to retirement income optimization.
2. Optimizing Social Security income as a critical input in enhancing retirement outcomes. Improving the choice architecture for Social Security by emphasizing the benefits of delaying the claiming date for those who are able (while simultaneously seeking to increase the population that can afford to do so) can help retirees increase their spending capacity in retirement.

Effectively optimizing retirement income requires addressing the problem from all angles, with a particular focus on helping those Americans who lack access to traditional financial planning advice and tools. The retirement ecosystem—record keepers, plan sponsors, asset managers, insurers, and more—have a responsibility to work with policymakers to develop creative solutions to modern problems.

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# Endnotes

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- 1 Alliance for Lifetime Income, “Peak 65,” accessed September 2022. Available at: <https://www.protectedincome.org/2024-surge-of-retirement-age-americans-peak-65/>. Emily Brandon, “What Is the Average Retirement Age?” *U.S. News & World Report*, July 26, 2022. Available at: <https://money.usnews.com/money/retirement/aging/articles/what-is-the-average-retirement-age>.
- 2 See N. Bhutta, A. Chang, et al., “Disparities in Wealth by Race and Ethnicity in the 2019 Survey of Consumer Finances,” FEDS Notes, Board of Governors of the Federal Reserve System, September 28, 2020. Available at: <https://www.federalreserve.gov/econres/notes/feds-notes/disparities-in-wealth-by-race-and-ethnicity-in-the-2019-survey-of-consumer-finances-20200928.html>.
- 3 Barry Ritholtz, host, “Interview with William Sharpe,” *Masters in Business* (podcast), 35:25-38:46, June 2, 2017. Available at: <https://www.bloomberg.com/news/audio/2017-06-02/interview-with-william-sharpe-masters-in-business-audio>.
- 4 Emerson Sprick, “Inflation Is Making Social Security’s Solvency Problem Worse,” Bipartisan Policy Center, October 13, 2022. Available at: <https://bipartisanpolicy.org/blog/inflation-solvency-problem/>. Dallas L. Salisbury, “Retirement Planning and Personal Responsibility: The Changing Shape of the Three-Legged Stool,” *Generations: Journal of the American Society on Aging*, 21(2): 23-26, Summer 1997. Available at: <https://www.jstor.org/stable/44877411>.
- 5 EBRI and Greenwald Research, *2022 Retirement Confidence Survey*, 8. Available at: <https://www.ebri.org/retirement/retirement-confidence-survey>.
- 6 Wenliang Hou, “How Well Do Retirees Assess the Risks They Face in Retirement?” Center for Retirement Research at Boston College, IB#22-10, July 2022, 3. Available at: <https://crr.bc.edu/briefs/how-well-do-retirees-assess-the-risks-they-face-in-retirement/>.
- 7 U.S. Social Security Administration, *Period Life Table, 2019, as used in the 2022 Trustees Report*. Available at: <https://www.ssa.gov/oact/STATS/table4c6.html>.
- 8 Latoya Hill, Samantha Artiga, and Sweta Haldar, “Key Facts on Health and Health Care by Race and Ethnicity,” KFF, January 26, 2022. Available at: <https://www.kff.org/report-section/key-facts-on-health-and-health-care-by-race-and-ethnicity-health-status-outcomes-and-behaviors/>.
- 9 Janelle Jones, “5 Facts About the State of the Gender Pay Gap,” U.S. Department of Labor Blog, March 19, 2021. Available at: <https://blog.dol.gov/2021/03/19/5-facts-about-the-state-of-the-gender-pay-gap>.
- 10 Rocio Sanchez-Moyano and Bina Patel Shrimali, “The Racialized Roots of Financial Exclusion,” August 2021. Federal Reserve Bank of San Francisco. Available at: <https://www.frbsf.org/community-development/publications/community-development-investment-review/2021/august/the-racialized-roots-of-financial-exclusion/>.

- 11 N. Bhutta, A. Chang, et al., "Disparities in Wealth by Race and Ethnicity in the 2019 Survey of Consumer Finances," FEDS Notes, Board of Governors of the Federal Reserve System, September 28, 2020. Available at: <https://www.federalreserve.gov/econres/notes/feds-notes/disparities-in-wealth-by-race-and-ethnicity-in-the-2019-survey-of-consumer-finances-20200928.html>.
- 12 Congressional Budget Office, *The Distribution of Major Tax Expenditures in 2019*, October 2021, 15-19. Available at: <https://www.cbo.gov/system/files/2021-10/57413-TaxExpenditures.pdf>.
- 13 Oscar Contreras and Joseph Bendix, *Financial Literacy in the United States*, 2021, 1. Milken Institute. Available at: <https://milkeninstitute.org/report/financial-literacy-united-states>.
- 14 M. Angrisani, S. Barrera, et al., "The racial/ethnic gap in financial literacy in the population and by income," *Contemporary Economic Policy*, 39: 524-536, 2021. Available at: <https://onlinelibrary.wiley.com/doi/full/10.1111/coep.12507>.
- 15 Oscar Contreras and Joseph Bendix, *Financial Literacy in the United States*, 2021, 9. Milken Institute. Available at: <https://milkeninstitute.org/report/financial-literacy-united-states>.
- 16 Berhanu Alemayehu and Kenneth E. Warner, "The Lifetime Distribution of Health Care Costs," *Health Serv Res.* 39(3): 627-642, June 2004. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1361028/>.
- 17 Fidelity, "Five Key Risks of Retirement," accessed August 2022. Available at: [https://institutional.fidelity.com/app/item/RD\\_13569\\_41055/five-key-risks-of-retirement.html](https://institutional.fidelity.com/app/item/RD_13569_41055/five-key-risks-of-retirement.html).
- 18 Berhanu Alemayehu and Kenneth E. Warner, "The Lifetime Distribution of Health Care Costs," *Health Serv Res.* 39(3): 627-642, June 2004. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1361028/>.
- 19 Wenliang Hou, "How Well Do Retirees Assess the Risks They Face in Retirement?" Center for Retirement Research at Boston College, IB#22-10, July 2022. Available at: <https://crr.bc.edu/briefs/how-well-do-retirees-assess-the-risks-they-face-in-retirement/>.
- 20 Ibid.
- 21 George M. Korniotis and Alok Kumar, "Do Older Investors Make Better Investment Decisions?" *Review of Economics and Statistics*, 93(1): 244-265, 2011. Available at: <https://direct.mit.edu/rest/article-abstract/93/1/244/57885/Do-Older-Investors-Make-Better-Investment>.
- 22 Melissa A.Z. Knoll, "The Role of Behavioral Economics and Behavioral Decision Making in Americans' Retirement Savings Decisions," *Social Security Bulletin*, 70(4), 2010. Available at: <https://www.ssa.gov/policy/docs/ssb/v70n4/v70n4p1.html>.
- 23 J. Fichtner, G. Koenig, et al., *How to Help Americans Claim Social Security at the Right Age*, Bipartisan Policy Center, August 2020, 18-19. Available at: <https://bipartisanpolicy.org/report/how-to-help-americans-claim-social-security-at-the-right-age/>.

- 24 Jeffrey R. Brown, Arie Kapteyn, and Olivia S. Mitchell, "Framing and Claiming: How Information-Framing Affects Expected Social Security Claiming Behavior." *Journal of Risk and Insurance* 83(1): 139-62, 2016. Available at: [www.ncbi.nlm.nih.gov/pmc/articles/PMC5453649/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC5453649/).
- 25 Fidelity, "Five Key Risks of Retirement," accessed August 2022. Available at: [https://institutional.fidelity.com/app/item/RD\\_13569\\_41055/five-key-risks-of-retirement.html](https://institutional.fidelity.com/app/item/RD_13569_41055/five-key-risks-of-retirement.html).
- 26 See Abha Bhattarai, "Fewer hot showers, less meat: How retirees on fixed incomes are dealing with inflation," *Washington Post*, March 21, 2022. Available at: <https://www.washingtonpost.com/business/2022/03/21/elderly-inflation-fixed-income/>.
- 27 BlackRock, *The 2022 BlackRock Read on Retirement*, 2022. Available at: <https://www.blackrock.com/us/individual/insights/retirement/2022-read-on-retirement-survey>.
- 28 Richard H. Thaler and Shlomo Benartzi, "The Behavioral Economics of Retirement Savings Behavior," AARP Public Policy Institute #2007-02, 2007, 1. Available at: [https://assets.aarp.org/rgcenter/econ/2007\\_02\\_savings.pdf](https://assets.aarp.org/rgcenter/econ/2007_02_savings.pdf).
- 29 Catherine Collinson, Patti Rowey, and Heidi Cho, *Retirees and Retirement Amid COVID-19*, 2020, 18. Transamerica Center for Retirement Studies. Available at: [https://www.transamericacenter.org/docs/default-source/retirees-survey/tcrs2020\\_sr\\_retiree-retirement-amid-covid19.pdf](https://www.transamericacenter.org/docs/default-source/retirees-survey/tcrs2020_sr_retiree-retirement-amid-covid19.pdf).
- 30 BlackRock, *Re-examining "to versus through": New research into an old debate*. April 2022 (originally published May 2014).
- 31 J. Yellen, M. Walsh, et al., *The 2022 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, June 2022, 161, Table V.C7. Available at: <https://www.ssa.gov/OACT/TR/2022/>.
- 32 John B. Shoven and Sita Nataraj Slavov, "The Decision to Delay Social Security Benefits: Theory and Evidence," NBER Working Paper 17866, February 2012, 2. Available at: <https://www.nber.org/papers/w17866>.
- 33 Social Security Administration, *Annual Statistical Supplement to the Social Security Bulletin, 2021*, SSA Publication No. 13-11700, December 2021, Table 6.B5. Available at: <https://www.ssa.gov/policy/docs/statcomps/supplement/>.
- 34 BlackRock, *The 2022 BlackRock Read on Retirement*, 2022. Available at: <https://www.blackrock.com/us/individual/insights/retirement/2022-read-on-retirement-survey>.
- 35 Mercer, *In-plan annuities: A viable option for DC plans?* 2022. Available at: <https://www.mercer.us/content/dam/mercer/attachments/north-america/us/us-2022-in-plan-annuities-brochure.pdf>.
- 36 Urban Institute, *Dynamic Simulation of Income Model (DYNASIM)*, 2022.
- 37 BlackRock, *The 2022 BlackRock Read on Retirement*, 2022. Available at: <https://www.blackrock.com/us/individual/insights/retirement/2022-read-on-retirement-survey>.
- 38 N. Nefouse, M. Pensky, et al., *Building a common framework for spending down assets in retirement: BlackRock's principles of decumulation*, BlackRock, 2021, 3.

- 39 John J. Topoleski and Elizabeth A. Myers, *Private-Sector Defined Contribution Pension Plans: An Introduction*, CRS Report No. R47152, Congressional Research Service, June 8, 2022. Available at: <https://crsreports.congress.gov/product/pdf/R/R47152>.
- 40 Shlomo Benartzi, “How Much Can You Spend in Retirement? Answer These Questions First,” *Wall Street Journal*, September 11, 2022. Available at: <https://www.wsj.com/articles/how-much-can-you-spend-in-retirement-questions-to-answer-11662487918>.
- 41 Bipartisan Policy Center, “BPC’s Akabas: SECURE Act Offers Millions of Americans Greater Retirement Security,” December 18, 2019. Available at: <https://bipartisanpolicy.org/press-release/bpcs-akabas-secure-act-offers-millions-of-americans-greater-retirement-security/>.
- 42 U.S. Bureau of Labor Statistics, *National Compensation Survey: Employee Benefits in the United States, March 2022*, Table 2, September 2022. Available at: <https://www.bls.gov/ncs/ebs/benefits/2021/home.htm>.
- 43 BlackRock Submission, “Improving Retirement Security for America’s Workers,” U.S. House Committee on Ways and Means Hearing, February 20, 2019, 8. Available at: <https://www.blackrock.com/corporate/literature/publication/submission-house-ways-and-means-improving-retirement-security-022019.pdf>.
- 44 Vanguard, *How America Saves 2022*, June 2022, 9. Available at: <https://institutional.vanguard.com/how-america-saves/overview.html>.
- 45 Ibid., 25.
- 46 Paul Mulholland, “CITs a No-Go for 403(b) Accounts,” PLANSPONSOR, January 6, 2023. Available at: <https://www.plansponsor.com/cits-a-no-go-for-403b-accounts/>.
- 47 Robert Argento, Victoria L. Bryant, and John Sabelhaus, “Early Withdrawals from Retirement Accounts During the Great Recession,” *Contemporary Economic Policy* 33(1): 1-16, 2015. Available at: <https://onlinelibrary.wiley.com/doi/full/10.1111/coep.12064>.
- 48 Shai Akabas, Tim Shaw, and Brian Gilmore, “Can Emergency Savings Support the Retirement System?” June 1, 2022. Aspen Institute, Bipartisan Policy Center, and Commonwealth. Available at: <https://bipartisanpolicy.org/blog/can-emergency-savings-support-the-retirement-system/>.
- 49 Emerson Sprick, Rachel Snyderman, and Shai Akabas, “SECURE 2.0 Is About to Pass. What Made It In?” Bipartisan Policy Center, December 20, 2022. Available at: <https://bipartisanpolicy.org/blog/what-made-it-in-secure-2/>.
- 50 Seth J. Hanft and Christopher R. Switzer, “SECURE 2.0 Act of 2022—Congress’ Final Gift of 2022 to Retirement Plan Sponsors,” BakerHostetler, January 3, 2023. Available at: <https://www.bakerlaw.com/alerts/secure-20-act-2022congress-final-gift-2022-retirement-plan-sponsors>.
- 51 Fidelity Investments, “2022 State of Retirement Planning,” 2022, 3. Available at: [https://www.fidelity.com/bin-public/060\\_www\\_fidelity\\_com/documents/about-fidelity/FID-SORP-DataSheet.pdf](https://www.fidelity.com/bin-public/060_www_fidelity_com/documents/about-fidelity/FID-SORP-DataSheet.pdf).
- 52 Theron Guzoto, Mark Hines, and Alison Shelton, “State Auto-IRAs Continue to Complement Private Market for Retirement Plans,” Pew Charitable Trusts, July 25, 2022. Available at: <https://www.pewtrusts.org/en/research-and-analysis/articles/2022/07/25/state-auto-iras-continue-to-complement-private-market-for-retirement-plans>.

- 53 Written Testimony of Shai Akabas Before the U.S. Senate Special Committee on Aging Hearing: *A Financially Secure Future: Building a Stronger Retirement System for All Americans*, October 28, 2021. Available at: [https://www.aging.senate.gov/imo/media/doc/Testimony\\_Akabas%2010.28.211.pdf](https://www.aging.senate.gov/imo/media/doc/Testimony_Akabas%2010.28.211.pdf).
- 54 Emerson Sprick, Rachel Snyderman, and Shai Akabas, “SECURE 2.0 Is About to Pass. What Made It In?” Bipartisan Policy Center, December 20, 2022. Available at: <https://bipartisanpolicy.org/blog/what-made-it-in-secure-2/>.
- 55 Bipartisan Policy Center Commission on Retirement Security and Personal Savings, *Securing Our Financial Future*, June 9, 2016, 62. Available at: <https://bipartisanpolicy.org/report/retirement-security/>.
- 56 Emerson Sprick, Rachel Snyderman, and Shai Akabas, “SECURE 2.0 Is About to Pass. What Made It In?” Bipartisan Policy Center, December 20, 2022. Available at: <https://bipartisanpolicy.org/blog/what-made-it-in-secure-2/>.
- 57 Bipartisan Policy Center Commission on Retirement Security and Personal Savings, *Securing Our Financial Future*, June 9, 2016, 54-55. Available at: <https://bipartisanpolicy.org/report/retirement-security/>.
- 58 M. Fellowes, J. Fichtner, et al., “The Retirement Solution Hiding in Plain Sight,” United Income White Papers, 2019, 12-13. Available at: <https://drive.google.com/file/d/1PCkajIAbXYOrY1ufIxpBbnvyZ2fEGgkq/view>.
- 59 MassMutual, “2022 MassMutual Near Retiree Pulse Check: Social Security.” Available at: <https://www.massmutual.com/global/media/shared/doc/2022massmutualnearretireepulsecheck.pdf>.
- 60 Nationwide, “New Study: More Than Two-Thirds of Americans Don’t Know that Social Security Is Protected Against Inflation,” July 19, 2022. Available at: <https://news.nationwide.com/071922-americans-dont-know-that-social-security-is-protected-against-inflation/>.
- 61 U.S. Government Accountability Office, *Social Security: Improvements to Claims Process Could Help People Make Better Informed Decisions about Retirement Benefits*, Report to the Special Committee on Aging, U.S. Senate, GAO-16-786, September 2016. Available at: <https://www.gao.gov/products/gao-16-786>.
- 62 J. Fichtner, G. Koenig, et al., *How to Help Americans Claim Social Security at the Right Age*, Bipartisan Policy Center, August 2020, 18-19. Available at: <https://bipartisanpolicy.org/report/how-to-help-americans-claim-social-security-at-the-right-age/>.
- 63 See F. Pérez-Arce, L. Rabinovich, et al., “Three Little Words? The Impact of Social Security Terminology,” CESR-Schaeffer Working Paper 005, 2019. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3502412](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3502412).
- 64 J. Fichtner, G. Koenig, et al., *How to Help Americans Claim Social Security at the Right Age*, Bipartisan Policy Center, August 2020, 24-28. Available at: <https://bipartisanpolicy.org/report/how-to-help-americans-claim-social-security-at-the-right-age/>.
- 65 Ibid., 31-32.
- 66 Ibid., 32-33.



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1225 Eye Street NW, Suite 1000  
Washington, D.C. 20005

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