Bridging Client Biases in Retirement: Framing Effects, the Familiarity Principle, and an Income-Centric Approach to Planning

By Avi Sharon, PhD, and Jennifer Gongola, PhD
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How long an individual may live is a fundamental issue in retirement planning. Yet, if a financial advisor asks a client, “What age do you expect to live to?” as opposed to, “What age do you expect to die by?” the answer tends to differ by about a decade—85 years versus 75 years (Payne et al. 2013).

This example illustrates the significant uncertainty surrounding many aspects of retirement—i.e., that individuals have no idea how long they’ll live. This uncertainty breeds cognitive bias and investor misbehaviors. And the more uncertainty investors feel, the more influence supposedly irrelevant factors may have.

In this case, the cognitive bias at work is a “framing effect,” wherein people tend to make different decisions or develop inconsistent preferences based on whether the wording of the choice emphasizes the potential for losses or the potential for gains. One implication of a framing effect is that it’s more difficult for investors to accurately account for certain retirement risks, particularly longevity (Hou 2022).

Indeed, if just the wording of a question can shift an estimate of life expectancy by a decade, then financial advisors may add substantial value by stabilizing investor behaviors while clients navigate this period of heightened uncertainty. That 10-year difference may have vital consequences for income planning during one’s retirement journey.

We believe that financial advisors play a key role in recognizing when framing effects may cause undue influence on important retirement-planning decisions. Advisors who know how to realign the frames around these choices can help their clients create plans that are more realistic and achieve better outcomes. In this way, advisors can add value by essentially redirecting investor biases so that those biases become more functional.

This article unpacks how framing can affect key retirement-income questions, particularly when to claim Social Security benefits and at what pace to draw down retirement assets.

It’s not until the later years, in their 70s and beyond, that the odds begin to grow that retirees’ liquid net worth could expire before they do. Longevity risk, as this phenomenon is called, cries out for some form of insurance, yet relatively few retirees own commonly available annuity products (Shu et al. 2018). Social Security provides an inflation-indexed, government-run income program that offers benefits for the retiree’s lifetime regardless of lifespan, and, for the retiree, it’s a benefit that already has been paid for. Social Security can be likened to an attractive source of longevity insurance, and its appeal rises the longer an investor expects to live.

Figure 1 compares several investors, each of whom starts at age 60 with a $1-million balanced 60/40 equity/bond portfolio and spends 6 percent in real terms annually.

For these retirees, longevity risk becomes a concern about 15 years later, at about age 75. At that point, fears rise quickly for the individuals who lack this government-supported annuity entirely. For those who begin their claim at age 62, the risk of failure is delayed into their early 80s, but the odds rise steeply from there. Those who wait until age 70 to claim see the risk of failure begin to rise only after age 90, and then only...
modestly. In short, Social Security helps mitigate the likelihood of failure (i.e., depleting the portfolio), and it does so more effectively the later one claims it.

There’s a clear economic basis for these improved portfolio longevity projections associated with later claiming strategies. Figure 2 shows that deferring Social Security benefits increases the real benefit payout by 6.7–9.5 percent per year relative to taking benefits at age 62 (Sapra and Moore 2019). Claiming at age 70, the latest and most remunerative point, can substantially reduce the likelihood of running out of assets for those who live past 90—something that a quarter of the population may experience. And although there are those who may not expect such an extended retirement or who won’t experience it, the larger benefits of a later claiming date accrue to the surviving spouse, further mitigating the uncertainty around longevity.

Importantly, claiming benefits at age 70 is not the same as retiring at age 70. People can retire earlier and still maximize Social Security by taking withdrawals from their portfolios and other assets as income in the interim. This is often referred to as a Social Security “bridge” strategy, because it enables retirees to claim Social Security at a later date, maximize benefits, and reduce the likelihood of retirement failure.²

However, this can be an emotionally taxing strategy for many investors (Shoven et al. 2017). Indeed, in 2019, about one-third of claimants filed at the earliest possible opportunity, i.e., at age 62, and another third claimed at the full retirement age (FRA), i.e., age 67, and only 9 percent of women and 6 percent of men waited until age 70 (Chen and Munnell 2021).³ If investors prefer to err on the side of funding a potentially longer retirement, then these trends reflect inconsistent assumptions and perhaps irrational behaviors. Specifically, implied time horizons are relatively short in the Social Security benefits claiming context but quite long in the account withdrawals context. We unpack this point in the next section.

**Loss Aversion and Its Discontents**
Bias due to framing is powered by the psychological mechanism known as loss aversion, which is the powerful emotional response evoked when losses loom larger than gains. Because investors’ aversion to loss is generally about twice as strong as their desire for an equivalent gain, framing any investment outcome in terms of possible losses or potential gains can have a decisive impact on client preferences.

Here is a classic example: Loss-averse investors have a bad habit of buying stocks when prices are high and then selling when they’re low. How does that come about? Loss-averse investors are eager to book profits, so they tend to act quickly to unload investments when they’re rising. At the same time, they tend to hold onto losing investments for too long, because they dread selling low-performing assets, even when it’s in
their best interest to do so. The impulse to avoid realizing losses often leads to decisions that tend to create larger losses over time, which embeds increasingly greater risk in the portfolio.

Social Security benefits feel like assets gained. In a positive frame, people tend to act conservatively and prefer to lock in profits as soon as possible—in this case, at the earliest claiming age of 62. In other words, when claiming benefits, people have an impulse to choose certainty and immediacy, even if it results in a smaller benefit overall.

Conversely, if clients were to retire but delay claiming Social Security benefits, they may need to use their own financial assets to support spending in the interim. Such withdrawals mean reducing account balances and may feel like a loss. People are reluctant to realize losses and often will take on extra risk to avoid having to do so.

A client’s use of these two sources of retirement income—government-run Social Security and one’s own financial assets—may reveal a client’s conflicting assumptions about the expected length of retirement. Assumptions about time horizons are short in the Social Security benefits claiming context, and individuals may be trying to lock in a gain as soon as possible. At the same time, however, they’re accepting greater longevity risk, which would indicate they don’t expect a long retirement.

Assumptions about time horizons in the context of financial assets, however, appear quite long because account withdrawals usually are infrequent. The pain of seeing an account balance sink affects even the smartest investors. But given long-term trends in human longevity, we believe there are more individuals who would prefer a holistic plan that supports a longer retirement.

In summary, loss aversion and the resulting framing effect may impose an outsized negative influence on these key claiming decisions, which could lead to suboptimal retirement-income planning. Claiming the benefit at the earliest date feels like a gain, but it can result in a lower payout over time. Using one’s own financial assets as a bridge to a later, optimal claiming strategy may feel like a loss in the present moment but can enable higher levels of inflation-indexed Social Security income over time. These observations make clear how loss aversion can undermine long-term investment goals and impair decision-making.

Of course, it’s one thing to recognize these behavioral miscues, and it’s quite another to encourage clients to recognize them and engender optimal retirement-planning behaviors.

**MITIGATING BIAS AND LONGEVITY RISKS: REFRAMING DECISIONS**

One way to help investors make better claiming decisions is to flip the frame of the Social Security claiming question. Instead of considering the value of the benefits over the short term, advisors could focus on the value of the benefits over the long term. In other words, advisors might seek to shift the “choice architecture” around claiming Social Security from a positive to a negative frame (Thaler and Sunstein 2021). Consider Al and Alma, a couple on the verge of retirement. They are seeking guidance on how much they might reasonably expect to spend in a potential 30-year retirement. They are both 64 years old, and their combined pretax annual salary is $150,000. Alma will retire imminently; Al will work another year and then join Alma in retirement. They have saved $1.8 million between their 401(k) plans and their taxable accounts, allocated in a balanced 60/40 equity/bond split.

PIMCO’s optimization analysis initially defaults both Al and Alma to a claiming date of age 70, to maximize the government benefit. Figure 3 shows that this approach, in conjunction with their existing savings, may enable an annual spending allowance of $104,000 in retirement, which meets an initial internal target of 90%-percent probability of successfully taking this couple to age 95. We assess their individual benefits from Social Security to be about $2,500 a month, with an estimated lifetime benefit value of over $1.6 million.

Delaying Social Security to age 70 requires an alternative source of supporting capital for those intervening years. The four-year “bridge” drawn from existing savings (the dark blue bars) enables their retirement spending in the near term, from ages 66 to 70. But claiming later enables a higher Social Security payout at the start of the claiming period (note the purple bars, beginning five years post-retirement), which rises with inflation throughout their lifetimes. This means Al and Alma could reduce the amount withdrawn from their own savings (the light blue bars) over the long term, leaving more for legacy goals.

When Al and Alma asked about claiming earlier, the advisor re-ran the analysis to show the impact of claiming Social Security just as they entered retirement, at ages 64 and 65. We first note the impact on their overall retirement plan: The probability of success falls to 79 percent (see figure 4). This stems...
**AL AND ALMA: A MORE POSITIVE FRAMING FOR SOCIAL SECURITY DECISIONS**

There is a 91% chance of maintaining retirement spending of $104,000 per year (about $8,667/month after taxes)

**Stress test results**

- **Above average**
- **Spending stability likelihood** 91%
- **Legacy Wealth** $60k–1.6m
  - Range is 10th percentile to median

**Annual Spending**

- Future dollars (nominal) □
- Graph □
- All years □

- Assume spending flexibility □

**Retirement Age**

- Al Ready to Retire
  - Retirement age 65
  - Retirement end 95

- Alma Ready to Retire
  - Retirement age 64
  - Retirement end 95

**Social Security**

- Lifetime benefit value
- Future dollars (nominal) □
- Graph □
- All years □

**AL AND ALMA: REFRAMING THE DOWNSIDE OF EARLIER CLAIMING**

There is a 79% chance of maintaining retirement spending of $104,000 per year (about $8,667/month after taxes)

**Stress test results**

- **Above average**
- **Spending stability likelihood** 79%
- **Legacy Wealth** $0–1.1m
  - Range is 10th percentile to median

**Annual Spending**

- Future dollars (nominal) □
- Graph □
- All years □

- Assume spending flexibility □

**Retirement Age**

- Al Ready to Retire
  - Retirement age 65
  - Retirement end 95

- Alma Ready to Retire
  - Retirement age 64
  - Retirement end 95

**Social Security**

- Lifetime benefit value

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Figures 3 and 4: Samples provided for illustrative purposes only.

The data utilized within the sample was provided by PIMCO as a hypothetical example of the type of analysis that can be conducted within the Retirement Income Planning Tool. Certain details may be stale and should not be relied upon as investment advice or a recommendation of any particular security, strategy or investment product. Refer to Notes for additional risk information.
from the fact that their monthly Social Security benefits are smaller, and so are their total lifetime benefits. This means they will draw more from, and be more dependent upon, their own savings (the light blue bars) over their lifetimes, leaving less for their legacy goals. Critically, the costs of claiming Social Security early are shown in real dollar terms—Alma and Al forego about $1,500 monthly for claiming early, which amounts to nearly a $300,000 loss over the full 30-year planning period ($1,661,855 versus $1,374,158).

Framing the impact of this critical decision in this specific “negative” context may incline some investors to work past their biases and plan for the longer term. But how do you bridge using a portfolio? And, importantly, how do you reinforce the bridge to avoid triggering bias from investors’ aversion to perceived losses? To answer these questions, we shift from an analysis of cognitive bias to a different behavioral heuristic we find helpful for advisors and clients facing the complexity of decumulation—the familiarity principle.

**THE FAMILIARITY PRINCIPLE AND THE NEAR-TERM INCOME ALLOCATION**

The psychological power of a paycheck often goes underappreciated. It is saturated in familiarity and comfort. We know its source and the date it arrives; we know its amount and where it’s delivered; we rely on it to be there and cover costs for the month. People prefer the familiar. The sudden disappearance of this reliable cash flow can be fraught with anxiety. Indeed, retirees often claim Social Security early, more to alleviate this anxiety than because they need the income (Shoven et al. 2017).

Designing and designating a portion of the retirement-specific portfolio with a clear purpose (i.e., a “near-term income allocation”) may pay critical financial and behavioral dividends. A near-term income portfolio could ease investors’ anxiety at the start of retirement and afterwards (Martel et al. 2021), especially if its characteristics include low volatility, low equity-market beta, little likelihood of default, and a tendency to deliver regular distributions—essentially the characteristics of one’s former salary.

This portfolio may be achieved by dedicating a portion of the client’s existing fixed income allocation to near-term income (see figure 5). The idea is to deliver the capital required to support a retiree’s annual spending with a high degree of certainty, essentially replacing the regular income that a paycheck provided. Investments could consist of either laddered bonds geared to mature and deliver their principal and interest each year for the next five, seven, or 10 years, or a portfolio of bond mutual funds or exchange-traded funds with low risk and an income focus.

This near-term income portfolio seeks to provide cash flows over a set period of years, which can be adjusted or extended by drawing periodically (via rebalancing) from a separate long-term growth-oriented portfolio of equities and other growth assets as markets and individual needs dictate. At the often anxiety-ridden start of retirement, the
Consider two retirees. Both enter retirement at age 62 with $1 million in assets invested in a portfolio of 60–percent stocks and 40–percent bonds. The first retiree follows a typical strategy with a constant asset allocation, rebalanced annually, claims Social Security immediately upon retirement, and spends a constant $60,000 in real terms each year. The client’s spending is drawn pro rata from both equities and bonds, regardless of market movements.

The second retiree also maintains a 60–percent equity and 40–percent bond portfolio but allows an income-centric approach: the client’s $60,000 of annual spending is derived exclusively from the “near–term income” allocation, invested in this case in a bond ladder designed specifically for this purpose, and she defers Social Security benefits until age 70. Rebalancing from equities to bonds is determined annually based on market performance (with Consumer Price Inflation as the bogey) and this second retiree is reasonably flexible in her willingness to forego the annual “inflation adjustment” if markets decline precipitously and caution rises. Foregoing that typically small increase has the potential for unexpectedly large impacts on the long–term health of the portfolio, and another year may bring particularly robust markets, affording a modest raise over and above the standard increase. Moreover, this type of budgeting behavior is a familiar practice for many and aligns with the mental accounting heuristics people tend to fall back on, like matching spending to accounts labeled “income” and preserving accounts labeled “wealth” (Shefrin and Thaler 2004).

By deferring Social Security, benefits grow relatively quickly for the second, “optimizing” retiree, especially on an after–tax basis. When combined with modest flexibility in total spending, the optimizing retiree can make an accumulation portfolio last much longer than a typical retiree, especially in more difficult markets. In the worst 5 percent of outcomes, the typical retiree’s $1 million in assets would last 19 years, but the optimized retiree would enjoy 34 years of asset longevity. The improvement relative to traditional approaches only grows as the retiree experiences more agreeable market environments.7

“familiarity motif” is one of the tools that advisors can use to build the plan upon the foundation of near–term income.

CONCLUSION

Retirement is thought of as a period where a lifetime of accumulated wealth is finally spent and enjoyed. In practice, though, people tend to limit spending and preserve their assets (Klein 2020). Why is this apparent self–deprivation so widespread? Many factors drive retiree spending patterns, but arguably the biggest factor is precautionary concern around unknown and unknowable factors—from markets to illness to mortality.

There is no financial panacea for such uncertainty, but it is possible to manage it over time. In our formulation, a “near–term income” portfolio defines and can help maintain a retiree’s predictable annual spending in the near term by means of a dedicated bond portfolio. Importantly, this structure doesn’t constrain spending. It aims to give retirees full flexibility to adjust their income up or down at any time to address their needs, without restrictions, surrender fees, or contractual transaction costs.

Uncertainty is an unpleasant state for most investors, especially those facing or in retirement. Establishing a known and predictable source of income early on gives more confidence and comfort at the start of the journey (Martel et al. 2021). And leveraging Social Security to address longevity risk reduces the possibility of failure over the long term. Investors struggling with the manifold uncertainties that retirement brings may appreciate such an income–centric approach.

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ENDNOTES

1. Annuities are subject to the claims–paying ability of the issuing insurance company. PIMCO does not offer insurance guaranteed products or products that offer investments containing both securities and insurance features.

2. The desire for regular income in retirement is so strong that the occasional retiree purchases an immediate or deferred annuity but neglects to maximize Social Security benefits. Such a strategy can cost hundreds of thousands of dollars more than may be necessary. See Bronstein et al. (2020).

3. The full retirement age is 66 for individuals born from 1943 to 1954. The full retirement age increases gradually for individuals born from 1955 to 1960, until it reaches 67. For anyone born 1960 or later, full retirement benefits are payable at age 67.

4. Nobel laureate Richard Thaler, an advisor to PIMCO on retirement spending, often notes that his father, a talented and esteemed actuary, couldn’t help but set a retirement budget that would last him at least to age 150.

5. Investment products contain risk and may lose value. There is no guarantee that an investment product will be successful in producing income. Investors should consult an investment professional before making an investment decision.

6. For full details about the simulation and spending strategy, see Davis and Klein (2022).

7. The typical strategy spends a constant real dollar amount each year and claims Social
Security immediately on retirement. The robust strategy permits spending to vary with the markets, never allows nominal spending to decline, and defers Social Security benefits. For full details on the spending strategy, tax treatment, and simulation assumptions, see Davis and Klein (2022).

REFERENCES


Important Information on Figures 3 and 4: Allocations Optimized for Social Security

Assumptions used to simulate estimated assets at retirement. If the prospective retiree has not yet retired, the asset values assumptions grow at the selected asset allocation stock/bond mix for each account up to the prospective retiree reaches retirement age. PIMCO’s proprietary estimated expected returns for the 10-year Treasury bonds for bond returns and stock returns are simulated jointly with bond yields and inflation according to a long run equity risk premium (all data is index based on product of risk factor exposures and projected risk premium which rely on historical data, valuation metrics and qualitative inputs from senior PIMCO investment professionals). Importantly, our simulation begins with yields, spreads, and equity risk premia. Bond coupon and principal payments are fully repriced throughout the horizon, and periods of low bond yields correspond to elevated stock and bond valuations, leading to lower future returns. This additional complexity allows us to characterize the remaining properties of the income portfolio within the analysis.

Inflation assumptions: Instead of a static inflation rate (for example, a fixed 2% applied every year), we’ve applied PIMCO’s proprietary inflation model to this analysis, where the inflation rate varies each year in relation to the other asset class and interest rate movements. Generally, the annual inflation rate ranges between 1% to 5% and averages roughly 2%. We take this approach because the inflation assumption impacts other assumptions in the analysis, like the level and path of interest rates. Determining a fixed inflation rate for the entirety of the analysis, like many other financial planning tools, would have an impact on interest rates. By modeling inflation and interest rates, we can see how these relationships hold and make sense. To generate inflation realizations, we simulate both the real curve and the nominal yield curve.

The difference between these is the breakeven inflation rate. In each period on each path, realized inflation is anchored to the realized breakeven inflation rate.

Annual spending flexibility: In addition to modeling for inflation each year, we assume that a prospective retiree will (reasonably) adjust their spending year to year, depending on economic conditions. Based on our research, some spending flexibility improves the likelihood that a prospective retiree can retire at any given level of initial income. So: When the market performs positively, we assume an increase in retirement income (parallel to inflation), to account for the increased cost of things like milk and gas. In years of poor market performance, we assume the spending target does not change. In other words, we don’t adjust upward for inflation when their investments perform poorly.

Annual spending target estimation: We base this (adjustable) number of the prospective retiree’s current household income, current assets and Social Security strategy, assuming they’ll want to continue living a similar lifestyle. This budget is based on their initial funded assets, after taxes, and meant to last through retirement to whatever the plan “end” is set for. (We make the starting assumption that the prospective retiree will live to 95 years. If the prospective retiree has enough money to match their pre-retirement household income (or lifestyle), we won’t increase their spending target.) We instead, any excess funds contribute to the prospective retiree’s “legacy wealth,” intended for future generations. We try to make this a conservative estimate. Our goal is that in 90% of our market simulations, a client who starts with this budget, and follows our investment strategy, reaches the end of life without running out of assets. That means, we give a prospective retiree a 90% probability of being able to sustain this rate of spending through age 95.

Required Minimum Distributions (RMDs) or Other Investment Income: This analysis assumes an annual spending target throughout retirement, which is assumed to be funded by a prospective retiree’s investments and other sources of income. Even if a prospective retiree plans on withdrawing a certain amount from their investment accounts in a given year, they may be required to withdraw more from certain retirement accounts to meet required minimum distribution requirements. The amount in a prospective retiree’s analysis labeled RMDs represents an amount that they could be forced to withdraw, even if it is more than they might need to meet their annual spending target that year. Required minimum distribution rules apply to traditional IRAs, SEP IRAs, SIMPLE IRAs, 401(k) plans, 403(b) plans, 457(b) plans, profit sharing plans, and some other defined contribution plans. Any required minimum distributions that are withdrawn in excess of a prospective retiree’s annual spending target are assumed to be reinvested.

Funded Income: This amount represents income that will be withdrawn from a prospective retiree’s near-term income allocation to meet spending needs over a specified funded period (measured in years).

The amount in a given year and shown over the course of several years is “funded” because it is what can be delivered by the near-term income allocation that is implemented at the start of a plan. For example, if you see funded income lasting seven years, it means that a prospective retiree’s starting near-term income allocation is calculated to be large enough to meet their spending over that time period.

Future dollars (nominal): “Future dollars” account for inflation (nominal dollars). Instead of a static inflation rate (for example, a fixed 2% applied every year), we’ve applied PIMCO’s proprietary inflation model to this analysis, where the inflation rate varies each year in relation to the other asset class and interest rate movements. For PIMCO’s proprietary inflation model we simulate both the real curve and the nominal curve. The difference between these is the breakeven inflation rate. In each period on each path, inflation simulation is anchored to the realized breakeven inflation rate.

Projected Income: In order to maintain the cash flow required to meet a prospective retiree’s annual spending target after the initial funded period described above, the prospective retiree will need periodically reinstate the near-term income allocation by drawing some of the gain from the growth allocation. Projected future income that is assumed to be withdrawn from their near-term income allocation in the future, made possible by these assumed rebalances.

Social Security estimation: Our estimate is based on retirement age, expected longevity, and current salary. We then use the Social Security Administration’s website, national average wage indexing, and standard wage inflation estimates to estimate Social Security income at each eligible age. In our initial optimization, we assume that the prospective retiree delays claiming Social Security until they’re eligible for the maximum benefit. To bridge the gap if the prospective retiree retires before their target claim age, we designed an income allocation in the prospective retiree’s investment portfolio to address the client’s remaining income needs until age 95.

The Monte Carlo approach: Monte Carlo simulations are mathematical methods used to estimate the likelihood of a particular outcome based on market performance historical analysis. We use a Monte Carlo simulation-based approach to estimate potential growth of your account balances through retirement and then convert those balances into potential withdrawal amounts over the time frame specified, relying on certain market performance assumptions. Historical performance simulations are conducted to determine the probability that a portfolio may experience a certain minimum level of performance given market volatility. For the purposes of our Monte Carlo simulations, we randomly generate a series of thousands of returns for a given scenario. Together, these scenarios provide a probability that a certain amount (or less) of assets/income occurs at that level.

Assumptions in Monte Carlo: Random variables, based on 20-year historical data, are drawn from a specific statistical distribution. The time increment used in the Monte Carlo simulations is variable depending upon the prospective retiree’s current age and end age. Annual randomly generated returns over a 20-year period are required to simulate the mean, standard deviation, distribution, and correlated behavior of the observed historical asset. Annual returns assume the reinvestment of interest income and dividends, no transaction costs, and no management or servicing fees.

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