

# Decoding Retirement:

Key Insights Into Participant Preferences For Lifetime Income Options

By Qi Sun, PhD, CFP® & Thomas Korankye, PhD, CFP®

# Introduction

The landscape of employer-sponsored retirement plans has changed greatly over the past few decades. As the majority of Baby Boomers with pension plans reach the age to receive full Social Security benefits and enter retirement, a new chapter is beginning in terms of how these future retirees receive retirement income. Currently, only 15% of the employees who work for private companies have access to defined benefit plans.<sup>1</sup> Members of Generation X, who begin to retire in the next decade, will be the first generation to manage their retirement income independently.

This explains why people who are approaching retirement age today must grapple with a profound concern—the fear of outliving their savings. The prospect of potentially enjoying two or three decades in retirement is both a blessing and a financial challenge. The risk of running out of money looms large, especially as life expectancy continues to rise, healthcare costs soar, and inflation erodes purchasing power. Defined contribution (DC) plans can help participants navigate these challenges, allowing them to convert at least a portion of their retirement assets into guaranteed lifetime income.

However, similar to the introduction of auto-enrollment to DC plans, a feature that took legislators, plan sponsors, and participants many years to embrace, in-plan lifetime income is still a new concept. Both plan sponsors and participants are hesitant to make decisions before the industry produces more facts and guidelines. Through this *Decoding Retirement* study, we seek to gain a better understanding of retirement plan participants' preferences toward different annuity products, their financial and annuity literacy levels, and how they relate to their choice of annuity products and their overall financial well-being.

Retirement is not a one-size-fits-all scenario. Personalization of retirement income decumulation solutions is essential to address the diversity of retiree needs and help institutions design plans that maximize retirees' financial security and align with their preferences. Through this research study, we hope to provide more empirical evidence to help the industry better understand the preferences of different retirement plan participants and how to design corresponding personalized solutions to improve their retirement security. **PL**

## Methodology

The survey questionnaire was designed by Pacific Life Insurance Company (referred to as Pacific Life) and independent academic researchers. In partnership with Qualtrics, the survey was conducted online between March and April 2023, with 2000 current retirement plan participants. The participants in this survey were full-time employees, 21 years of age or older, who were participating in either a DC or defined benefit plan. Qualtrics recruited respondents with diverse social-demographic backgrounds to represent the national population distribution in the United States. Pilot tests were conducted separately within Pacific Life and the University of Arizona before implementing the survey with the full sample group. **PL**

# Table of Contents

---

- 6 The Current Landscape of Lifetime Income Options
- 8 Financial Health & Retirement
- 11 Financial & Annuity Literacy
- 15 The Defined Lifetime Income Products Preference Study
- 25 Conclusion & Findings

## Key Insights

- Defined Contribution plan participants face the uncertainty of outliving their retirement assets
- Few plan sponsors currently offer lifetime income annuity options to address this concern
- For plan sponsors who do offer lifetime income options, low participation rates can be attributed to a lack of education and demographic factors
- Financial well-being is dynamically linked to financial literacy, age, and demographics
- Participants are receptive to the concept of annuities depending on how the options and benefits are presented

# The Current Landscape of Lifetime Income Options



# The Current Landscape of Lifetime Income Options

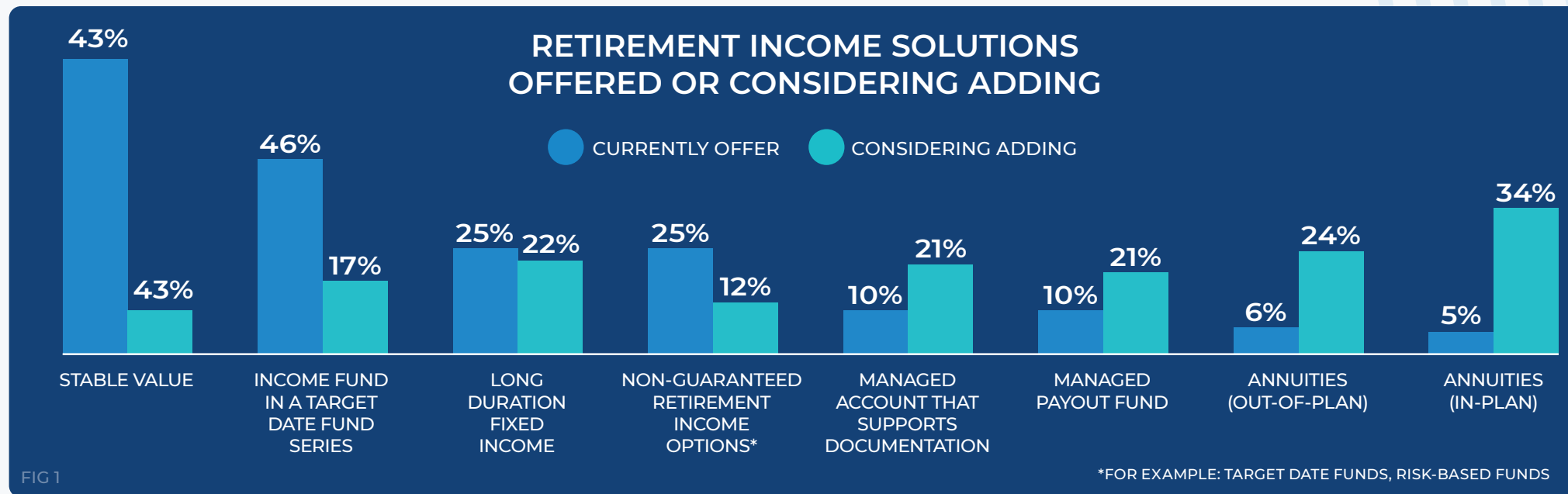
Current DC plan participants face a high level of uncertainty about whether they will outlive their retirement assets. While various in-plan income options are available on the market to help them manage their retirement income, we are aware of plan sponsors' concerns, such as fees, fiduciary liability, and administrative burdens, which may result in a lower rate of in-plan annuity options offered to participants.

According to The Evolving DC Landscape survey,<sup>2</sup> out of 155 plan sponsors with DC plans, only 5% currently offer in-plan annuities as a retirement income solution. Thirty-four percent of plan sponsors indicate that they are in the process of evaluating such products and considering adding them in the future. As shown in Figure 1, stable value and income funds in a target date fund, which are not designed to

address the longevity risk that retirees may face in retirement, are the top choices that plan sponsors offer to support retirement income.

## PARTICIPANTS ARE NOT PARTICIPATING

Another challenge is participants' low adoption rate of in-plan annuities when they are available. According to the Guaranteed Income Investment Options in DC Plans report from LIMRA,<sup>3</sup> in 2020, 3.65 million participants were covered under plans offering in-plan annuity options, but only 131,000 participants elected the lifetime income option, an adoption rate of about 3.5%. Almost 70% of participants with in-plan annuities are under larger plans with at least \$200 million in assets. It is nearly impossible for small-plan participants to access in-plan annuities to ensure secure and reliable life-long retirement income. **PL**



# Financial Health & Retirement





In the United States, retirement plan participants' financial well-being can be measured using the U.S. Consumer Financial Protection Bureau's (CFPB) Financial Well-being Scale.<sup>4</sup> The scale uses 10 key questions to measure these four aspects of financial well-being:

1. Having control over one's finances.
2. Having the capacity to absorb a financial shock.
3. Being on track to meet financial goals.
4. Being able to make choices that allow one to enjoy life.

The scale ranges from 0 (lowest) to 100 (highest). In this study, the minimum, maximum, median, and average well-being scores were 14, 95, 54, and 53.79, respectively.

## FINANCIAL WELL-BEING: KEY FINDINGS

We examined how wealth relates to financial well-being by analyzing a logistic regression model that considers social-demographic variables and predicts financial well-being scores across all ethnic groups.<sup>5</sup>

There were several key findings:

- Respondents with more than \$150,000 in investable assets had significantly higher financial well-being scores across all ethnic groups. These respondents reported 5.48 times higher financial well-being than those with investable assets below \$50,000.
- However, we did not see a linear increase in financial well-being as investable assets increased.<sup>5</sup>
- There were no significant differences in financial well-being scores

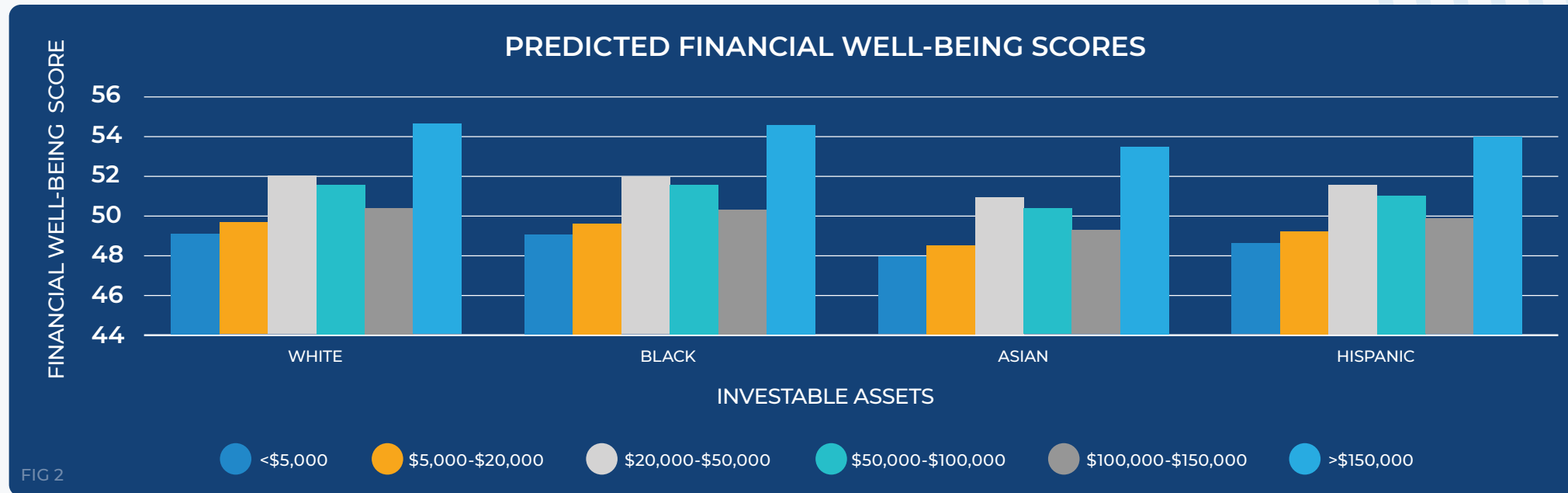


FIG 2

between White and Black groups across entire investable assets groups, while Hispanic and Asian groups report a slightly lower score.<sup>5</sup>

**Additionally, we found that financial well-being is also impacted by participants' age and their financial literacy.**

- Financial literacy is positively related to financial well-being. Those with the lowest financial literacy report a 20% lower financial well-being score than those with the highest financial literacy.<sup>5</sup>
- Age is also positively related to financial well-being. Participants aged 50 and over are more likely to report higher financial well-being than those aged 20 to 34.<sup>5</sup>

## RETIREMENT: WORDS THAT COME TO MIND

We asked participants the first word that comes to mind when they think about retirement planning. Figure 4 shows the words most frequently mentioned by respondents.

- Saving for retirement is reported as the top priority for retirement planning, at the same time, participants are looking for stability and security in retirement.
- Most participants have very favorable expectations for their retirement life and acknowledge the importance of saving. For the retirement industry, the critical question is how to help participants make a safe decumulation strategy over a lifetime to achieve their retirement goals and increase their retirement satisfaction. **PL**



**20%  
LOWER**

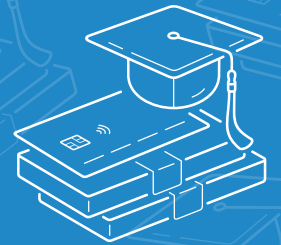
The Financial Well-Being Score for the bottom financial literacy group compared to the top group.

FIG 3



FIG 4

# Financial & Annuity Literacy



This study utilized two sets of questions to test DC participants' financial and annuity literacy. In addition, we asked the participants to rate their financial and annuity knowledge levels and compared their perceptions with testing scores.

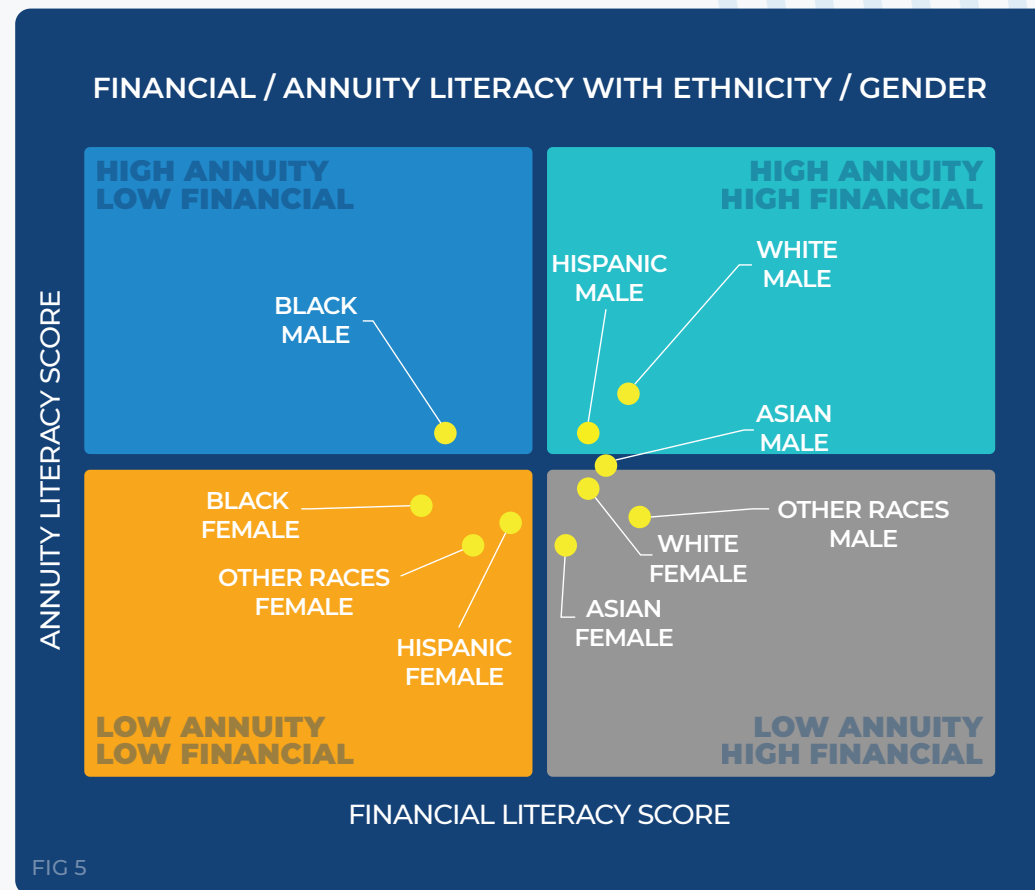
We measured financial literacy using the "Big Five" questions relating to compound interest, inflation, bond pricing, mortgage payments, and risk diversification. Correct responses were added up to obtain the respondents' financial literacy scores, ranging from 0 to 5. We further grouped the financial literacy scores into two categories: low and high literacy. Financial literacy scores exceeding the median were classified as high financial literacy, while scores equal to or below the median score were classified as low financial literacy.

We measured the participants' annuity literacy using nine questions regarding their basic and advanced knowledge about annuity products. Some questions related to using annuities for retirement planning (e.g., insurance against running out of money in old age). Other questions focused on the features of annuity products, such as protection (e.g., what happens to a person's annuity when the insurance company goes bankrupt?), illiquidity (e.g., whether unexpected expenses can be financed with annuities at any time), and death benefits (e.g., whether the annuity can be paid to a beneficiary when the annuitant dies). We compiled all the correct responses to obtain an annuity score ranging from 0 to 9. Additionally, the annuity literacy score was regrouped as low or high literacy. Scores exceeding the median annuity literacy were classified as high, and all others were classified as low.

## THE ANNUITY MINDSET

We found that groups with different demographic backgrounds exhibited a variety of financial and annuity knowledge levels.

- In general, males showed a higher level of financial and annuity literacy than females. Specifically, we found that females were 73% more likely to report low financial literacy than males.<sup>6</sup>
- Among all respondents, White, Hispanic, and Asian males gener-



ally fell into the high annuity literacy and high financial literacy groups. Correspondingly, Asian and White females had high financial literacy scores, with all female groups recording low annuity literacy scores.<sup>7</sup>

## FINANCIAL LITERACY ISN'T JUST IN OUR HEADS

In addition, we found that the participants' annuity literacy was positively related to their financial literacy and asset levels.

- The relationship between financial literacy and annuity literacy was positive. Increasing the financial literacy score by one resulted in a 0.38-point increase in annuity literacy, with all other factors being constant. On average, a one-unit increase in financial literacy resulted in an increase in annuity literacy between 0.31 and 0.45 points.
- We found a trend where the average annuity literacy score in-

creased as investable assets increased. Compared to those with less than \$5,000 in investable assets, the average increase in annuity literacy for those with more than \$5,000 in investable assets was between 0.24 and 1.13 points. A lack of financial resources may explain why certain groups had lower annuity literacy.

- Financial literacy is crucial for participants to better understand the decumulation option of in-plan annuities. The ability to make informed decisions likely plays a considerable role in their increased participation. Historically, the financial services industry has focused on developing solutions to help participants understand the importance of accumulation. To overcome enrollment hurdles and low participation, a common approach is enrolling participants in specific in-plan income solutions by default. However, with limited knowledge, participants may not feel confident making significant decisions about their retirement income.

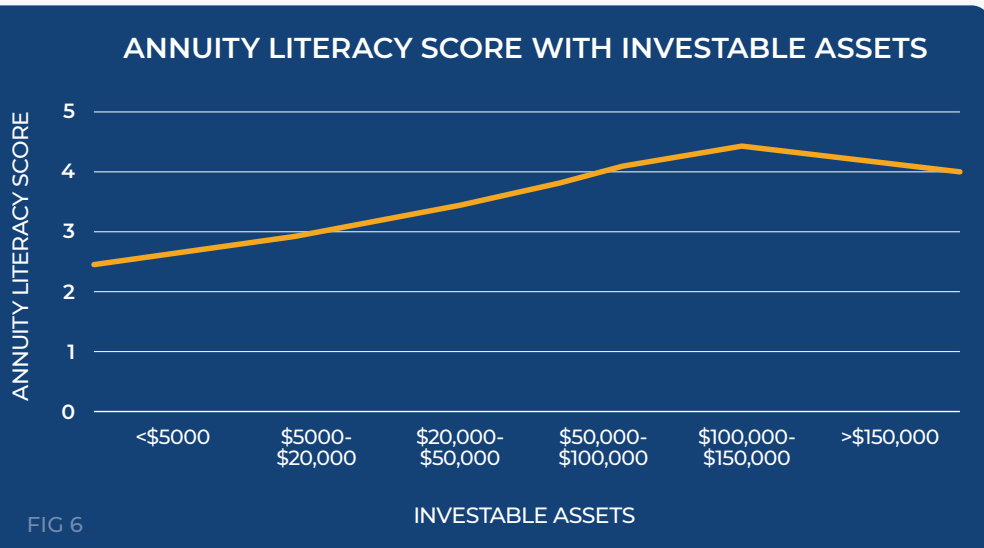


FIG 6

INVESTABLE ASSETS

## FINANCIAL KNOWLEDGE: WE DON'T KNOW WHAT WE DON'T KNOW

Previous studies found that individuals have biases regarding their own financial knowledge. People are either overconfident or under-confident about what they think they know, and this bias impacts their financial decisions and willingness to receive systematic financial education.<sup>8</sup> In this study, we tested how well participants' subjective financial/annuity knowledge aligned with their objective financial/annuity literacy scores.

- For both financial and annuity literacy, we examined whether the respondents' perceptions (subjective knowledge) aligned with reality (objective knowledge) using four mutually exclusive outcomes:

## PERCEPTION VS. REALITY

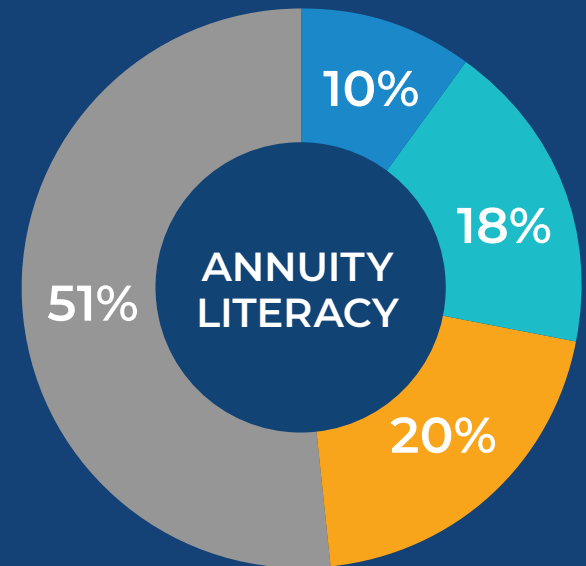
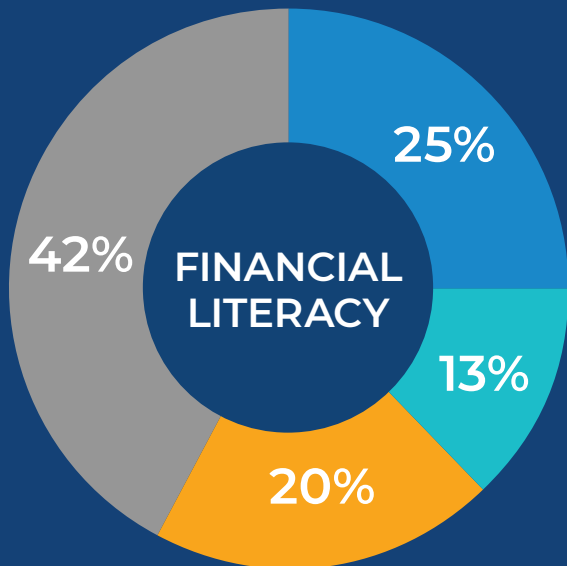


FIG 7

1. Low objective-high subjective (overconfident)
2. High-objective-high subjective (confident)
3. High objective-low subjective (less confident)
4. Low objective-low subjective (no confidence)

- We found similar evidence for annuity literacy: over half of the respondents (51%) were described as not confident, and only 18% could be considered confident in their annuity knowledge.
- Overconfident or less confident indicates that perception and objective reality are misaligned. Confident or no confidence indicates the alignment of perception and objective reality.
- More than half of the respondents' perceptions and objective

reality were aligned in terms of financial literacy (55%): 42% of the respondents were described as not financially confident, and only 13% of them could be considered financially confident.

- Participants with a higher level of financial literacy are more likely to understand in-plan lifetime income products, resulting in a higher adoption rate. It is critical to help participants with no confidence gain financial confidence through financial education so they feel comfortable making important decisions. To increase participants' engagement with financial education programs, plan sponsors must also manage overconfident participants, helping them to increase their awareness of their actual knowledge and encouraging them to continue their financial education. **PL**

# Introduction to the Defined Contribution Lifetime Income Products Preference Study



# Introduction to the Defined Contribution Lifetime Income Products Preference Study

For this study, we designed several hypothetical scenarios to understand the participants' preferences between immediate vs. laddering lifetime income options, including tests for different payout ages (age 65 vs. 70), granular premium amount intervention, and employer incentives.<sup>9</sup> Respondents who were qualified for the testing module were randomly assigned into two payout age scenarios so that we could compare their preferences for different lifetime income products accordingly.

Here is an example of how we describe the immediate and laddering lifetime income options to participants:

**IMMEDIATE OPTION:** At age 65, you can invest \$X in product A, which:

- Provides \$Z annual payments starting now (the amount is around X% of your future annual Social Security retirement income, assuming a normal retirement age)
- Will last for the rest of your life (adjusted for inflation)
- Your beneficiaries would receive a lump-sum payout of your initial investment less any payments received

**LADDERING OPTION:** Instead of investing \$X one time at age 65 in exchange for a stream of lifetime income, you can choose product B, which:

- You would make an annual contribution \$Y between the ages of 55 and 65 to product B
- Product B will provide the same annual income \$Z (adjusted for inflation) starting at age 65 for the rest of your life

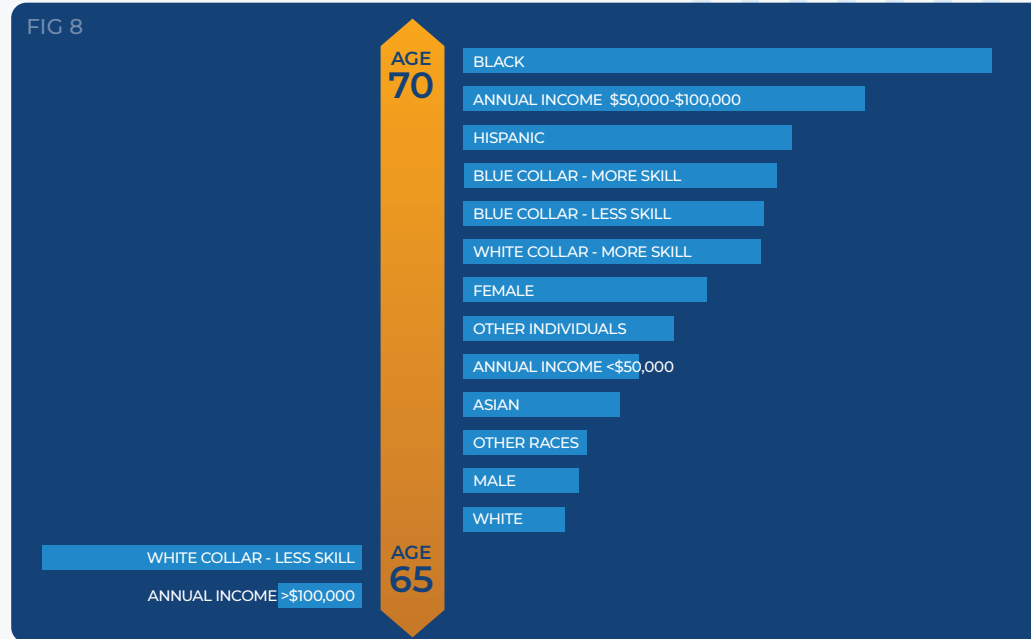


FIG. 8 SHOWS TO WHAT EXTENT EACH SEGMENT GROUP IS INCLINED TO CHOOSE THE LADDERING INCOME OPTION WHEN THE PAYOUT AGE IS 70 COMPARED TO AGE 65.

- Overall, age 70 is a more attractive payout option than age 65 for laddering lifetime income products. While people carry more uncertainty for a longer deferral period, the lower annual premium amount and the higher total lifetime payout make it more advantageous.
- Certain segment groups, such as African Americans and people with an annual income between \$50,000 and \$100,000, show a more significant preference for using the laddering lifetime income option when the payout begins at age 70.



# Introduction to the Defined Contribution Lifetime Income Products Preference Study

## PREFERENCE OF USING LADDERING OVER IMMEDIATE LIFETIME INCOME WITH DIFFERENT PAYOUT AGE

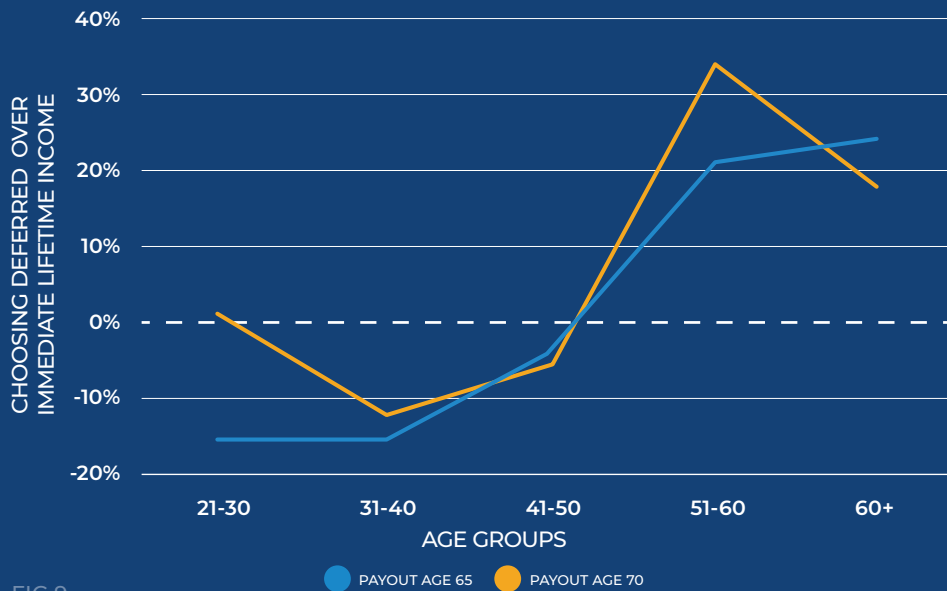


FIG 9

The choice to use laddering lifetime income over immediate lifetime income differed across age groups.

- Under both payout age testing scenarios, younger respondents (under age 40) chose the immediate lifetime income option (below 0%), while respondents over the age of 40 preferred the laddering lifetime income option (above 0%).
- Young participants in their 20s and 30s are not candidates for lifetime income products. Hence, simple product structures and immediate benefits may be more attractive to them.
- For respondents in their 50s, the laddering lifetime income with a

## RESPONDENTS CHOICES OF LIFETIME INCOME PRODUCTS

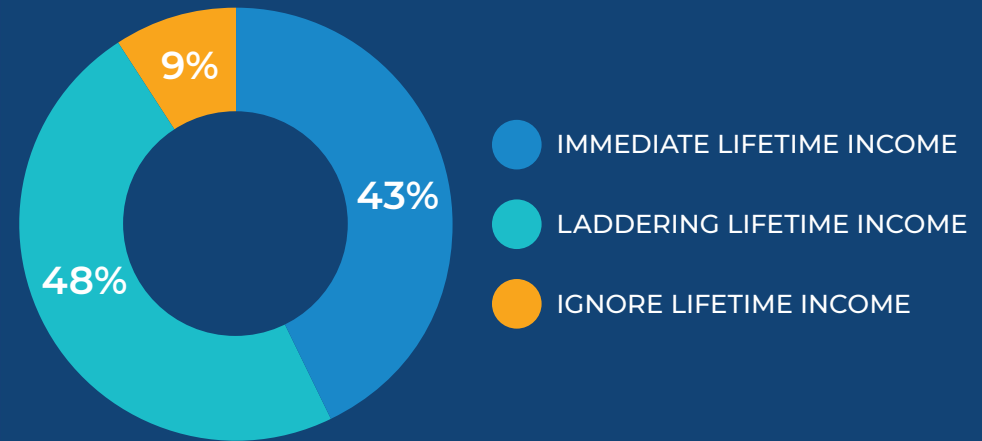


FIG 10

payout age of 70 was even more popular than the immediate lifetime income with a payout age of 65.

In addition to testing the preferred payout age for adopting laddering lifetime income products, we explored the participants' preferences for different types of lifetime income products.

- In general, the respondents' preferences for immediate and laddering lifetime income products were almost evenly distributed, contrary to theoretical model predictions that individuals would prefer lifetime income products with a deferral period because

# Introduction to the Defined Contribution Lifetime Income Products Preference Study

of the increased welfare gain with a deferred payout at a later life stage.<sup>10</sup>

- Certain groups leaned towards the laddering lifetime income option, including individuals with an annual income less than \$100,000, some investable assets, mortgage payers, and white-collar skilled employees (refer to Table 1 in the Appendix).

## INFLUENCES ON LIFETIME INCOME PARTICIPATION

We predicted the probability of lifetime income options based on financial/annuity knowledge scores.

- Respondents with the lowest level of financial knowledge had the highest probability of not using any lifetime income products.
- Financial education appears to be a primary contributor to choosing lifetime income products.
- The choice between immediate and laddering lifetime income products did not differ across financial knowledge scores. However, the probability of using immediate lifetime income options was significantly higher for respondents with the highest annuity knowledge scores.
- Participants with a higher level of annuity knowledge may have an increased awareness of uncertainties during the deferral period, potentially reducing the adoption of long and complex deferral period of lifetime income products. Conversely, it appears that individuals with low knowledge, who are unfamiliar with those uncertainties, may not have reservations about the same products.



200%

Compared to those with the highest financial literacy, individuals with the lowest financial literacy are 200% more likely to not utilize any lifetime income products.

FIG 11

# Introduction to the Defined Contribution Lifetime Income Products Preference Study

The respondents had various preferences regarding the trade-off between spending today and saving for the future. People who are future-oriented tend to plan for the long term. Using two measurements of time preference, we predicted the probability of lifetime income choices for “savers” (future oriented) and “spenders” (present oriented).

- Spenders and savers tend to choose different lifetime income products. Spenders are more likely to use immediate lifetime income over laddering lifetime income, and vice versa.
- Future-oriented individuals are generally more patient about making long-term financial decisions, and the structure of laddering lifetime income fits them better and is easier to adopt.

- Time preferences for certain groups of people are relatively consistent over time,<sup>11</sup> and studies have shown that individual time preferences have a strong impact on individuals’ financial decisions, such as retirement savings and the use of credit cards.<sup>12</sup>
- According to the 2023 *The State of Employee Financial Wellness*<sup>13</sup> report, only 11% of the human resources departments interviewed understood the financial well-being of employees in their organization to a great extent (Figure 13). In addition, plan sponsors had blind spots in understanding their participants’ patterns related to major financial decisions, such as their time preferences and planning horizons.
- However, plan sponsors are aware that conversations with partici-

## PREDICTED CHANCE TO USE LIFETIME INCOME PRODUCTS / SPENDERS vs SAVERS

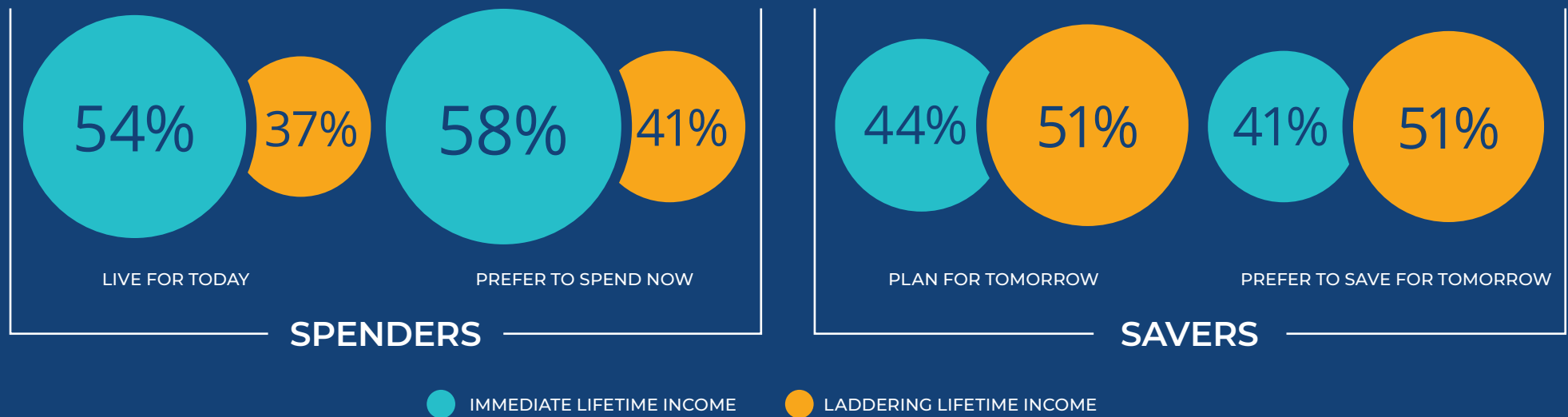


FIG 12

# Introduction to the Defined Contribution Lifetime Income Products Preference Study

## PERCENTAGE OF HR DEPARTMENTS THAT UNDERSTAND EMPLOYEES' FINANCIAL WELL-BEING

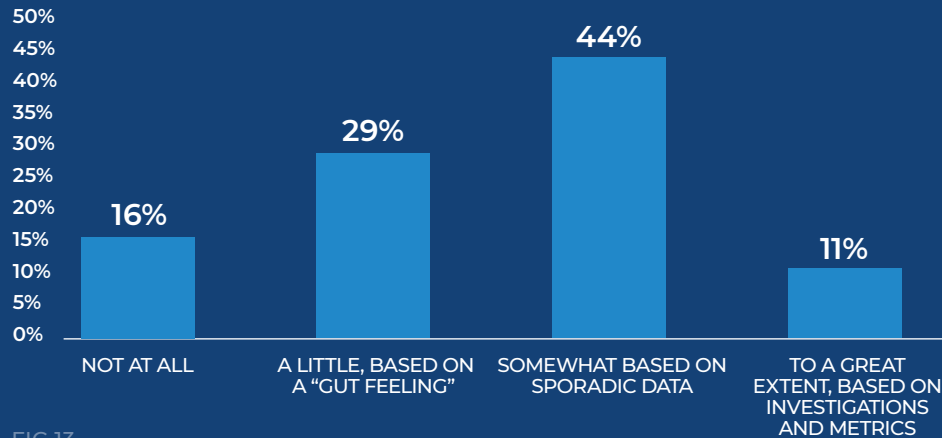


FIG 13

pants regarding financial education need to be personalized, preferably in a one-on-one meeting format.<sup>14</sup> Therefore, we see that the personalized participant experience should be built based on a better understanding of participants' characteristics, not solely by recommending various products.

We further conducted a latent class model to explore the characteristics of potential in-plan lifetime solution users/non-users. We found that our respondents could be classified into three groups:

- Lack of external help and financial resources to plan for retirement income
- Self-directed retirement income planner
- Hands-off solution user

Figure 14 shows the characteristics of each group. It does not appear that people with the most assets and relatively good financial knowledge are certain users of in-plan lifetime income products. Rather, being exposed to information about in-plan lifetime income products by either a financial advisor or their employers may be the key to this choice.

## MENTAL BARRIERS TO SAVINGS COMMITMENT

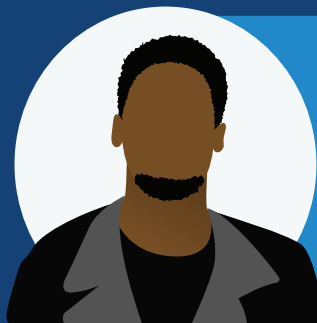
Previous research studies have proposed introducing savings programs using smaller dollar amounts to help reduce the "psychological pain" people may experience when enrolling in a regular savings program. Similar to regular savings contributions, when purchasing

FIG 14



### LACK OF EXTERNAL HELP AND FINANCIAL RESOURCES TO PLAN FOR RETIREMENT INCOME

- Lack of financial resources
- Lack of external help to plan for retirement income
- Low financial and annuity literacy
- More worried about running out of money during retirement
- Unlikely to use in-plan lifetime income solution



### SELF-DIRECTED RETIREMENT INCOME PLANNER

- Adequate financial resources
- Do not rely on external help to plan for retirement income
- High financial and annuity literacy
- Less worried about running out of money
- Unlikely to use in-plan lifetime income solution



### HANDS-OFF SOLUTION USER

- Adequate financial resources
- Rely on external help to plan for retirement income
- High financial and annuity literacy
- Worried about running out of money
- Highly likely to use in-plan lifetime income solution

# Introduction to the Defined Contribution Lifetime Income Products Preference Study

laddering lifetime income products, participants must temporarily give up access to the premium amount and “deposit” it until the payout age. Therefore, we designed an additional testing scenario for respondents who previously chose either immediate lifetime income or no lifetime income. Instead of presenting the larger annual premium amount, we switched to a smaller monthly amount and asked respondents again whether they would like to choose the laddering lifetime income product.

- Like previous research findings, the smaller, more granular amounts appear less psychologically painful for respondents of the laddering lifetime income products. Overall, 58% of the re-

spondents switched to laddering lifetime income products after the intervention. However, we see the switch to laddering lifetime income products is even more profound for those who previously chose immediate lifetime income products, than those who chose not to use any lifetime income products (63% vs. 35%).

- Low-income (annual income less than \$50,000) and Asian groups are disproportionately more sensitive about the smaller monthly amount than other groups when considering lifetime income products
- Mental accounting is a common behavioral bias, and past studies show that when individuals mentally set a budget period, this peri-

## SWITCH FROM NO LIFETIME INCOME TO LADDERING LIFETIME INCOME

● YES ● NO

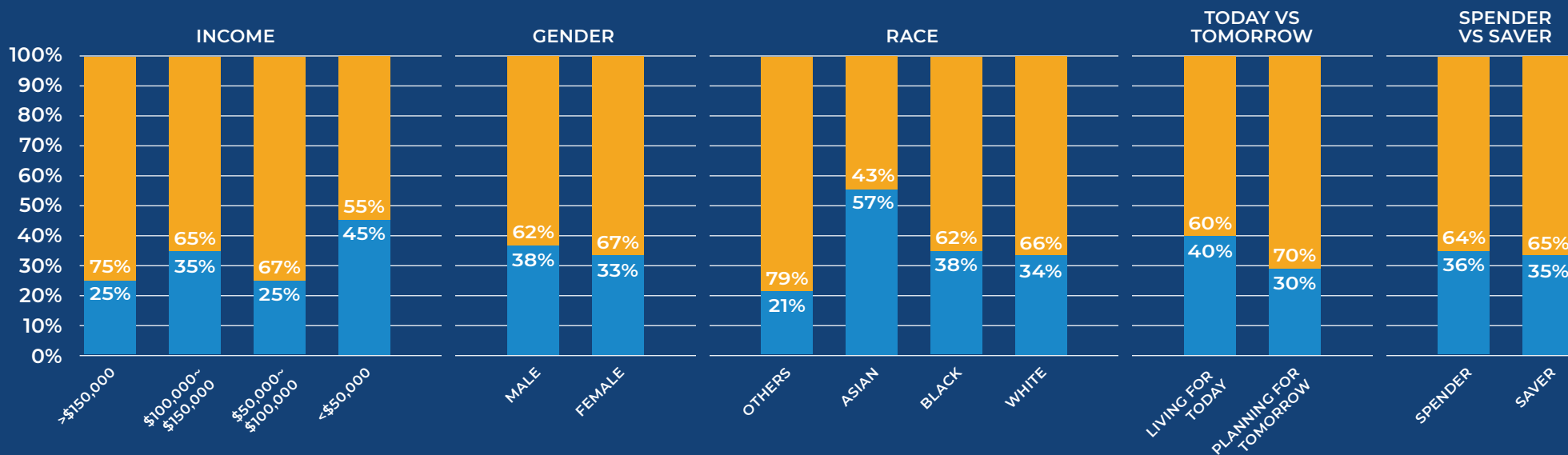


FIG 15

# Introduction to the Defined Contribution Lifetime Income Products Preference Study

od affects how much they will spend and therefore, the amount of resources they will budget in the future.<sup>15</sup> For employees, the most common budget period is their paycheck period. The personalization of participants' decumulation experience should further be expanded to the design of targeted communications and product information materials for different groups. Ideally, when introducing laddering lifetime income products, the premium amount would match the frequency of participants' paychecks, making it easy for them to relate the premium amount to their budget period.

- For example, over 76% of employers pay their employees weekly or biweekly. In the construction industry (with an average annual in-

come slightly above \$50,000), over 80% of employers pay weekly.<sup>16</sup> It is more psychologically comfortable for participants to be presented with a smaller weekly premium instead of a larger monthly premium, as it aligns more with what they are accustomed to.

## OVERCOMING PARTICIPATION HURDLES

- We were also interested to see whether participants are willing to increase their investment for laddering lifetime income products with a hypothetical employer match. Employer matching has been widely used in DC plans to encourage participants to save more for retirement. Past studies have reported mixed findings regard-

## SWITCH FROM IMMEDIATE LIFETIME INCOME TO LADDERING LIFETIME INCOME

● YES ● NO

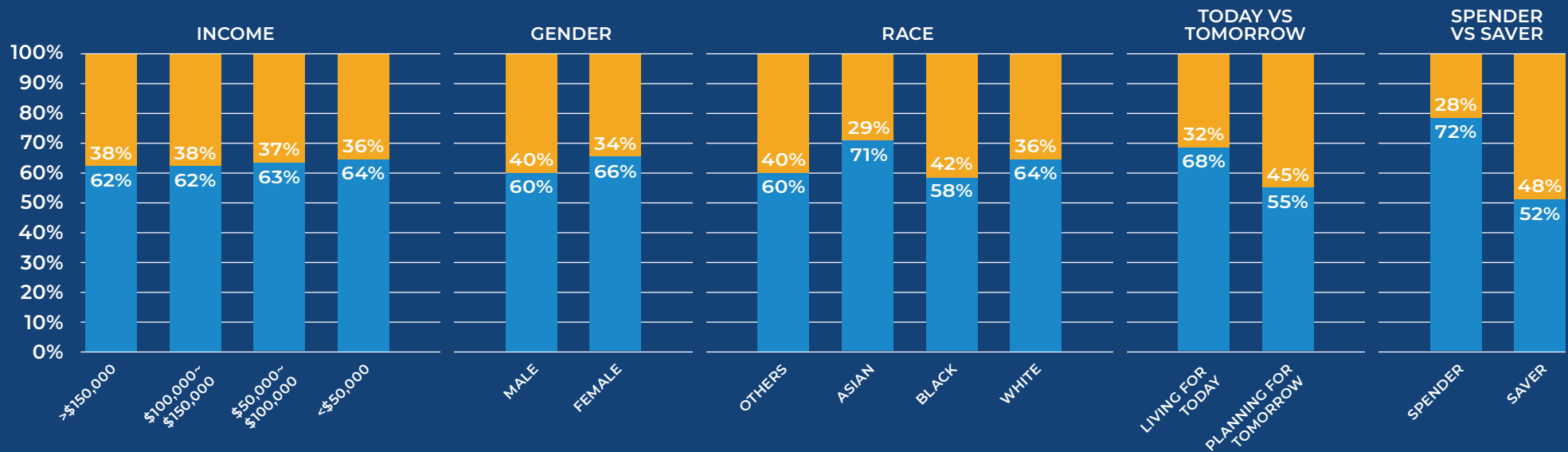


FIG 16

# Introduction to the Defined Contribution Lifetime Income Products Preference Study

## INCREASE INVESTMENT IN LADDERING LIFETIME INCOME OPTION WITH EMPLOYER MATCHING

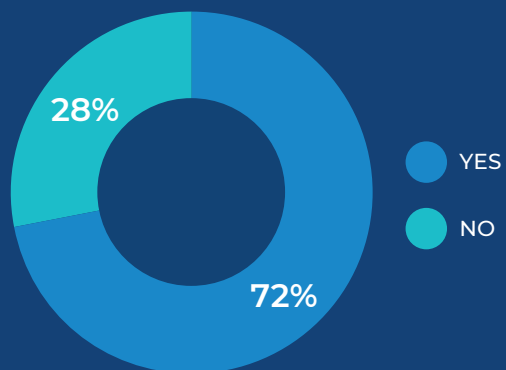


FIG 17

ing whether employer matching can effectively help raise retirement savings, especially for low-income participants.<sup>17,18</sup>

- We asked those who initially chose laddering lifetime income products and those who switched to laddering lifetime income products after the monthly premium intervention whether they were willing to increase their monthly premium amount by 30% if their employer would match the increase dollar for dollar. Over 70% of the respondents indicated they would be willing to utilize employer matching and increase their purchase amount.
- We found that certain groups fell slightly behind the average, including various racial groups, blue-collar workers, and people with low accumulated assets. This highlights a similar problem when using employer matching to increase retirement savings: The most vulnerable groups with liquidity constraints cannot take advantage

tage of employer matching.

- We also found that age and time preferences were significantly related to the effectiveness of employer matching. Controlling for respondents' social-demographic and financial differences, we plotted the predicted probability of increasing laddering lifetime investment with employer matching.
- The younger respondents showed a higher tendency to take advantage of employer matching. Participants' planning horizons become shorter as they get older, leading them to become more rigid in their financial decisions and less motivated to adopt laddering lifetime income products with a deferral period. Although participants typically do not consider investing in lifetime income products until close to their retirement age, a window of opportunity begins as early as their late 40s, when they may be receptive to lifetime income products.

## PROBABILITY OF INCREASING LIFETIME INCOME INVESTMENT WITH EMPLOYER INCENTIVE

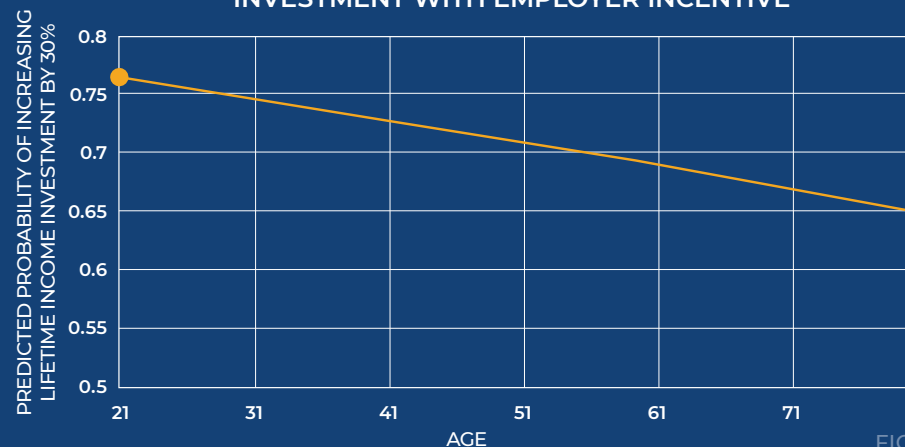


FIG 18

# Introduction to the Defined Contribution Lifetime Income Products Preference Study

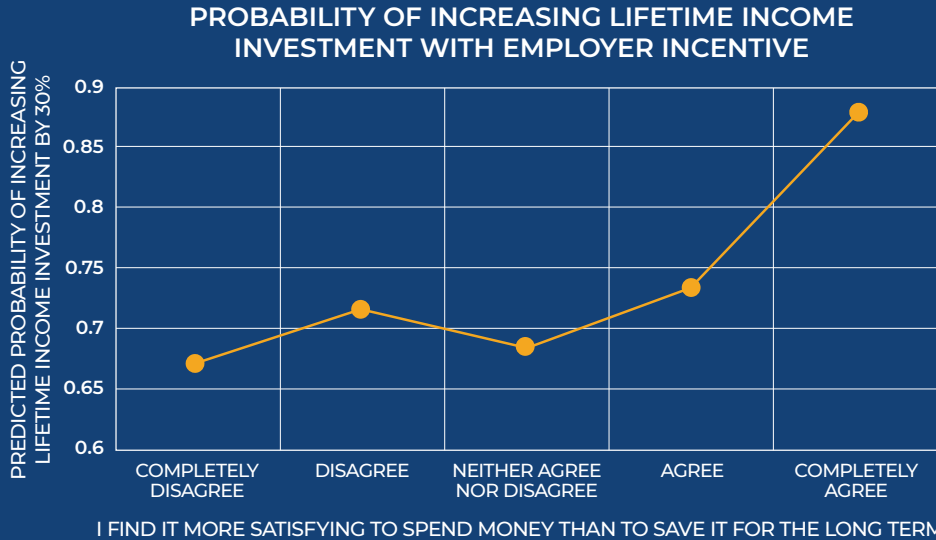


FIG 19

## CHOSE TO USE LADDERING LIFETIME INCOME WITH EMPLOYER MATCHING

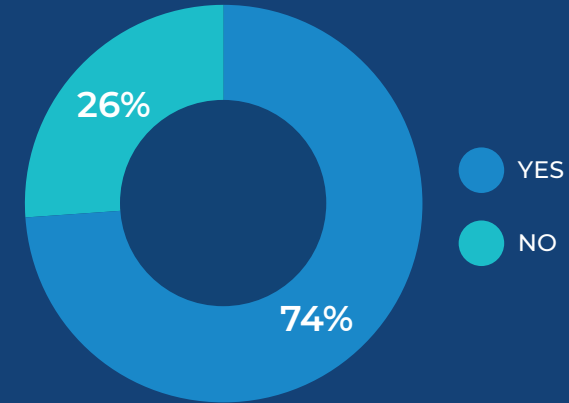


FIG 20

- We also found that the predicted probability of increasing laddering lifetime investment was significantly high (nearly 90%) for “spenders” with employer matching. As previously noted, present-oriented participants are hesitant to adopt laddering lifetime products because of the longer deferral period, preferring to receive immediate benefits. However, it is possible to help incentivize them. Employer matching benefits can help motivate them to increase their investment in laddering lifetime income products, thereby helping spenders enjoy a similar level of lifetime income as future-oriented participants.

### FREE MONEY IS (ALMOST) THE PERFECT MATCH

Finally, we tested the same employer-matching scenario for the

respondents who still did not choose a laddering lifetime income product after the monthly premium intervention. We asked them if they would choose the laddering lifetime income product if their employer matched every dollar of their investment up to 30% of the total monthly premium amount.

About 74% of the respondents indicated they would switch to laddering lifetime income products with employer matching. We also found that certain racial groups were more sensitive about this additional employer benefit. For example, 90% of the Asian respondents reacted to employer matching, while the number of Hispanics and other groups was below average. **PL**



## Conclusion & Findings

As DC plans are the dominant type of employer-sponsored retirement plan, they should give participants the ability to turn some of their plan balance into guaranteed lifetime income to protect against the risk that they will outlive their retirement assets. At the same time, there is a need to address the challenge of helping participants realize how lifetime income will help them achieve their retirement expectations. This study provides insight into participants' financial and annuity knowledge levels as well as their preferences regarding purchase frequency, when to start income payments, and incentives. Participants with a higher level of financial literacy were found to be more likely to understand in-plan lifetime income options, resulting in a higher election rate. This suggests that the first step in the process should be boosting participants' financial literacy. The findings from this study can be leveraged when making decisions about providing financial education resources, personalizing communications to participants, and selecting lifetime income products for defined contribution plans. **PL**



**DESTINY LARA**

AVP Financial Education and Participant Experience • Pacific Life

## About the Authors

### QI SUN

Qi Sun, PhD, CFP® is a financial economist for Pacific Life's Institutional Division. In her role, Qi conducts research on how to help individuals improve their retirement security. She is a current member of the Executive Committee for the Defined Contribution Institutional Investment, Retirement Research Center and the Strategic Planning Committee for American Council on Consumer Interests. Qi holds a bachelor's degree in finance from Donghua University, a master's degree in personal financial planning from the University of Missouri, Columbia, and a doctorate in personal financial planning from Texas Tech University. **CONTACT:** [qi.sun@pacificlife.com](mailto:qi.sun@pacificlife.com)

### THOMAS KORANKYE

Thomas Korankye\*, PhD, CFP® is an assistant professor of personal and family financial planning at the University of Arizona. His current research focuses on families' and individuals' financial decisions and well-being, including retirement savings, education financing, and experiential well-being. He is an editorial board member of the Journal of Financial Counseling and Planning. Thomas holds a master's degree and a doctorate in personal financial planning from Texas Tech University.

\*Pacific Life is unaffiliated with Thomas Korankye

# Appendix

**TABLE 1 / RESPONDENTS' CHOICES OF LIFETIME INCOME PRODUCTS**

| PERCENTAGE OF RESPONDENTS |                           | Immediate       | Laddering       | Not using       |
|---------------------------|---------------------------|-----------------|-----------------|-----------------|
|                           |                           | Lifetime Income | Lifetime Income | Lifetime Income |
| <b>INCOME</b>             | <\$50,000                 | 47%             | 43%             | 10%             |
|                           | \$50,000 - \$100,000      | 41%             | 51%*            | 8%              |
|                           | \$100,000 - \$150,000     | 42%             | 48%             | 10%             |
|                           | \$150,000 +               | 43%             | 49%             | 8%              |
|                           | <\$5000                   | 48%             | 43%             | 9%              |
|                           | \$5,000 - \$20,000        | 44%             | 53%*            | 4%              |
| <b>INVESTABLE ASSETS</b>  | \$20,000 - \$50,000       | 41%*            | 49%             | 10%             |
|                           | \$50,000 - \$100,000      | 47%             | 43%             | 10%             |
|                           | \$100,000 - \$150,000     | 40%*            | 50%*            | 9%              |
|                           | \$150,000 +               | 43%             | 47%             | 10%             |
| <b>GENDER</b>             | Female                    | 42%             | 48%             | 9%              |
|                           | Male                      | 44%             | 47%             | 9%              |
| <b>ETHNICITY</b>          | White                     | 44%             | 47%             | 9%              |
|                           | Black                     | 42%             | 52%             | 6%              |
|                           | Asian                     | 43%             | 45%             | 12%             |
|                           | Other Races               | 44%             | 46%             | 10%             |
|                           | Hispanic                  | 51%             | 39%             | 9%              |
| <b>MORTGAGE</b>           | Mortgage Payer            | 41%*            | 50%*            | 9%              |
|                           | Non-Mortgage Payer        | 44%             | 46%             | 9%              |
| <b>JOB OCCUPATION</b>     | White-collar More Skilled | 40%*            | 51%*            | 9%              |
|                           | White-collar Less Skilled | 48%             | 43%             | 9%              |
|                           | Blue-collar More Skilled  | 44%             | 46%             | 10%             |
|                           | Blue-collar Less Skilled  | 41%             | 50%             | 9%              |
|                           | Other Industries          | 47%             | 45%             | 8%              |

**TABLE 2 / INCREASE INVESTMENT IN LADDERING LIFETIME INCOME OPTION WITH EMPLOYER MATCHING**

|                                   | Percentage of Respondents |      |     |
|-----------------------------------|---------------------------|------|-----|
|                                   | Yes                       | No   |     |
| <b>INCOME</b>                     | <\$50,000                 | 71%  | 29% |
|                                   | \$50,000 - \$100,000      | 72%  | 28% |
|                                   | \$100,000 - \$150,000     | 73%  | 27% |
|                                   | \$150,000+                | 72%  | 28% |
|                                   | <\$5000                   | 69%  | 31% |
|                                   | \$5,000 - \$20,000        | 73%  | 27% |
| <b>INVESTABLE ASSETS</b>          | \$20,000 - \$50,000       | 74%  | 26% |
|                                   | \$50,000 - \$100,000      | 68%  | 32% |
|                                   | \$100,000 - \$150,000     | 74%  | 26% |
|                                   | \$150,000 +               | 73%  | 27% |
| <b>GENDER</b>                     | Female                    | 73%  | 27% |
|                                   | Male                      | 71%  | 29% |
| <b>ETHNICITY</b>                  | White                     | 72%  | 28% |
|                                   | Black                     | 72%  | 28% |
|                                   | Asian                     | 73%  | 27% |
|                                   | Other Races               | 68%  | 32% |
|                                   | Hispanic                  | 74%  | 26% |
| <b>MORTGAGE</b>                   | Mortgage Payer            | 72%  | 28% |
|                                   | Non-Mortgage Payer        | 73%  | 27% |
| <b>JOB OCCUPATION</b>             | White-collar More Skilled | 74%* | 26% |
|                                   | White-collar Less Skilled | 70%  | 30% |
|                                   | Blue-collar More Skilled  | 70%  | 30% |
|                                   | Blue-collar Less Skilled  | 69%  | 31% |
|                                   | Other-Industries          | 71%  | 29% |
| <b>FINANCIAL/ANNUITY LITERACY</b> | Low Financial Knowledge   | 71%  | 29% |
|                                   | High Financial Knowledge  | 73%  | 27% |
|                                   | Low Annuity Knowledge     | 72%  | 28% |
|                                   | High Annuity Knowledge    | 72%  | 28% |

**TABLE 3 / SWITCH TO LADDERING LIFETIME INCOME OPTION WITH EMPLOYER MATCHING**

|                                   | Percentage of Respondents |      |     |
|-----------------------------------|---------------------------|------|-----|
|                                   | Yes                       | No   |     |
| <b>INCOME</b>                     | <\$50,000                 | 74%  | 26% |
|                                   | \$50,000 - \$100,000      | 73%  | 27% |
|                                   | \$100,000 +               | 73%  | 27% |
|                                   | <\$5000                   | 73%  | 27% |
|                                   | \$5,000 - \$20,000        | 83%  | 17% |
|                                   | \$5,000 - \$20,000        | 73%  | 27% |
| <b>INVESTABLE ASSETS</b>          | \$20,000 - \$50,000       | 78%  | 22% |
|                                   | \$50,000 - \$100,000      | 73%  | 27% |
|                                   | \$100,000 - \$150,000     | 64%  | 36% |
|                                   | \$150,000 +               | 76%  | 24% |
| <b>GENDER</b>                     | Female                    | 73%  | 27% |
|                                   | Male                      | 75%  | 25% |
| <b>ETHNICITY</b>                  | White                     | 73%  | 27% |
|                                   | Black                     | 78%  | 22% |
|                                   | Asian                     | 90%* | 10% |
|                                   | Other Races               | 58%* | 42% |
|                                   | Hispanic                  | 68%* | 32% |
| <b>MORTGAGE</b>                   | Mortgage Payer            | 76%  | 24% |
|                                   | Non-Mortgage Payer        | 68%  | 32% |
| <b>JOB OCCUPATION</b>             | White-collar More Skilled | 76%  | 24% |
|                                   | White-collar Less Skilled | 71%  | 29% |
|                                   | Blue-collar More Skilled  | 73%  | 27% |
|                                   | Blue-collar Less Skilled  | 71%  | 29% |
|                                   | Other-Industries          | 69%  | 31% |
| <b>FINANCIAL/ANNUITY LITERACY</b> | Low Financial Knowledge   | 74%  | 26% |
|                                   | High Financial Knowledge  | 73%  | 27% |
|                                   | Low Annuity Knowledge     | 73%  | 27% |
|                                   | High Annuity Knowledge    | 75%  | 25% |

# Guide to Charts & Graphs

ALL CHARTS & GRAPHS ARE DERIVED FROM STUDIES CONDUCTED BY PACIFIC LIFE UNLESS OTHERWISE NOTED.

- P. 7** Fig. 1 Retirement Income Solutions Offered or Considering Adding (Source: 2023 PGIM The Evolving DC Landscape [https://cdn.pficdn.com/cms/dcsolutions/sites/default/files/PGIM\\_The\\_Evolving\\_DC%20Landscape\\_ADA.pdf](https://cdn.pficdn.com/cms/dcsolutions/sites/default/files/PGIM_The_Evolving_DC%20Landscape_ADA.pdf))
- P. 9** Fig. 2 Predicted Financial Well-Being Scores
- P. 10** Fig. 3 Relationship Between Financial Literacy and Financial Well-Being
- P. 10** Fig. 4 Word Cloud
- P. 12** Fig. 5 Financial/Annuity Literacy Score with Ethnicity/Gender
- P. 13** Fig. 6 Annuity Literacy Score over Investable Assets
- P. 14** Fig. 7 Perception vs. Reality
- P. 16** Fig. 8 Indifference Between Payout Ages
- P. 17** Fig. 9 Preference of Using Laddering Lifetime Income Between the Payout Ages of 65 and 70
- P. 17** Fig. 10 Respondent's Choices of Lifetime Income Products
- P. 18** Fig. 11 Respondents Who Chose Not to Use Any Lifetime Income Products
- P. 19** Fig. 12 Predicted Chance to Use Lifetime Income Products
- P. 20** Fig. 13 Understanding Employees' Financial Wellbeing
- P. 20** Fig. 14 Three-Part Graphic Cluster Showing Three Approaches to Providing Such Assistance
- P. 21** Fig. 15 No Lifetime Income Switch to Laddering Lifetime Income / Income / Gender / Today vs. Tomorrow / Spender vs. Saver
- P. 22** Fig. 16 Immediate Lifetime Income Switch to Laddering Lifetime Income / Income / Gender / Today vs. Tomorrow / Spender vs Saver
- P. 23** Fig. 17 Increase Invest in Laddering Lifetime Income Option with Employer Matching
- P. 23** Fig. 18 Probability of Increasing Lifetime Income Investment with Employer Incentive (Age)
- P. 24** Fig. 19 Probability of Increasing Lifetime Income Investment with Employer Incentive (Time Preference)
- P. 24** Fig. 20 Choose to Use Laddering Lifetime Income with Employer Matching

## Footnotes

1. Butrica, B. A., Smith, K. E., & Iams, H. M. (2012). This is not your parents' retirement: comparing retirement income across generations. *Soc. Sec. Bull.*, 72, 37.
2. 2023 PGIM The Evolving DC Landscape [https://cdn.pficon.com/cms/dcsolutions/sites/default/files/PGIM\\_The\\_Evolving\\_DC%20Landscape\\_ADA.pdf](https://cdn.pficon.com/cms/dcsolutions/sites/default/files/PGIM_The_Evolving_DC%20Landscape_ADA.pdf)
3. [https://www.limra.com/siteassets/research/research-benchmarks/guaranteed-income-investment-options-on-dc-plans-in-plan-glwb-and-dia-availability-and-election-tracking-survey/guaranteed-income-investment-options-in-dc-plans\\_2020-data.pdf](https://www.limra.com/siteassets/research/research-benchmarks/guaranteed-income-investment-options-on-dc-plans-in-plan-glwb-and-dia-availability-and-election-tracking-survey/guaranteed-income-investment-options-in-dc-plans_2020-data.pdf)
4. [https://files.consumerfinance.gov/f/201512\\_cfpb\\_financial-well-being-user-guide-scale.pdf](https://files.consumerfinance.gov/f/201512_cfpb_financial-well-being-user-guide-scale.pdf)
5. This is based on logistic regression results that include factors relating to income, wealth, social demographics, education, industry, DC/DB plan type, financial knowledge, annuity literacy, and investment risk preferences.
6. Results are based on logistic regression that includes factors relating to income, wealth, social demographics, education, industry, DC/DB plan type, and investment risk preferences.
7. Figure 5 represent means of financial literacy score and annuity literacy score for each segment group.
8. Angrisani, M., & Casanova, M. (2021). What you think you know can hurt you: under/over confidence in financial knowledge and preparedness for retirement. *Journal of Pension Economics & Finance*, 20(4), 516-531.
9. The immediate and laddering annuity factors are estimated internally by Pacific Life. The testing scenarios are only available for respondents with DC plans.
  - We assumed respondents would use 30% of their retirement savings to purchase lifetime income options.
  - Respondents are assigned to different groups of purchase/payout amounts based on their annual income.
  - We estimated each income group's average retirement savings balance based on the 2020 Health and Retirement Study.
10. Scott, J. S., Watson, J. G., & Hu, W. Y. (2011). What makes a better annuity? *Journal of Risk and Insurance*, 78(1), 213-244.
11. Harrison, Glenn, W., Morten I. Lau, and Melonie B. Williams. 2002. "Estimating Individual Discount Rates in Denmark: A Field Experiment." *American Economic Review*, 92 (5): 1606-1617.
12. Bradford, D., Courtemanche, C., Heutel, G., McAlvanah, P., & Ruhm, C. (2017). Time preferences and consumer behavior. *Journal of Risk and Uncertainty*, 55, 119-145.
13. 2023 The State of Employee Financial Wellness
14. Greenwald 2021 In-Plan Insights on Retirement Income
15. Ülkümen, G., Thomas, M., & Morwitz, V. G. (2008). Will I spend more in 12 months or a year? The effect of ease of estimation and confidence on budget estimates. *Journal of Consumer Research*, 35(2), 245-256).
16. U.S. Bureau of Labor Statistics, Current Employment Statistics survey
17. Mitchell, O. S., Utkus, S. P., & Yang, T. (2007). Turning workers into savers? Incentives, liquidity, and choice in 401 (k) plan design. *National Tax Journal*, 60(3), 469-489
18. Engelhardt, G. V., & Kumar, A. (2003). Understanding the impact of employer matching on 401 (k) saving. *Research Dialogue*, 76, 1-12.)

## Disclosure

Pacific Life, its affiliates, its distributors, and respective representatives do not provide tax, accounting, or legal advice. Any taxpayer should seek advice based on the taxpayer's particular circumstances from an independent tax advisor or attorney.

Pacific Life is a product provider. It is not a fiduciary and therefore does not give advice or make recommendations regarding insurance or investment products. Pacific Life, its affiliates, its distributors, and respective representatives do not provide any employer-sponsored qualified plan administrative services or impartial advice about investments and do not act in a fiduciary capacity for any plan.

Pacific Life refers to Pacific Life Insurance Company and its subsidiary Pacific Life & Annuity Company. Insurance products can be issued in all states, except New York, by Pacific Life Insurance Company and in all states by Pacific Life & Annuity Company. Product availability and features may vary by state. Each insurance company is solely responsible for the financial obligations accruing under the products it issues.



**PACIFIC LIFE**