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PARTICIPANT ATTITUDES TOWARD GUARANTEED INCOME IN A DEFINED-CONTRIBUTION PLAN

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ABSTRACT

The Setting Every Community for Retirement Enhancement Act (SECURE Act) of 2020 provides additional protections to retirement plan sponsors who add lifetime income products to defined-contribution plans. In a survey of defined-contribution plan participants, we find that nearly twice as many participants prefer a mix of annuitized income (such as a pension) and investments to a system that offers only investments or only a pension. When given a choice to allocate savings among stocks, bonds, and an income annuity, overall respondents would place 33.5 percent of their total retirement savings in an income annuity, while older and average-income respondents prefer higher annuity allocations. The most important attribute of a retirement savings plan that participants value is whether the plan design helps them understand how much they can safely spend in retirement. Eighty-one percent of participants indicate that they are somewhat or highly likely to prefer a retirement plan that substitutes guaranteed income for bond investments. The peace of mind offered by a product that provides a guarantee of lifetime income, the reduced fear of outliving savings, and the ability to budget spending in retirement are the most frequently cited reasons for preferring an annuity.

INTRODUCTION

Many Americans are approaching their retirement with Social Security as their only protected income. The decline in traditional defined-benefit (DB) retirement pension plans that pay a monthly income is requiring many Americans to assume the risk of determining how best to spend their accumulated savings in retirement without running out of money. Annuities can fulfill the role that traditional DB pension plans played by providing a monthly income for life, but the switch to defined-contribution (DC) plans has not resulted in large numbers of people choosing to purchase income annuities after they retire.

The Setting Every Community for Retirement Enhancement Act (SECURE Act) of 2020 provides additional protections to retirement plan sponsors who add lifetime income products to DC plans. Safe harbor protections should reduce the perceived cost of adding annuities as an investment option within 401(k)s, and more than half of plan sponsors indicated in a 2021 survey that they were moderately or very interested in adding annuities to their DC plan. Forty-three percent of respondent plan sponsors who did not intend to add annuities indicated that their concerns about participant use were a major reason for avoiding annuities, up from 28 percent in 2020 (Alight 2021).

Concern about employee interest in buying annuities is understandable, since far fewer Americans purchase income annuities than economic models predict (Davidoff, Brown, and Diamond 2005). Rates of annuitization are higher for workers who participate in plans that allow them the explicit choice between annuitizing or taking a lump sum. For example, the percentage of workers in the Teachers Insurance and Annuity Association of America (TIAA) DC plan who chose to annuitize at least a fraction of their retirement assets averaged 25 percent in the 10 years between 2008 and 2017 (Brown, Poterba, and Richardson 2019). In a review of prior research of workers eligible to receive a pension who are given a choice to instead take a lump-sum payment, 41 percent of pension plan participants chose to annuitize their retirement savings (Banerjee 2013). Benartzi, Previtero, and Thaler (2011) found that about half of employees in two large DB plans chose an annuitized income over a lump-sum option. Preference for lifetime income over a lump sum of assets suggests that there could be a large percentage of workers contributing to DC plans who would also value having the ability to trade retirement savings for lifetime income.

The infrequent purchase of annuities may not be surprising when most American workers save automatically in default investment funds and carry this wealth into retirement without also defaulting into an investment that provides a stream of income. The failure to make an investment choice that reflects a worker's preference for lifetime income is consistent with the literature on active choice and the power of defaults. For example, employers increased DC enrollment by 28 percentage points simply by asking new hires to make an active decision about saving rather than relying on them to eventually sign up for their DC plan (Carroll et al. 2009). The cost of making an active choice might also explain the wide difference between employees' low willingness to pay for lifetime income (Fitzpatrick 2015) and their unwillingness to sell lifetime income for a lump-sum payment (Chalmers and Reuter 2012). In 2006, only 19 percent of workers invested in target-date retirement funds that automatically rebalance and maintain an age-appropriate asset allocation. In 2016, 52 percent of workers invested in target-date funds after legislation encouraged employers to use them as the default investment choice (Investment Company Institute 2020). It is likely that annuitization rates could be increased at retirement by simply asking employees how much of their savings they would like to annuitize or defaulting them into a partially annuitized investment instrument.

The failure to annuitize is often seen as a puzzle since risk-averse retirees should prefer to pool longevity risk through annuitization rather than retain this risk with no expected spending benefit (Yaari 1965). Retirees with significant assets who do not annuitize often spend down their savings only when they have an emergency expense, which results in them spending less on maintaining a preretirement lifestyle than is optimal (Poterba, Venti, and Wise 2011). An unwillingness to spend down savings may explain why retirees with higher annuitized income are more satisfied than those with an equal amount of non-annuitized savings (Panis 2004). Among survey respondents, 79 percent believe that the average retiree does not know enough about managing investments to make their retirement savings last, and 73 percent believe that most workers do not have the financial skills to manage their money in retirement (Oakley and Kenneally 2019).

Prior academic studies find evidence of consumer interest in lifetime retirement income, but no study has surveyed DC plan participants to carefully gauge demand for a range of possible annuitization options. Unlike prior studies that evaluate interest in lifetime income based on lump-sum choices, our study explores trade-offs among investments and lifetime income among workers, many of whom do not have access to a DB plan. We find that nearly twice as many participants prefer a mix of annuitized income, such as a pension and investments, to a system that offers only investments or only a pension. Respondents would allocate an average of 33.5 percent of their total retirement savings to guaranteed lifetime income; workers close to retirement with incomes between $50,000 and $100,000 prefer higher allocations. The most important attribute participants value of a retirement savings plan is whether the plan allows the participant to understand how much they can safely spend from their savings in retirement. Eighty-one percent of participants indicate that they are somewhat or highly likely to prefer a retirement plan that substitutes guaranteed income for bond investments. The peace of mind offered by a product that provides a guarantee of lifetime income, the reduced fear of outliving savings, and the ability to budget spending in retirement are the most frequently cited reasons for preferring an annuity.

I. LITERATURE REVIEW

Planning for a financially secure retirement requires the ability to estimate numerous factors, including interest rates and inflation, as well as expected spending on housing, travel, health care, and so on. It also requires the ability to estimate how long someone will live and, therefore, how long they will need their retirement assets to last. Annuity products can provide protected income in retirement or guaranteed income that lasts as long as the annuity owner lives. Why consumers do or do not choose to annuitize has been the subject of considerable research.

The roles that consumer behavior and estimation of longevity play in demand for annuity products has been discussed for decades (e.g., Modigliani 1986; Yaari 1965). Since annuities transfer an uncompensated risk of unknown longevity to an institution for little cost, economists have long questioned why so few people either choose to purchase an annuity or under-annuitize their wealth at retirement even though the economic rationale for annuitization is strong (Brown 2007). The literature suggests numerous reasons why demand for annuities is limited (known as the annuity puzzle), even though, from the viewpoint of a rational actor, annuities should be much more popular.

For example, the way that information to purchase an annuity is discussed, or framed, can have a major effect on an individual's decision to annuitize. If consumers evaluate an annuity product using an investment frame that focuses on potential investment return and risk, then annuities may appear to be an inferior investment. If instead, however, consumers evaluate an annuity product using a consumption frame, where the product protects a person's ability to have a guaranteed level of income to support consumption, then annuity products are quite attractive. Research by Brown et al. (2008) supports the hypothesis that a consumption frame is superior to an investment frame. In one study, researchers found that 72 percent of participants preferred a life annuity over a savings account when the choice is framed in terms of consumption, while only 21 percent prefer it when the choice is framed in terms of an investment (Brown et al. 2008).

Additional research suggests that consumers have difficulty valuing annuities and therefore have a preference for lump sums, which also helps to explain the low demand for annuity products (Brown 2013). A survey conducted a few years ago expanded on the difficulty consumers have in valuing annuity products when information is presented with varying degrees of complexity (Brown 2019). The study finds causal evidence that increasing the complexity of the annuity choice reduces the ability of people to value an annuity. Furthermore, the ability to value an annuity increases when the study is designed in a manner to induce people to think jointly about the annuitization decision as well as how quickly or slowly they should spend down assets in retirement. Annuities can solve many of the complex problems people face in planning for and during retirement, such as when to retire and how much to spend in retirement (Benartzi, Previtero, and Thaler 2011).

Individuals who do not believe that they will live long in retirement might not be attracted to a financial product whose price is based on the expected longevity of annuitants. O'Dea and Sturrock (2020) find that most individuals underestimate their expected longevity, and that this underestimation of the expected payout from annuities can explain low demand for annuitization. Valuation of annuitization could also be influenced by behavioral factors that can result in more-favorable attitudes toward annuities even when the actuarial value is below the market price. For example, smokers should optimally be less interested in annuities because they can expect to receive fewer lifetime income payments. Hurwitz and Sade (2020), however, find that smokers prefer to fully annuitize rather than receive a lump-sum retirement payment, and that they are also less likely to partially annuitize. A possible explanation is that smokers recognize that they have problems with self-control and may see annuities as a way to "tie themselves to the mast" by restricting their ability to run out of money from overspending (Laibson 1997).

Economists now stress that both behavioral and institutional factors play an important role in whether people choose to purchase an annuity. The decline of traditional DB plans that paid out a stream of income payments during retirement, as well as the anticipated decline in real Social Security income payments, should only increase the interest in annuities as people seek to mirror the lifetime benefit payment feature of a pension with the assets accumulated in a DC plan. Brown, Poterba, and Richardson (2019) find that demand for income annuities among participants has decreased in recent decades, but that this decline appears to mirror decreasing fair annuity income payments that result from falling interest rates. While the fraction of new retirees selecting an income annuity fell from 54 percent in 2000 to 19 percent in 2017, the percentage of retirees who waited until they were forced to withdraw retirement savings through required minimum distributions increased from 9 percent to 58 percent. The authors also found that, as a person approaches age 70, he or she is less likely to purchase an annuity. The failure to annuitize might result from consumers' inability to understand the opportunity cost of failing to annuitize in a low-interest rate environment. When income quotes this year are less generous than they were last year, consumers may believe that annuities provide less of a fair deal, when in fact low interest rates also impact the amount of spending that can be withdrawn from a bond portfolio over time. Demand for annuities might fall when interest rates are low because the lower income that can be generated from a portfolio of bonds is less salient than the income quote on an annuity.

Demand for annuities in the economic literature depends on a number of individual financial and preference characteristics. Most studies calculate an optimal allocation to annuities that is far higher than the amount that retirees actually annuitize. For example, Milevsky and Young (2007) estimate that a risk-averse retiree with no bequest motive should annuitize 52 percent of financial assets when they have $50,000 of savings and 91 percent of financial assets at $1 million of savings. Horneff, Maurer, and Rogalla (2010) estimate optimal annuitization of about 80 percent, given reasonable assumptions about risk aversion and income replacement rates. Most models estimate that, all else equal, retirees with a higher income during their working lives and greater retirement savings (who have a lower Social Security income replacement rate) should be more attracted to income annuities. This is because lower-income workers will have a greater percentage of their lifestyle replaced by Social Security, which acts as an inflation-protected lifetime annuity. Likewise, workers who are eligible to receive a DB pension should optimally annuitize less of their financial assets (Dushi and Webb 2004). Retirees who would like to leave their assets upon death as a bequest to a family member or charity might be less inclined to pay for a stream of income payments when that lump sum could instead be used as a bequest upon death (Lockwood 2012).

II. DATA

Attitudes toward annuitization are evaluated through a 25-question survey (appendix 1) distributed to a random sample of DC plan participants through a recordkeeper in late September and early October 2020. The existing literature primarily evaluates annuitization preference as a binary decision (lump sum or full annuitization). To better understand whether workers prefer to allocate a portion of savings to an income annuity, we develop questions that elicit preference for a hypothetical retirement portfolio that contains stocks, bonds, and an income annuity. We evaluate preference for annuitization using current annuity income quotes, but also provide information about the opportunity cost of failing to annuitize by demonstrating the probabilities of outliving assets and the income that could be produced from bond assets. We include an investment literacy instrument (Finke, Howe, and Huston 2017) to evaluate the impact of investment knowledge on annuity preference, as well as questions about smoking behaviors and expectations of longevity to evaluate the possible effect of adverse selection. When the recordkeeper had received 400 completed online responses, the survey was terminated.

Since the survey was conducted through a recordkeeper, the participants represented a range of employers and geographical regions. Occupations include health care (16.3 percent), information technology (15.8 percent), management (11.8 percent), finance and banking (9.0 percent), and clerical (5.0 percent), among others. Among the respondents, 35 percent lived in the South, 24.8 percent in the Midwest, 22.0 percent in the Northeast, and 18.3 percent in the West; 89 percent held assets in a 401(k) plan, 21.8 percent in a 403(b), and 7.5 percent in a 457 plan; 35 percent indicated that they invested in the default (target-date) fund, 31.5 percent chose their own funds, 25.0 percent invested in a mix of defaults and other investments, and 8.5 percent did not know.

In addition to descriptive comparisons, we conducted a series of binary logistic multivariate analyses. Since older participants often have larger account balances, multivariate analyses allow us to compare the independent impact of retirement savings, age, and other control variables. Preference for annuitization is modeled as a function of education, investment knowledge, income, gender, race or ethnicity, total retirement savings, age, expected receipt of pension income exceeding $10,000 a year, presence of minor children in the household, whether the participant is a primary decision-maker or a do-it-yourself investor, and indicators of expected longevity (e.g., history of smoking and perceived likelihood of living to age 75). Smoking and expected longevity provide insight into the presence of adverse selection among participants who do not expect to live longer than average.

III. RESULTS

Table 1 shows characteristics of sample participants. Participants in employer-sponsored retirement plans tend to be more educated and to have higher incomes than average Americans. In this sample, 72.6 percent have a four-year college or a postgraduate degree and 42.1 percent earn an income greater than $100,000. Furthermore, 22.3 percent have more than $250,000 in total retirement assets and 23.3 percent have assets between $100,000 and $249,999. Most of the sample, 59.5 percent, are currently married, 68.5 percent have children, 70.3 percent are the primary decision-maker in their households, and 56.5 percent consider themselves to be a do-it-yourself investor. Of the sample, 59.3 percent are women, 75.3 percent White, 8.0 percent Black, 7.2 percent Hispanic (any race), and 9.6 percent are other race or ethnicity. Investment literacy is modest (average of 2.02 questions correct out of 4). Finally, 37.5 percent of the sample have smoked more than 100 cigarettes in their life and 19.5 percent believe that they have a 50 percent chance or less of living to the age of 75[1].

TABLE 1: *Sample Characteristics*

	Sample
Gender	
Male	40.8%
Female	59.3%
Race/Ethnicity	
White	75.3%
Black	8.0%
Hispanic (any race)	7.2%
Other	9.6%
Education	
Less than Four-Year Degree	27.6%
Four-Year Degree	44.8%
Graduate or Professional Degree	27.8%
Age	
34 and younger	26.8%
35–44	34.8%
45–54	22.0%
55 and older	16.5%
Income	
$49,999 or less	14.0%
$50,000–$74,999	22.8%
$75,000–$99,999	21.3%
$100,000–$199,999	32.8%
$200,000 or more	9.3%

	Sample
Retirement Wealth	
$24,999 or less	17.5%
$25,000–$49,999	16.3%
$50,0000–$99,999	11.0%
$100,000–$149,999	11.0%
$150,000–$249,999	12.3%
$250,000–$499,999	10.8%
$500,000 or more	11.5%
Married	59.5%
Have Children	68.5%
Do-It-Yourself Investor	56.5%
Primary Financial Decision-Maker	70.3%
Investment Literacy (out of 4)	2.02
Pension Greater than $10,000/Year	32.5%
Smoked More than 100 Cigarettes	37.5%
< = 50% Chance You Will Live to Age 75 or More	19.5%

1. Both the rates of having smoked 100 cigarettes and a pessimistic belief in the likelihood of living to age 75 are similar to larger samples of Americans from Jamal et al. (2015) and Elder (2013).

Respondents are asked whether they prefer a retirement system that provides a regular monthly income for life such as a pension, one that allows them to control their own investments, or one that provides a mix of pension-like lifetime income and investments. Almost half (49.5 percent) prefer a mix of lifetime income and investments, 26.5 percent prefer investments alone, and 24.0 percent prefer a monthly pension (figure 1).

FIGURE 1: *Preferred Retirement System*

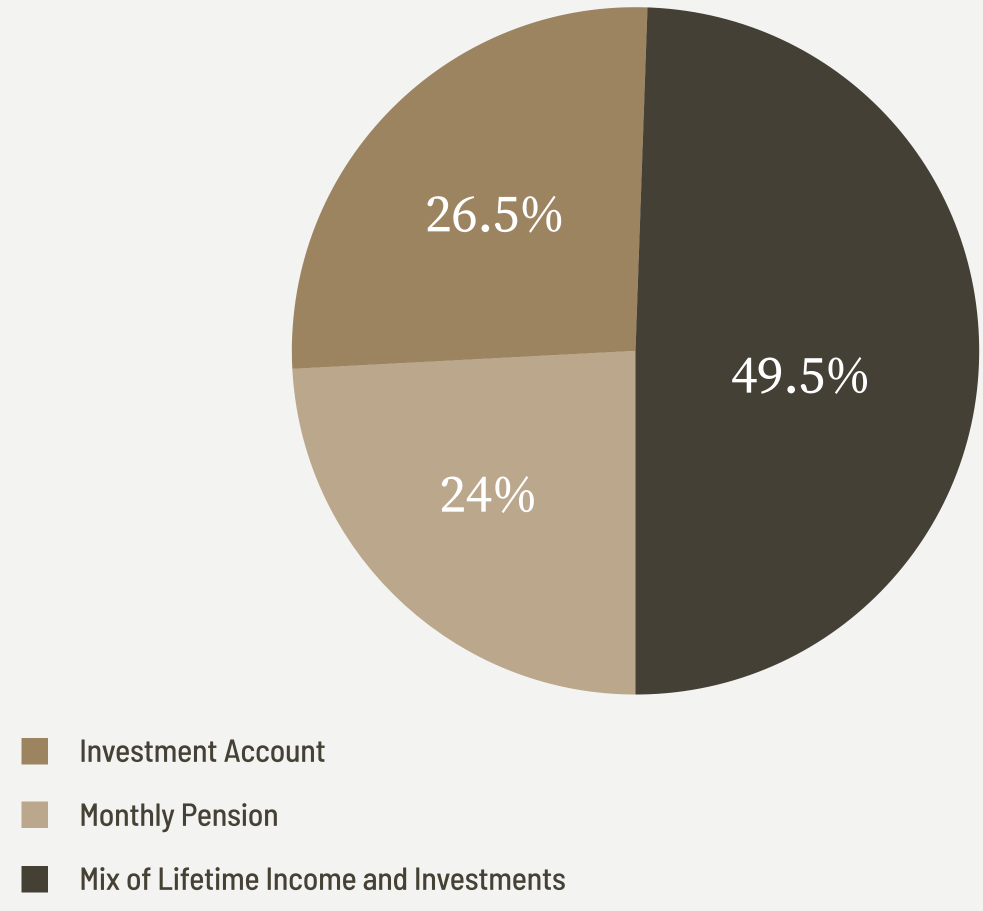


Table 2 shows the percentage of participants who prefer a monthly pension, an investment account, or a mix of a monthly pension and an investment account. Nearly half of participants prefer a mix of lifetime income and investments, while a quarter prefer either pensions only or investments only. Pension-only retirement plans are most popular among participants with less formal education, lower retirement savings, Black participants, and—surprisingly—among participants who believe that they are less likely to live beyond the age of 75. Investment-only plans are most popular among participants younger than 35, men, those with savings of between $100,000 and $499,999, those who have income between $100,000 and $199,999, and do-it-yourself investors.

Participants who most prefer a mix of investments and pensions are age 55 and older, those with income less than $50,000, women, Hispanics (any race), and

TABLE 2: *Which System Would You Prefer at Retirement?*

		Monthly Pension	Investment Account	Mix of Pension and Investments
Overall		24.0%	26.5%	49.5%
Gender	Make	25.1%	34.4%	40.5%
	Female	23.2%	21.1%	55.7%
Education	Less than Four-Year Degree	34.5%	20.0%	45.5%
	Four-Year Degree	17.9%	30.2%	52.0%
	Graduate or Professional Degree	23.4%	27.0%	49.5%
Age	34 and younger	23.4%	36.4%	40.2%
	35–44	25.2%	29.5%	45.3%
	45–54	28.4%	18.2%	53.4%
	55 and older	16.7%	15.2%	68.2%
Income	$49,999 or less	25.0%	14.3%	60.7%
	$50,000–$74,999	27.5%	19.8%	52.7%
	$75,000–$99,999	28.2%	28.2%	43.5%
	$100,000–$199,999	20.6%	33.6%	45.8%
	$200,000 or more	16.2%	25.5%	51.4%
Retirement Wealth	$24,999 or less	35.7%	14.3%	50.0%
	$25,000–$49,999	27.7%	16.9%	55.4%
	$50,0000–$99,999	22.9%	30.1%	47.0%
	$100,000–$149,999	22.7%	34.1%	43.2%
	$150,000–$249,999	22.4%	36.7%	40.8%
	$250,000–$499,999	11.6%	32.6%	55.8%
	$500,000 or more	17.4%	28.3%	54.3%
	Age 50+ with Retirement Wealth $150,000+	14.3%	18.4%	67.3%

TABLE 2: *Which System Would You Prefer at Retirement? (continued)*

		Monthly Pension	Investment Account	Mix of Pension and Investments
Race/Ethnicity	White	23.6%	28.2%	48.2%
	Black	37.5%	18.8%	43.8%
	Hispanic (any race)	10.3%	24.1%	65.5%
	Other	26.3%	21.1%	52.6%
Married		21.8%	29.0%	49.2%
Have Children		23.0%	27.4%	49.6%
Do-It-Yourself Investor		19.5%	31.4%	49.1%
Primary Financial Decision-Maker		23.5%	31.3%	45.2%
High Investment Literacy		18.4%	26.5%	55.1%
Pension Greater than $10,000/Year		26.2%	28.5%	45.4%
Smoked More than 100 Cigarettes		26.7%	26.7%	46.7%
< = 50% Chance You Will Live to Age 75 or More		29.5%	20.5%	50.0%

respondents with high investment literacy. We also sort the respondents to those over age 50 who have retirement wealth of $150,000 and find that 67.3 percent prefer a mix of lifetime income and investments, while only 14.3 percent prefer a pension and 18.4 percent prefer investments only. Preference for a mix of lifetime income and investments is higher than average among those with retirement wealth above $250,000 and income above $200,000.

Results for a multivariate analysis in table 3 model preference for a mix of guaranteed income and investments over pensions or investments only. The odds ratio is the relative likelihood that a respondent in that group would prefer a mixed option relative to the omitted reference group[2] (likelihood is measured as distance from 1, positive or negative). Women, those with a college or graduate degree, and those age 45–54 are about twice as likely to prefer a mix of guaranteed income and investments, while respondents age 55 and older are more than 200 percent more likely to prefer a mix. Respondents with higher incomes (between $75,000 and $199,000) were about 50 percent less likely to prefer a mix, as were primary financial decision-makers. In general, older and more-educated participants prefer a mix of investments and lifetime income. A separate logistic analysis predicting preference for investments only finds that men, participants younger than 45, those who have saved between $150,000 and $249,000, and those who are the primary decision-maker are more likely to prefer a DC plan that resembles the options most plans offer today. The only statistically significant predictors of pension preference

2. Omitted reference categories for categories with multiple categories are age less than 35, education less than a four-year degree, income below $50,000, retirement wealth less than $25,000, and non-White.

TABLE 3: *Predictors of a Mix of Guaranteed Income and Investments*

Variable		Odds Ratio	Significance
Female		2.036	0.003***
Age (Reference < 35)	35–44	1.465	0.210
	45–54	2.050	0.033**
	55 and Older	3.366	0.002***
Education (Reference Less than Four-Year Degree)	Four-Year Degree	2.008	0.019**
	Graduate or Professional Degree	1.844	0.068*
Income (Reference < $50,000)	$50,000–$74,999	0.737	0.896
	$75,000–$99,999	0.442	0.041**
	$100,000–$199,999	0.478	0.077*
	$200,000 or more	0.650	0.432
Retirement Wealth (Reference < $25,000)	$25,000–$49,999	1.374	0.398
	$50,0000–$99,999	0.996	0.992
	$100,000–$149,999	0.795	0.624
	$150,000–$249,999	0.715	0.456
	$250,000–$499,999	1.239	0.664
	$500,000 or more	1.269	0.638
Married		1.113	0.690
Have Children		1.131	0.656
White		0.819	0.432
Do-It-Yourself Investor		1.077	0.751
Primary Financial Decision-Maker		0.651	0.092*
High Investment Literacy		1.238	0.379
Pension Greater than $10,000/Year		0.874	0.607
Smoked More than 100 Cigarettes		0.973	0.910
< = 50% Chance You Will Live to Age 75 or More		1.069	0.811

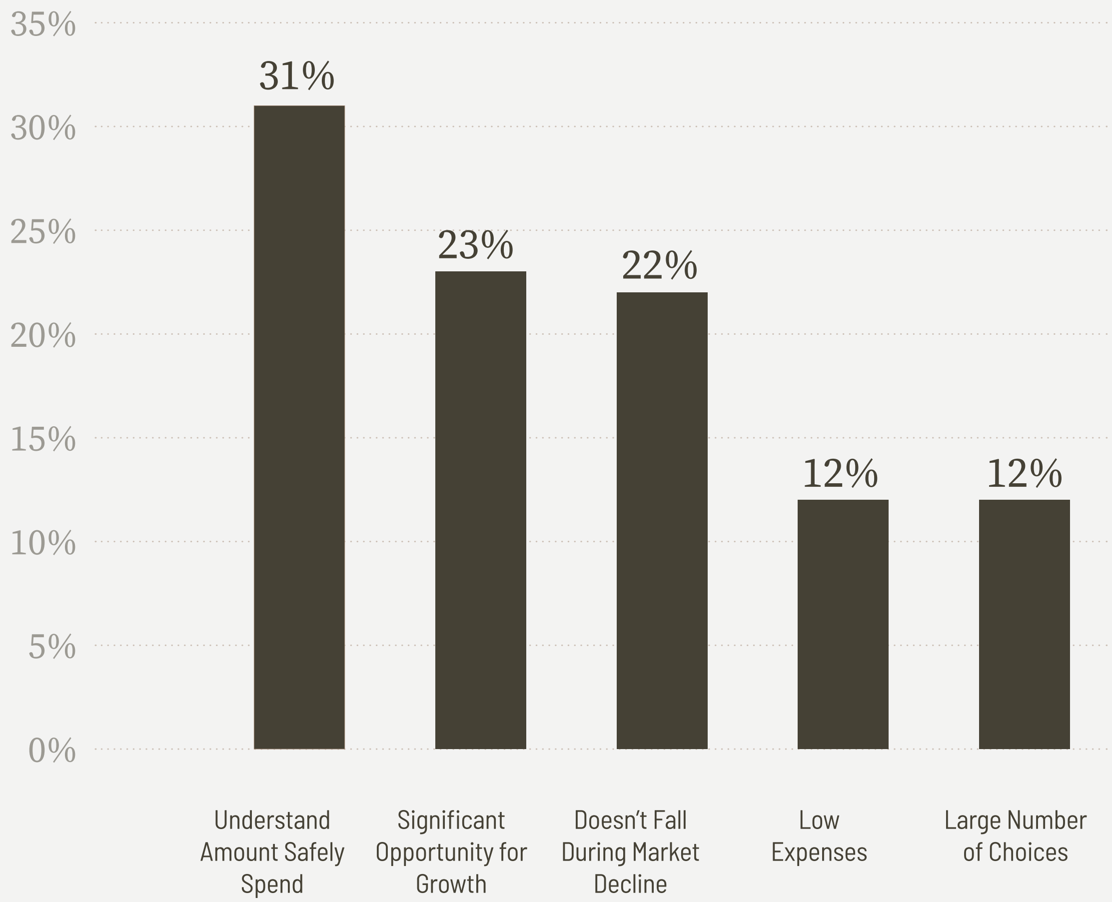
*, **, *** indicate statistical significance at $p < 0.1$, 0.05, and 0.01, respectively. N = 400.

are negative among respondents who are do-it-yourself investors, those who have a four-year college degree, and those who have between $250,000 and $499,999 in retirement savings.

To better understand why access to guaranteed lifetime income in retirement is valued by three-quarters of respondents (pension, or a mix of investments and lifetime income), we ask a series of questions to gain a deeper understanding of demand for annuitization.

Figure 2 shows responses to the question, “Once you retire, which of the following is the most important attribute of a retirement savings plan?” with five possible responses: low expenses, does not fall significantly during a market decline, provides an opportunity to achieve

FIGURE 2: *Most Important Attribute of a Retirement Savings Plan*



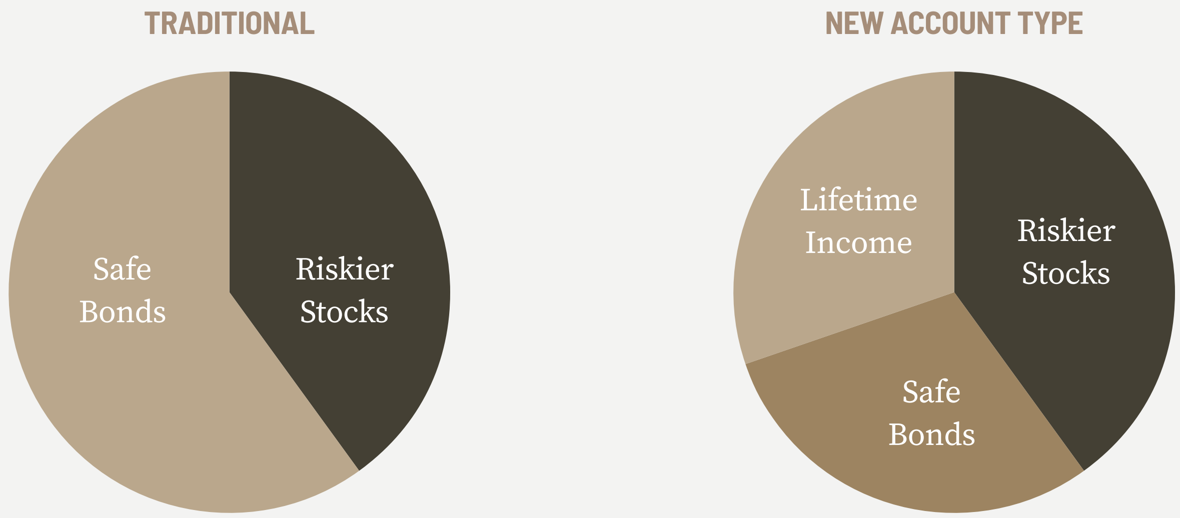
significant growth, helps me understand how much I can safely spend in retirement, and has a large number of investment choices.

The attribute most frequently selected by respondents (31 percent) was their ability to understand how much they could safely spend. Just under a quarter of respondents value an opportunity for growth and protection against a drop in value during a market decline. About one in eight believed that low expenses and a large number of choices were the most important attributes of a retirement savings plan.

Participants were then asked how likely they would be to invest in a new retirement account that substitutes a portion of their bond allocation with an instrument that provides a guaranteed income for life. Since insurance regulation requires investment in bonds to meet expected future income obligations paid to annuitants, it is appropriate to view income annuities as a component of the fixed-income allocation within a retiree's investment portfolio.

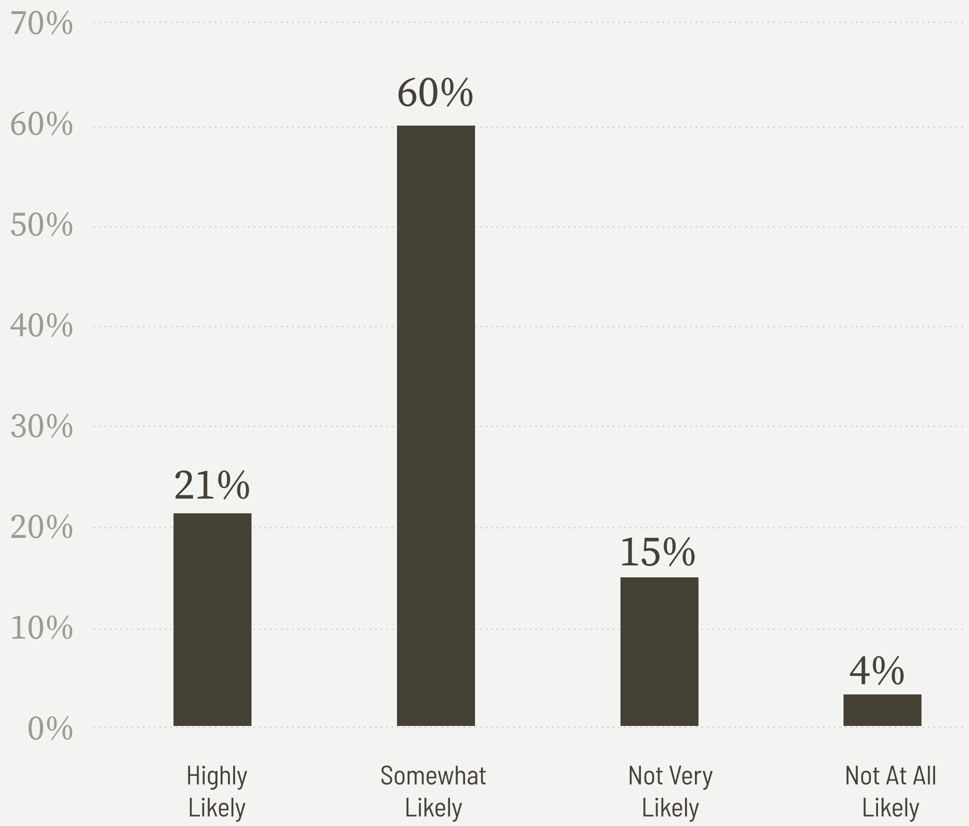
Results in figure 3 show that more than four out of five respondents had a positive opinion of retirement plans that substitute annuities for bonds: 21 percent indicated that they would be highly likely to prefer a retirement plan that substituted guaranteed income for bonds, and 60.3 percent said that they would be somewhat likely to do so. Only 19 percent were either not very likely or not at all likely to prefer a retirement plan that substitutes annuities for bonds.

The following figure is provided in the survey to clarify:



Respondents are then asked to assume that they can allocate their retirement savings among risky investments such as stocks, safe investments such as bonds, and an instrument that provides guaranteed lifetime income. They are then given the ability to select allocations among these three investment categories so that they add up to 100 percent. On average, participants would place about a third of their retirement savings in stocks, bonds, and guaranteed lifetime income (figure 4). The allocation was not biased by respondents dividing allocations into thirds. Only 4.8 percent of the sample chose either 33 percent or 34 percent allocation to an annuity, while 12.5 percent of participants would not allocate any retirement savings to an annuity. Most allocations (81 percent) fell at or below 50 percent: 5 percent chose a 30 percent allocation, 4.8 percent chose either 40 percent or 50 percent, 3.5 percent chose 20 percent, 2.8 percent

FIGURE 3: *How likely are you to prefer a retirement plan that substitutes guaranteed income for safe bond investments?*



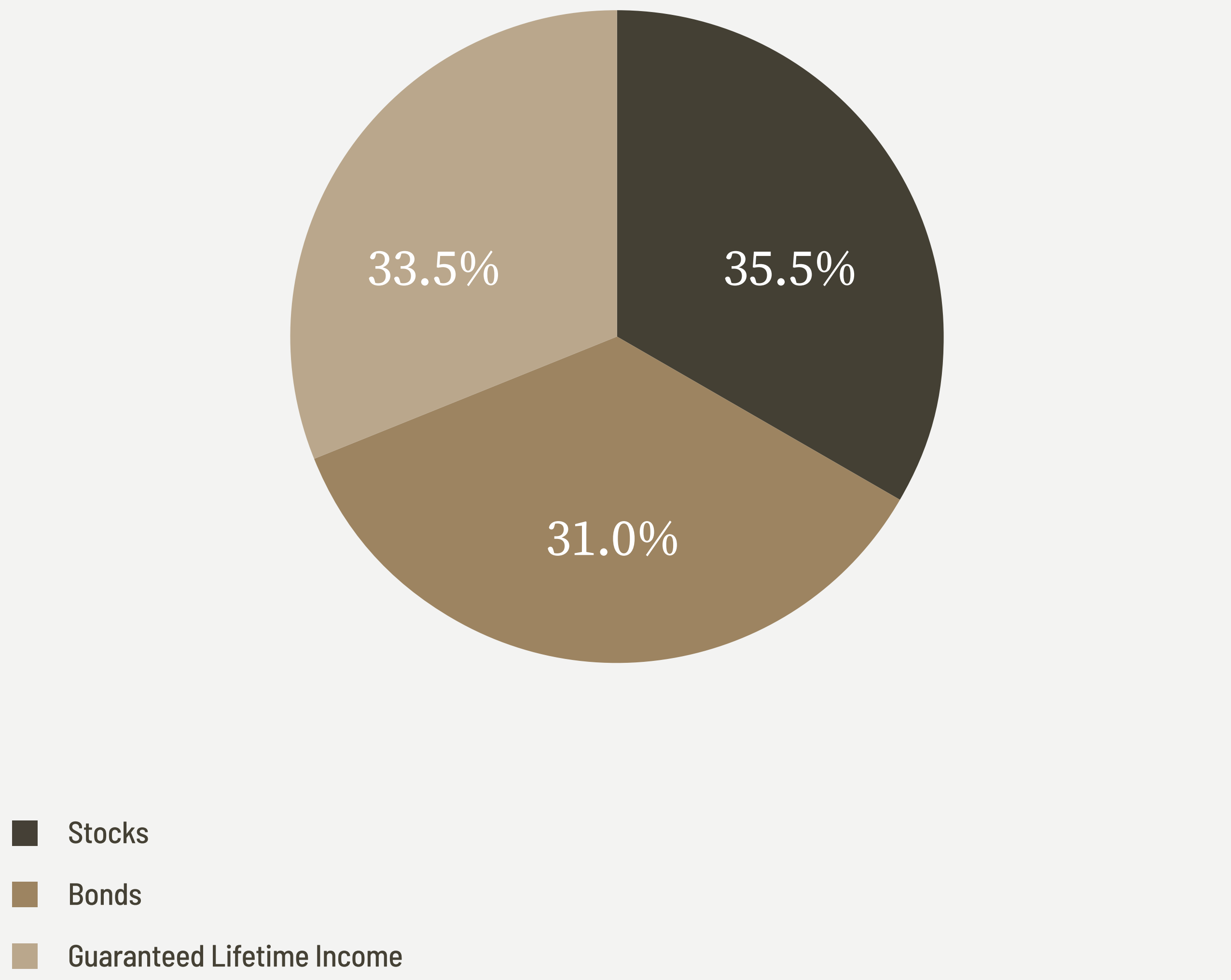
chose 10 percent, and 2.5 percent chose either 25 percent or 45 percent.

Deferred annuities allow a worker to buy dollars of fixed future retirement income at a lower price than if they wait until retirement age to buy income. When respondents are asked if they would be interested in buying future income during their working years, a large majority of participants (85 percent) indicated that they would be very interested (24 percent) or somewhat interested (61 percent) (figure 5) in doing so. The ability to lock in future income through deferred annuitization might reflect an employee's desire to achieve greater retirement lifestyle clarity long before reaching retirement age.

Deferred income annuities (DIAs) allow retirees to purchase an income that begins later in retirement. When asked whether they would be willing to buy about $10,000 of annual income beginning at age 80 for about $40,000 in retirement savings at the beginning of retirement (which corresponds to online DIA quotes in late 2020 for a 65-year-old man), respondents were asked how much (0 percent, 5 percent, 10 percent, 15 percent, 20 percent, or more) they would allocate to a product that provides deferred later-life income.

Figure 6 shows the percentage that participants would allocate at retirement to a deferred lifetime income product that begins making income payments at age

FIGURE 4: *Percentage of Retirement Savings Allocated to Each Investment Option*

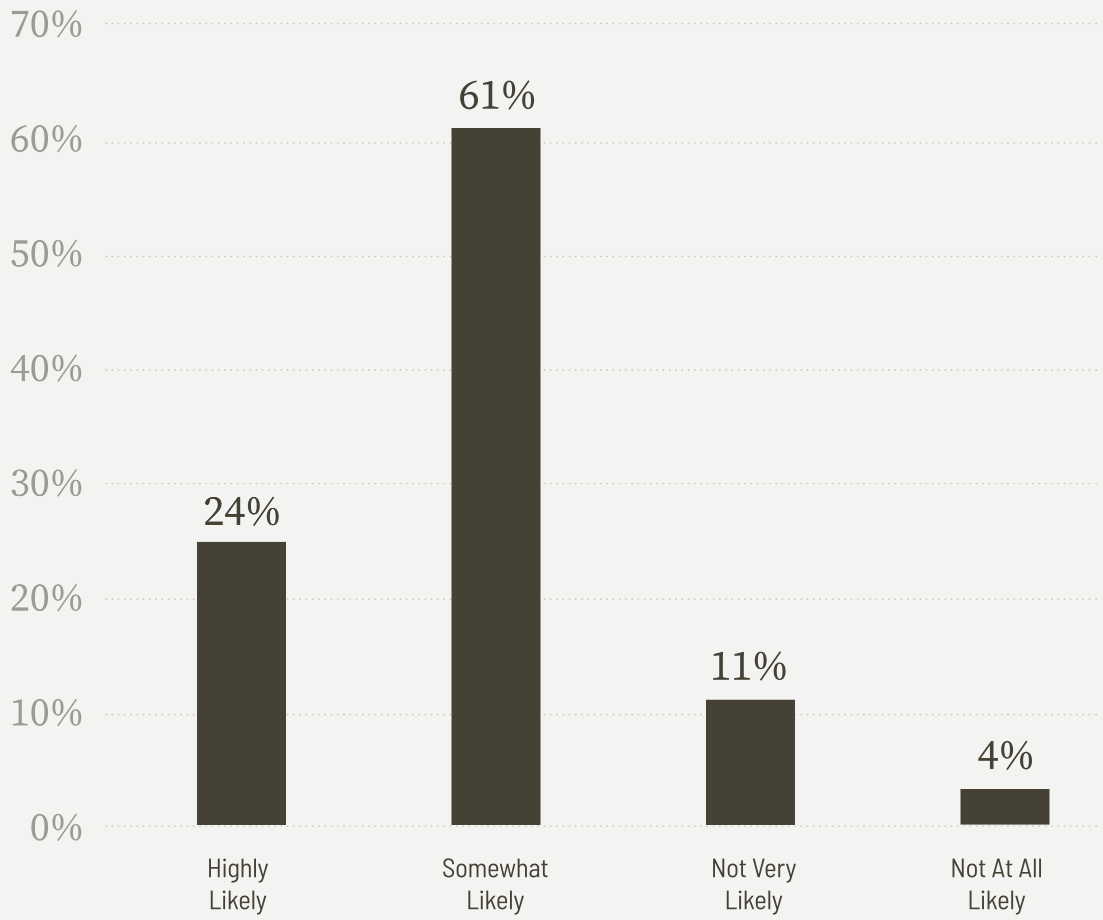


80: 36.5 percent of the sample would place 10 percent of their retirement savings in a DIA, and 33.8 percent would place 15 percent or 20 percent (or more) in a DIA. Only 10.8 percent would not purchase a DIA.

Table 4 shows the percentage of retirement savings participant groups would allocate to immediate guaranteed lifetime income. Highest allocations to immediate lifetime income are seen among respondents with a low self-assessed probability of living to age 75, retirement wealth under $50,000, lower education, those closer to retirement, women, and those with incomes between $50,000 and $100,000. There was no clear relation between retirement savings and preference for annuitization; however, workers age 50 and older with savings above $150,000 would allocate a slightly higher-than-average percentage of their savings to guaranteed lifetime income.

Patterns of allocation to DIAs are quite different from immediate annuitization. The second column shows the percentage within each group that would allocate either

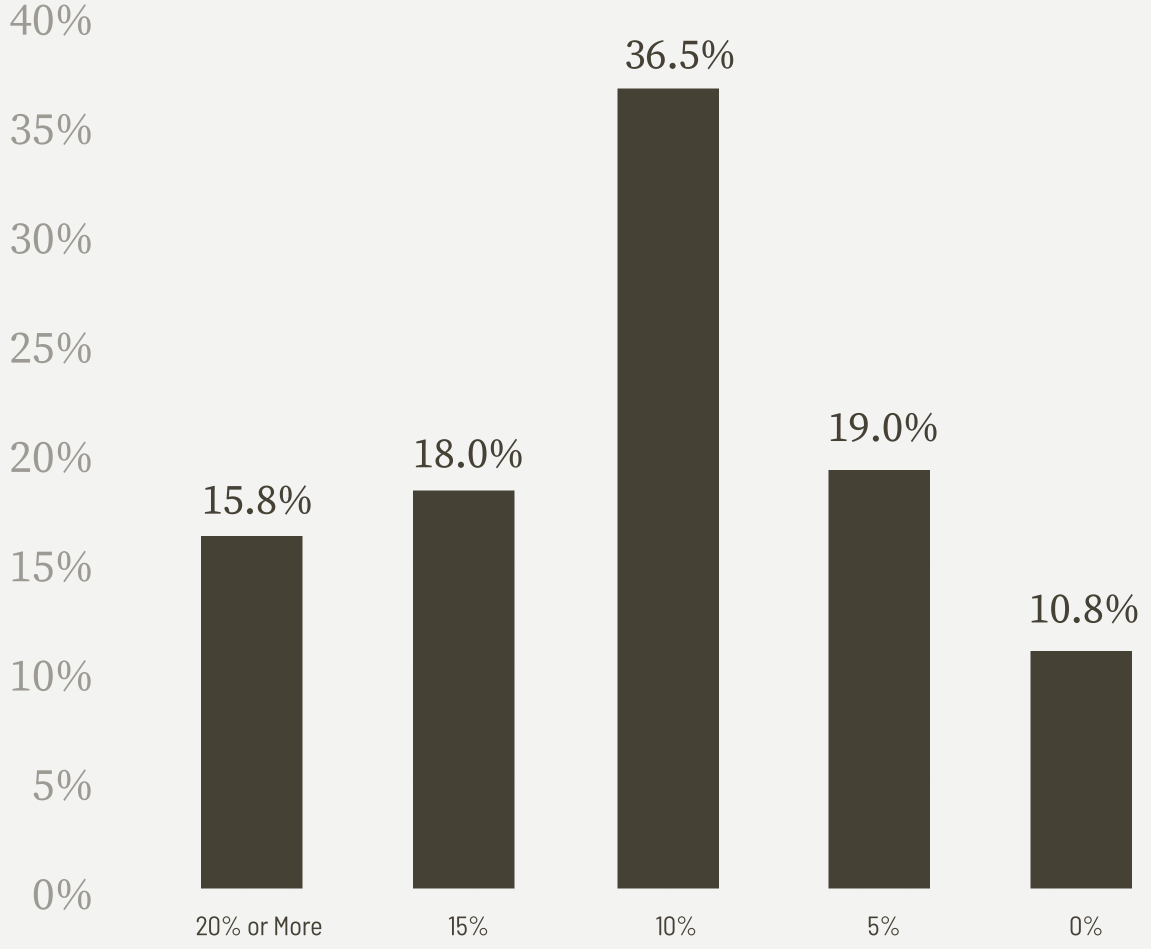
FIGURE 5: *How interested would you be in having the ability to buy additional lifetime income within your retirement plan savings?*



15 percent or 20 percent (or more) to a DIA. Those who would allocate a higher percentage to DIAs are men, those with a graduate or professional degree, individuals age 35–44, those with income greater than $500,000, and those with retirement wealth of $500,000 or more. Interestingly, those who have smoked more than 100 cigarettes and those who have pensions paying at least $10,000 per year would allocate more to DIAs.

Predictors of holding an immediate annuity allocation of at least 50 percent, and of allocating 15 percent or more of retirement savings to a DIA are presented in table 5. The strongest predictors of allocating a large percentage of retirement savings to immediate guaranteed lifetime income is older age. Respondents age 55 and older are four times more likely to allocate 50 percent or more to lifetime income than those younger than 35. Those with incomes between $50,000 and $100,000 and respondents who believe that there is less than a 50 percent chance they will live to age 75 are twice as likely to have a high allocation to guaranteed income. Participants with retirement wealth above $250,000, do-it-yourself investors,

FIGURE 6: *Allocation to Deferred Lifetime Income Beginning at Age 80*



and married respondents are less likely to allocate at least 50 percent to immediate lifetime income.

The second column in table 5 shows results from a multivariate analysis predicting an allocation of at least 15 percent to deferred lifetime income. Although those with the highest retirement wealth are less interested in placing a large percentage of savings in immediate lifetime income, they are more than four times more likely to allocate at least 15 percent to a DIA. Those with retirement wealth between $100,000 and $249,999 are also more likely to prefer a high DIA allocation. Respondents with high investment literacy and who believe that they will not live past the age of 75 are less likely to prefer a high DIA allocation.

In order to provide guidance that can help workers understand the trade-offs involved when deciding whether to annuitize, respondents are presented with a choice that explains the trade-offs of funding safe retirement

TABLE 4: *Allocation to Guaranteed Income: Immediate and Deferred*

		Allocation to Immediate Lifetime Income	At Least 15% Allocated to Deferred Lifetime Income
Overall		33.5%	33.8%
Gender	Make	30.2%	39.3%
	Female	35.7%	30.0%
Education	Less than Four-Year Degree	38.9%	27.3%
	Four-Year Degree	31.5%	33.5%
	Graduate or Professional Degree	31.3%	40.5%
Age	34 and younger	29.3%	32.7%
	35–44	32.3%	40.3%
	45–54	36.0%	33.0%
	55 and older	39.3%	22.7%
Income	$49,999 or less	35.8%	25.0%
	$50,000–$74,999	37.5%	30.8%
	$75,000–$99,999	37.1%	32.9%
	$100,000–$199,999	29.5%	32.1%
	$200,000 or more	25.8%	62.2%
Retirement Wealth	$24,999 or less	42.2%	21.4%
	$25,000–$49,999	38.0%	36.9%
	$50,0000–$99,999	32.9%	25.3%
	$100,000–$149,999	28.6%	40.9%
	$150,000–$249,999	30.9%	38.8%
	$250,000–$499,999	28.5%	30.2%
	Age 50+ with Retirement Wealth $150,000+	33.8%	30.6%

TABLE 4: *Allocation to Guaranteed Income: Immediate and Deferred (continued)*

		Allocation to Immediate Lifetime Income	At Least 15% Allocated to Deferred Lifetime
Race/Ethnicity	White	33.1%	33.2%
	Black	36.9%	34.4%
	Hispanic (any race)	33.6%	34.5%
	Other	33.4%	36.8%
Married		31.7%	35.7%
Have Children		33.2%	36.5%
Do-It-Yourself Investor		29.0%	34.1%
Primary Financial Decision-Maker		30.8%	36.3%
High Investment Literacy		31.0%	23.5%
Pension Greater than $10,000/Year		29.7%	43.9%
Smoked More than 100 Cigarettes		32.7%	41.3%
< = 50% Chance You Will Live to Age 75 or More		42.3%	21.8%

spending with traditional investments such as bonds and funding spending with guaranteed income. Given $200,000 of savings, they can invest in safe bonds or CDs to pay for basic expenses such as food and health care. They must first decide how long they want these investments to last by reviewing the age at which these funds will run out and the income they can receive to that age. Respondents are then presented with an alternative lifetime income that avoids the risk of outliving savings. This allows the participant to recognize the cost of failing to pool longevity risk through annuitization.

The failure rate is the likelihood that the participant will exhaust bond savings before dying at a given age (which is the survival probability using the Society of Actuaries [2012] annuity mortality tables). The income is calculated using a 3 percent hypothetical bond yield and the guaranteed lifetime income payment is the average of the five highest quotes provided by insurance companies on the same date. The trade-offs are presented in table format. Almost half (48 percent) of participants would choose the guaranteed lifetime income over funding essential expenses with bonds up to a specific age at which the assets are depleted (figure 7). The decision is framed as a direct comparison of bonds and an income annuity so that respondents understand the consequence of failing to annuitize (depleting their safe savings at a given age). The respondent is able to understand that spending more means a risk of running out of money, and that spending less means a more modest lifestyle. Annuities can provide a lifestyle roughly equal to spending bonds to the average longevity (or a failure rate of 50 percent).

TABLE 5: *Predictors of Preference for Immediate Lifetime Income Allocation of at Least 50 percent and Deferred (Commencing at Age 80) Lifetime Income Allocation of 15 percent or 20 percent*

Variable		Immediate Income 50%+ Odds Ratio	Deferred Income 15%+ Odds Ratio
Female		1.323	0.909
Age (Reference < 35)	35-44	2.328**	1.153
	45-54	2.953**	1.007
	55 and Older	3.991**	0.498
Education	Four-Year Degree	0.604	1.153
	Graduate or Professional Degree	0.780	1.176
Income	$50,000-$74,999	2.190*	1.041
	$75,000-$99,999	2.283*	1.100
	$100,000-$199,999	1.860	0.948
	$200,000 or more	0.334	2.388
Retirement Wealth	$25,000-$49,999	0.874	1.952
	$50,0000-$99,999	0.566	1.224
	$100,000-$149,999	0.590	2.539*
	$150,000-$249,999	0.434	2.383*
	$250,000-$499,999	0.212**	1.719
	$500,000 or more	0.272*	4.423***
Married		0.526**	1.042
Have Children		0.996	0.984
White		1.094	0.946
Do-It-Yourself Investor		0.553**	0.793
Primary Financial Decision-Maker		0.764	1.069
High Investment Literacy		0.753	0.496**
Pension Greater than $10,000/Year		0.810	1.076
Smoked More than 100 Cigarettes		0.905	1.654*
< = 50% Chance You Will Live to Age 75 or More		2.468***	0.542*

Preference for income values below the annuity amount reflect a demand for a greater expected legacy value at the expense of retirement spending.

The respondent can choose whether to spread safe income out over a fixed number of years at the current Treasury bond yield curve or buy lifetime income at the current market price. Choices are presented as follows:

1. I would buy the guaranteed lifetime income of $11,171.
2. I would spend $12,596 from bonds to age 85.
3. I would spend $10,862 from bonds to age 90.
4. I would spend $9,709 from bonds to age 95.
5. I would spend $8,894 from bonds to age 100.
6. I would spend $8,294 from bonds to age 105.

Age	Failure Rate	Bond Income	Guaranteed Lifetime Income
85	63%	$12,596	$11,171
90	41%	$10,862	
95	19%	$9,709	
100	5%	$8,894	
105	1%	$8,294	

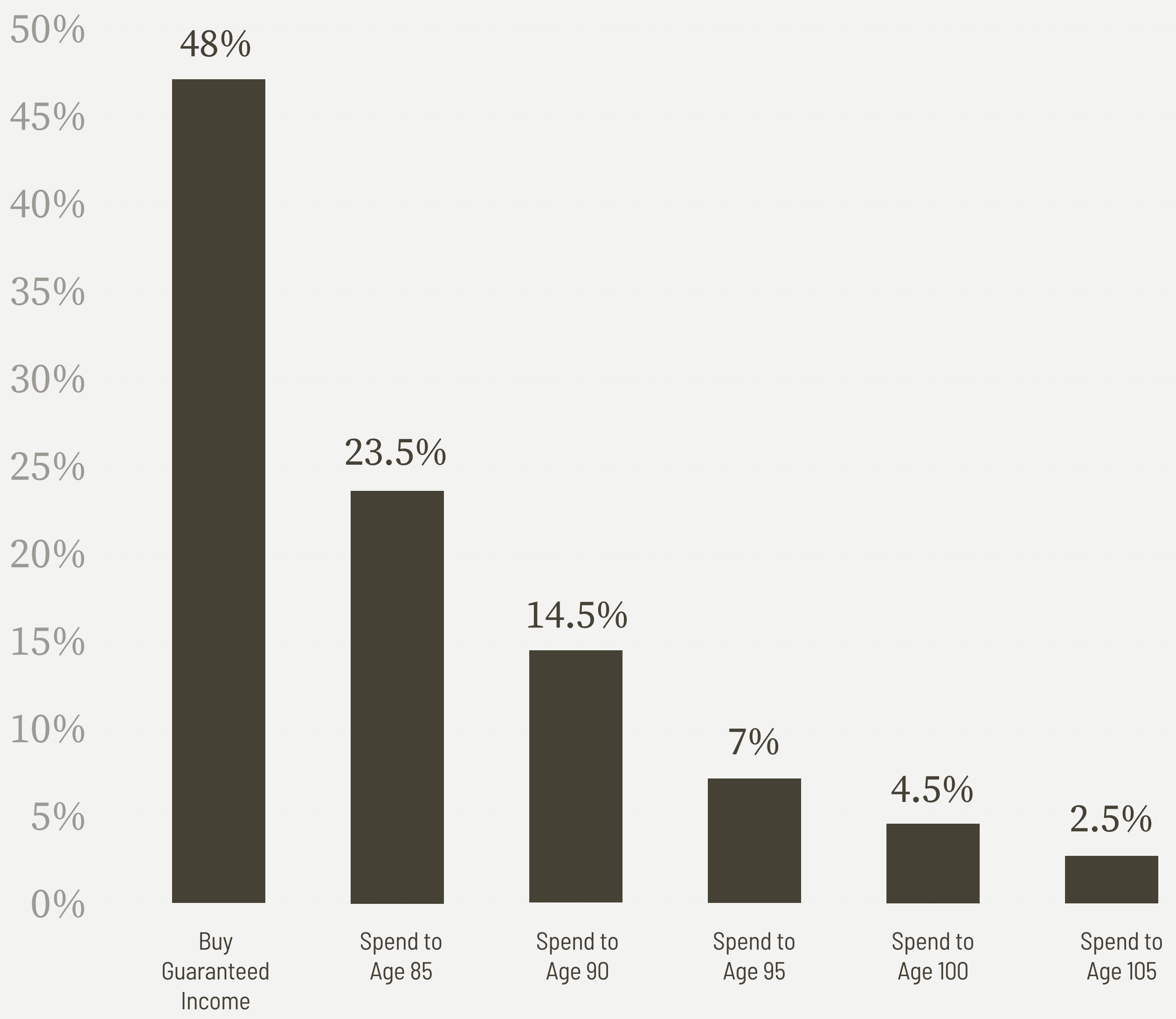
IV. OPEN-ENDED RESPONSES

After respondents are asked to choose whether they prefer guaranteed income or bond spending to a defined age, they are subsequently asked why they chose their answer. The following are examples of participants' responses explaining why they preferred annuitized income or to the purchase of bonds that will provide income up to a specified age. Most respondents who preferred the annuity did not make choices based on expected longevity, which suggests that adverse selection does not motivate demand for lifetime income among those who would buy an annuity. Responses generally reflected a desire for security and income stability among those who preferred annuitization. Among those who preferred bonds, respondents often framed the primary risk of annuitization as early death or a loss of control rather than a risk of outliving savings.

Among those who chose to buy lifetime income, the most frequent reason they offered was the appeal of the income guarantee:

- "It's guaranteed." [multiple responses]
- "It seems like the most stable guaranteed plan and I like stability."
- "I may live a long time and this way I'm guaranteed a good income for as long as I live."
- "Because it is guaranteed no matter how long I live. I would rather have this security."
- "It is more guaranteed, it's less complicated, and it has less risk."
- "The difference in the amount of the other was similar and the guarantee makes you feel comfortable."
- "Because no one knows when they're going to die no one has a guarantee that they're going to live to age 60 70 80 or 90."
- "This is a guaranteed amount that does not change with market fluctuations, with social security and other investments it should provide adequately without worrying if I run out of money."

FIGURE 7: *Investments Used to Fund Essential Expenses in Retirement*



Other common responses related to peace of mind from the reduced risk of outliving savings:

- "I would have peace of mind for my retirement."
- "It would give me peace of mind that I would have money coming in each year. I fear if I had control, I would overspend that money and run out sooner than I wanted to."
- "I would rather be comfortable knowing I would have a set income for life."
- "Security. Higher monthly income than most other options with security that it lasts a lifetime."
- "Because I would prefer to have a set amount for as long as I live than to run out and still have years left."
- "I like to play it safe and know what is available to me. I can live well on that amount."
- "Consistency and knowing how much you will receive is comforting."

Another appealing aspect of lifetime income was the ability to provide a fixed lifetime budget that made it easier to plan spending:

- "I could guarantee to at least pay my bills and have the money I need to survive."
- "It is fixed and I can plan on it."
- "I wouldn't have to worry if I could afford to retire."
- "I don't know how long I will live but it seems like the set amount of $11,172 for as long as I live would make it easier to plan to spend and not have to worry about running out of money."
- "I would buy the guaranteed lifetime income of $11,171 because it would be the amount I need to supplement my Social Security income to meet my retirement needs.

A handful of respondents selected guaranteed lifetime income because they expected to live longer than average:

- "I am a healthy person and it's very possible that I could outlive the $200,000 and I wouldn't want to run out of the money. Especially at an older age where I couldn't work if I didn't have money."
- "Well with advances in medical technology people are living longer and longer. Never know how long we have so I feel like the guarantee is worth it."
- "My family members have lived long so I probably will as well."
- "I plan to live to 100. I live my life to meet this goal (eating healthy, regular exercise, don't drink or smoke, etc.). So, by choosing this option I will have more money per year after age 85."

Why did respondents not choose the guaranteed option? The most frequent response was reduced expectations of longevity. Examples include the following:

- "I don't expect to live that long." [multiple responses]
- "Because I am never going to make those other ages. I'll take my money now."
- "I don't expect to live past that age. If so, I have a loving family to help me."
- "My family does not have a history of living to an old age."
- "This choice seems to give me more control of my money. I don't anticipate living beyond 95, based on family history."
- "There is no way I'm living past 85. I'd take the highest payout/return. If I make it that long, I will hope my kids can help. If not and I have full use of my faculties, I would make myself no longer a burden to anyone."
- "Because no one knows when they're going to die no one has a guarantee that they're going to live to age 60 70 80 or 90."
- "Because I want to be able to spend as much money as I want when I want and I don't know how long I'll live."

A handful of respondents expressed concern that selecting guaranteed lifetime income would have a negative impact on the amount they could pass on to their children:

- "While a guarantee is nice, I would need to understand options for beneficiaries if I die sooner than I'd hope to maximize the benefit of a guaranteed payment."
- "It's more money for my grandkids."

Other responses include the following:

- "I would want to enjoy it when I'm younger and more active. I also have a defined-benefit pension so i know that i will have some income coming in and at 85 I probably won't need as much money."
- "I wouldn't want to risk $200k if I died early say at 70.

Likewise, I would want to ensure that I had spendable income for bills to get to age 95 with the assumption that I could make up the difference thru low-level work like doing taxes seasonally if $9,700 was a shortfall while ensuring that if I passed early the investments would go to my heirs and if I passed later I could tap into the remaining $400k."

- "1k a year isn't enough to live on. And I have dependents. What happens to my money if I die at 70? There are no guarantees."
- "I want to spend my money while i am still alive."
- "Not knowing how long I will live, this would give me some shelter, versus forking over $200,000 and then I could pass away and that money wouldn't go to my loved ones left behind."

Despite simplifying the trade-offs of choosing safe income from bonds versus guaranteed lifetime income, some workers are still unsure about the choice:

- "I have no idea."
- "I don't understand this stuff well enough."
- "I'm not really sure, wish I understood this stuff more."
- "Not too sure, I'm not educated in this."
- "Because i don't understand these things and just picked one."
- "I'm not too knowledgeable when it comes to this."
- "I actually have to be honest—I don't understand the whole 401K / retirement process…so I picked one just to pick it."

In general, reduced risk was the most common reason respondents preferred annuitization among those who selected the lifetime income option. The most common reason given for preferring to spend down savings from safe investments was the belief that the respondent would not live long enough to benefit from an annuity.

V. CONCLUSION

The SECURE Act reduces the barriers to adding annuity options to DC plans. We survey plan participants to evaluate interest in financial products that provide lifetime income, evaluate preferred allocation among immediate and deferred annuity options, and provide insight into the characteristics of employees who are most interested in annuities. We find strong interest in allocating a portion of retirement savings to guaranteed income, particularly among employees near retirement. Employees attracted to immediate annuities are not necessarily the same employees who prefer deferred annuities. We find little evidence that adverse selection factors guide employee preference, and employee open-ended responses most frequently cite the peace of mind provided by income guarantees as the most attractive feature of income annuities.

Eighty-one percent of respondents indicate that they are either somewhat likely or highly likely to prefer a retirement plan that substitutes guaranteed income for safe investments. Workers value knowing how much they can safely spend more than any other characteristic of a retirement savings plan. Twice as many prefer a plan that offers both a mix of investments and lifetime income (49.5 percent) to a system that uses only investments (26.5 percent) or only a pension (24 percent) to provide income in retirement. On average, workers would place 33.5 percent of their retirement savings in guaranteed lifetime income, 35.5 percent in stocks, and 31.0 percent in bonds. Additionally, 70.3 percent would place at least 10 percent of their savings in a product that provides income that begins at age 80. The percentage of respondents who prefer a mix of guaranteed income and investments is high among all demographic groups and is particularly strong among respondents age 50 and older with at least $150,000 of retirement savings, women, the more educated, and workers with high investment literacy.

In a series of multivariate analyses that control for financial and other demographic characteristics, we find that the ability to partially annuitize is most attractive to women, those with more formal education, and older respondents. When given the option to allocate among stocks, bonds, and guaranteed income, respondents with greater levels of education and in the middle-income categories ($50,000 to $100,000) are most likely to allocate at least 50 percent of their savings to guaranteed income. Deferred annuitization is more attractive to workers with incomes above $100,000.

When given the choice between investing in bonds to fund safe spending in retirement or selecting an income annuity, we find that 48 percent prefer annuitization when the choice is framed as income rather than as an investment. In addition, rather than presenting the participant with only the income value, we also present them with the amount of income they could receive from bonds at current rates to various ages. Although recent studies suggest that only about a quarter of participants annuitize in a plan that offers an annuity or lump-sum options (e.g., Brown, Poterba, and Richardson 2019), we provide evidence that presenting participants with additional information that more accurately captures the trade-off of failing to annuitize could be expected to result in a higher rate of annuitization.

Open-ended responses reveal that the choice to annuitize is driven by the desire for a source of income that is guaranteed to take away the risk of outliving savings. While there appears to be some evidence of adverse selection among those who chose to annuitize because of a belief in higher-than-average longevity (or who chose to not annuitize because of a belief in reduced longevity), most of the responses indicate a behavioral motivation for the decision to annuitize. Highlighting the importance of annuitization as a means of reducing income risk and providing guarantees is likely more effective than appeals that emphasize efficiency. Further evidence that participants are behaviorally motivated is seen in a strong preference for deferred annuitization among smokers who are presumably motivated to insure against the risk of outliving savings due to a lack of self-control. Contrary to rational models of annuitization choice, respondents who believe that they have less than a 50 percent chance of living to the age of 75 are more likely to allocate at least half of their retirement savings to an income annuity. Our finding that participants who are likely to live longer are no more likely to prefer annuitization than smokers or workers who do not believe they will live past the age of 75 is both consistent with the prior literature on lump-sum versus pension choice at retirement, and provides some evidence that annuities offered within retirement plans can be priced lower than retail annuities, which are commonly chosen by longer-lived consumers.

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APPENDIX 1. SURVEY

1. Workers who contribute to a retirement plan are placed into a default investment such as a target-date mutual fund. If you are contributing to a retirement plan and have not specified an investment choice, then you are likely in the default plan. If you are not in the default, then you selected mutual fund investments from a menu of investment options.

   Which would best describe your current retirement plan investments?
   a. Default (target date) only
   b. Chose my own mutual funds
   c. Mix of default and my own funds
   d. I don't know how my retirement savings are invested

2. The benefit of owning investments that are diversified is that it:
   a. Reduces risk
   b. Increases return
   c. Reduces tax liability

3. A young investor willing to take moderate risk for above-average growth would be most interested in:
   a. Treasury bills
   b. Money market mutual funds
   c. Balanced stock funds

4. The main advantage of a 401(k) or 403(b) plan is that it:
   a. Provides a high rate of return with little risk
   b. Allows you to shelter retirement savings from taxation
   c. Provides a well-diversified mix of investment assets

5. To ensure that some of your retirement savings will not be subject to income tax upon withdrawal, you would contribute to:
   a. A traditional IRA or Individual Retirement Account
   b. A Roth IRA
   c. A 401(k) or 403(b) plan

Now we'd like to ask you a few questions about your employer-sponsored defined contribution retirement plans like your 401(k) or 403(b) that allow you to save for retirement. The next series of questions allow you to share opinions on possible improvements in the design of your retirement savings plan.

6. Retirees in prior generations often contributed to a pension plan that provided a regular monthly income for life. Today's workers often retire with an investment account composed of stocks and bonds. Some workers save in a 401(k)/403(b) but are also eligible to receive a pension.

   In general, which system do you think you would prefer at retirement?
   a. Monthly pension
   b. Investment account
   c. Mix of pension and investments

7. After you retire, what percentage of your retirement savings would you feel comfortable investing in riskier assets

like stocks (that are expected to provide a higher return) and what percentage would you invest in safer assets such as bonds?

a. 100% Stocks, 0% Bonds
b. 80% Stocks, 20% Bonds
c. 60% Stocks, 40% Bonds
d. 50% Stocks, 50% Bonds
e. 40% Stocks, 60% Bonds
f. 20% Stocks, 80% Bonds
g. 0% Stocks, 100% Bonds

8. What change would you make to your current 401(k)/403(b) plan that would provide you more peace of mind that you could live better in retirement?

9. Once you retire, which of the following is the most important attribute of a retirement savings plan?

a. Low expenses
b. Does not fall significantly during a market decline
c. Provides an opportunity to achieve significant growth
d. Helps me understand how much I can safely spend in retirement
e. Has a large number of investment choices

10. Once you retire, how confident do you feel spending down your savings to pay for lifestyle expenses if it means your balance will get smaller?

a. Not at all confident
b. Not very confident
c. Neutral
d. Somewhat confident
e. Highly confident

11. Assume you are a healthy 65-year old retiree who has saved $600,000 for retirement. You would like to invest $200,000 in safe bonds or CDs earning 3% each year in retirement to fund essential expenses like food, healthcare, and property taxes. Each year a portion of the bonds/CDs are sold to pay for these lifestyle expenses. Eventually the CDs/bonds will run out if you live a long time.

You are given two choices – (1) select an age to which you want the CD/bond savings to last and spend the same amount each year or (2) buy a guaranteed lifetime income. Buying a lifetime income will require handing the entire $200,000 to a financial institution and you will receive $11,171 in income each year. The $200,000 cannot be returned but the monthly payments will continue no matter how long you live (i.e., cannot change the contract / no refund). By choosing not to buy a lifetime income, you can either spend more each month and accept a high risk of running out of safe savings, or spend less each month to minimize the probability of outliving the $200,000.

Select the option that you would prefer.

a. I would buy the guaranteed lifetime income of $11,171
b. I would spend $12,596 from bonds to age 85
c. I would spend $10,862 from bonds to age 90
d. I would spend $9,709 from bonds to age 95
e. I would spend $8,894 from bonds to age 100
g. I would spend $8,294 from bonds to age 105

12. Why did you select this response? Please be as detailed as possible.

13. Assume you are a healthy 65-year old retiree who has saved $600,000 for retirement. You would like to invest $200,000 in safe bonds or CDs earning 3% each year in retirement to fund essential expenses like food, healthcare, and property taxes. Each year a portion of the bonds/CDs are sold to pay for these lifestyle expenses. Eventually the CDs/bonds will run out if you live a long time.

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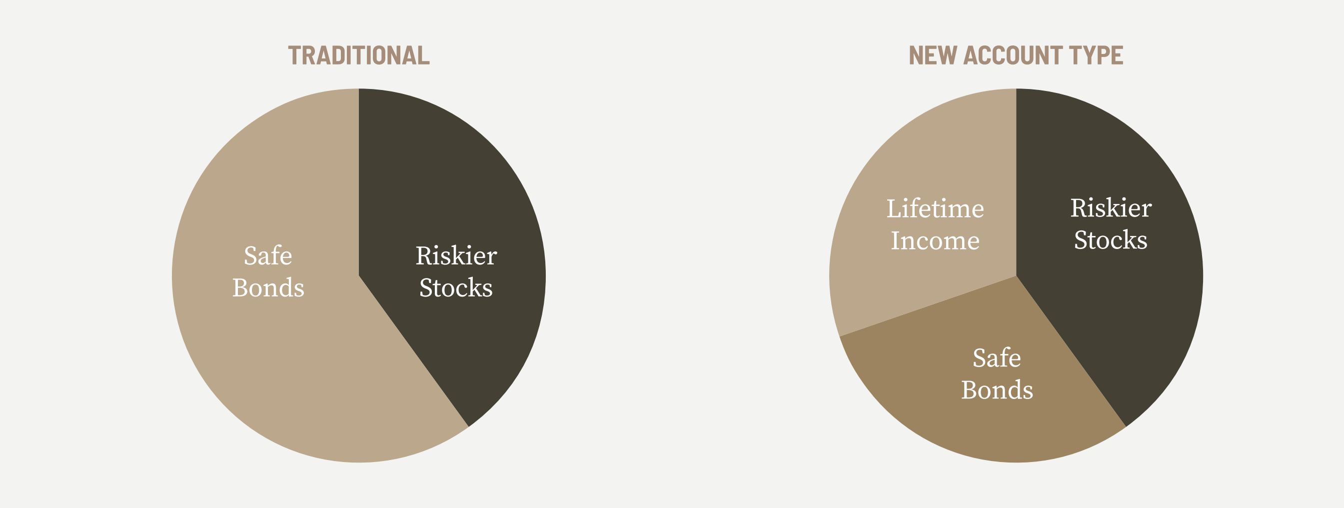
Age	Probability of Outliving Savings	Annual Spending	Guaranteed Lifetime Income
85	63%	$12,596	$11,171
90	41%	$10,862	
95	19%	$9,709	
100	5%	$8,894	
105	1%	$8,294	

The table above shows how much you can safely spend to various ages if the $200,000 earns 3% interest. The probability of outliving savings is the chance that you will outlive the $200,000 of savings by spending this amount. Select the option that you would prefer.

a. I would buy the guaranteed lifetime income of $11,171
b. I would spend $12,596 from bonds to age 85
c. I would spend $10,862 from bonds to age 90
d. I would spend $9,709 from bonds to age 95
e. I would spend $8,894 from bonds to age 100
f. I would spend $8,294 from bonds to age 105

14. Why did you select this response? Please be as detailed as possible.



15. Traditional retirement accounts invest in both riskier stocks and safer bonds. A new retirement account invests a portion of the safe bonds in an instrument that, like a pension, provides a guaranteed income for life. The following figure illustrates the difference between the two accounts.

How likely are you to prefer a retirement plan that substitutes guaranteed income for safe bond investments?
- a. Not at all likely
- b. Not very likely
- c. Somewhat likely
- d. Highly likely

16. The new type of retirement account allows you to buy additional lifetime income at any age. The price would be less when you are younger. How interested would you be in having the ability to buy additional lifetime income with your retirement plan (401(k), 403(b)) savings?
- a. Not at all interested
- b. Not very interested
- c. Somewhat interested
- d. Very interested

17. If you were offered the option to convert part of your current retirement savings to guaranteed lifetime income, what aspect of converting a portion of your retirement savings into guaranteed lifetime income appeals to you the most?
- a. Ability to cover basic expenses
- b. Better understand how much I can safely spend
- c. Don't have to worry about running out of money
- d. Worry less about stock market volatility
- e. Nothing – I would not consider converting

18. At retirement, assume you can choose between risky investments such as stocks that have a higher expected return, safe investments such as bonds, and an instrument that provides guaranteed lifetime income. What percentage of your total retirement savings would you place in each option? The percentages should add up to 100.

a. Stocks
b. Bonds
c. Guaranteed lifetime income

19. At the beginning of retirement, you can use a portion of your retirement savings to buy a guaranteed lifetime income that begins at age 80. You can buy about $10,000 of future annual income starting at age 80 for each $40,000 you use to purchase income today. What percentage of your retirement savings would you use to buy future income?

a. 0%
b. 5%
c. 10%
d. 15%
e. 20% or more

20. What do you think the chance is that you will live to be 75 or more?

a. 0%
b. 10%
c. 20%
d. 30%
e. 40%
f. 50%
g. 60%
h. 70%
i. 80%
j. 90%
k. 100%

21. Describe your lifetime smoking behavior:

a. I currently smoke
b. I have smoked more than 100 cigarettes in my life, but do not currently smoke
c. I have smoked fewer than 100 cigarettes in my life.

22. Do you currently work with a professional financial advisor? When we say financial advisor, we are referring to a professional financial advisor who helps and guides you to make financial decisions based on your specific goals, current financial and family situation, etc.

a. Yes
b. No

23. Which of the following investment decision-making methods BEST describes how you make investment decisions today?

a. I do most of the research and decision-making myself and rarely, if ever, enlist the assistance of a financial professional
b. I regularly research and make financial decisions myself, and also sometimes seek advice from a financial professional
c. I delegate the majority of the decision-making to a financial professional.
d. I rarely, if ever, research financial products myself or enlist the services of a financial professional

24. What is the approximate total amount of money that you personally have invested in a 401(k), IRAs, 403(b), or similar retirement account? Include all accounts from previous employers.

a. Under $25,000
b. $25,000 but less than $50,000
c. $50,000 but less than $100,000
d. $100,000 but less than $150,000
e. $150,000 but less than $250,000
f. $250,000 but less than $500,000
g. $500,000 but less than $750,000
h. $750,000 to $1 million
i. Over $1 million

25. Are you eligible to receive pension income from a current or former employer after retirement?

a. No
b. Yes, expected pension income is less than $5,000 per year
c. $5,000 but less than $10,000 per year
d. $10,000 but less than $20,000 per year
e. $20,000 but less than $40,000 per year
f. $40,000 but less than $60,000 per year
g. $60,000 but less than $80,000 per year
h. $80,000 but less than $100,000 per year
i. $100,000 or more per year