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Can annuities become a bigger contributor to retirement security?

Martin Neil Baily
Brookings Institution

Benjamin H. Harris
Kellogg School of Management

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ABOUT THE AUTHORS

Martin Neil Baily is the Bernard L. Schwartz Chair in Economic Policy Development and a Senior Fellow in Economic Studies at Brookings.

Benjamin H. Harris is the Executive Director of the Kellogg Public-Private Interface at Northwestern University's Kellogg School of Management. He recently served as the chief economist and economic adviser to the Vice President of the United States. Following his tenure at the White House, he was a senior economic policy adviser with Rokos Capital Management. In addition, he currently serves as the chief economist to the evidence-based policy organization Results for America.

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ABSTRACT

The gradual disappearance of traditional pensions as a benefit to private-sector workers has shifted a great deal of risk onto individuals. While the share of workers covered by some sort of workplace retirement plan has stayed mostly stable over time, the changing nature of those plans suggests that many retirees would be better off directing some portion of their liquid assets to an annuity. Instead, annuitization rates have remained low, producing what economists call the "annuity puzzle"—a disconnect between predicted and observed demand for annuities. This paper reviews explanations of the annuity puzzle and examines the nature of the market for annuity products in practice, highlighting, in particular, how some annuities (accumulation annuities) are often used to lower tax burdens rather than boosting lifetime income. This paper also reviews strategies for improving take-up of lifetime income products, including better access to annuities in workplace plans and better understanding of the role of lifetime income in a stable retirement.

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Introduction

In the old retirement paradigm, workers qualified for company pensions and were guaranteed income for life. This paradigm excluded large swaths of Americans, but those with company pensions enjoyed comfortable retirements largely free of financial anxiety. Those workers who still have pensions, such as union members and public-sector workers, put a high value on their pensions and fight efforts to eliminate or scale back benefits.

The new *de facto* paradigm has shifted to one characterized by risk. Many workers reach retirement with little or no financial assets, while those with appreciable savings rarely have protection against uncertain lifespans. Indeed, middle-class families that reach retirement with ample retirement nest eggs rarely buy annuities to ensure lifetime income. Few employer plans offer income annuity options, and individual annuities remain unpopular. In particular, deferred income annuities (to be explained later)—a product that specifically targets longevity risk that is much-loved by economists—has seen close to zero take-up in recent years. By and large, retirees are choosing to weather retirement under substantial risk and uncertainty.

In this framing paper we address the risk faced by retirees and offer tractable solutions to improve the American retirement. We start by explaining the annuity puzzle: why relatively few retirees hold annuities. We then look at the annuity market in practice and describe consumer patterns for these products. Lastly, we suggest policies that can help expand the market and encourage, or nudge, people towards buying annuities. We also identify helpful incremental steps by Congress to make income annuities more accessible to workers managing their own retirement.

The annuity puzzle: Why economists love annuities and consumers do not

Economic models of rational human behavior predict that households planning their retirement will buy an annuity to protect themselves against the risk of running out of money as they age, whereas in actual practice relatively few households buy annuities. This is the annuity puzzle.

Running out of money can have severe consequences. Someone at age 80, say, who runs out of money would find it very hard to obtain a job to provide themselves with continued income. For those with health problems, it would be virtually impossible to take a job. Of course, most retirees receive Social Security and Medicare benefits, but Social Security is not very generous for the average recipient and is even less generous after Medicare premiums have been deducted. There are other options, such as living with relatives or being admitted to a Medicaid-funded nursing home, but these do not eliminate the potential hardship from running out of savings at an advanced age.

In economic models, steep declines in income can lead to sharp drops in consumption, which typically cause substantial declines in welfare. The magnitude of the drop in welfare depends largely on individual preferences, but the central intuition is that people value consumption more at lower levels of income. For example, a dollar can raise a person's happiness more if they are at the poverty level than if they are wealthy. And declines in consumption are more painful for those with lower incomes. The associated implication is that dropping into poverty, or experiencing precipitous drops in income, can be disastrous to older consumers' wellbeing. The natural implication is that people are better off paying a relatively small amount to protect against the possibility of being at an advanced age with limited ability to earn wages or raise income.

Consumers' desire to avoid steep declines in income is why economic models typically include the assumption that people are risk averse. In these models, people are willing to pay an insurance premium each year to avoid a loss in income or a steep rise in costs—such as if their house burned down or their property were ransacked by thieves.[1] When it comes to insuring against a severe decline in income, we expect rational people to avoid taking on the risk if the cost of insuring against that risk is reasonable.

In the context of retirement, we would expect rational consumers to mitigate longevity risk—the risk posed by living longer than expected. Underlying this risk is the unavoidable fact that lifespans are inherently uncertain. While averages across cohorts of individuals are well-known, the average is far less informative than a distribution of possible lifespans. For example, Vanguard's life expectancy tool indicates that a 65-year-old man has an 80 percent chance of living at least another decade, a 41 percent chance of living two more decades, and a 6 percent chance of living three more decades. For a woman of the same age, the probabilities are 85 percent for one additional decade, 53 percent for two more decades, and 13 percent for three more decades.[2] This longevity uncertainty translates into longevity risk when people retire at a given age with a fixed amount of assets.

Decades ago, about half of workers had company pensions that were well-positioned to address this risk. Pensions provided by reputable, financially stable companies or insurance companies were guaranteed for life and were usually based on a formula tied to the earnings of the employee and years of service. Company pensions were very popular in the second half of the last century, and still are among those who have them. Workers have regretted their gradual demise and there are those in the labor movement who would like to restore widespread traditional defined-benefit pension plan coverage. We regard this as an unlikely development.

One of the underappreciated aspects of the shift away from company pensions is that workers can largely approximate a traditional defined benefit pensions by purchasing an income annuity. Given this, one might expect the popularity of defined benefit pensions to translate into widespread demand for income annuities. In reality, that is not the case.

The academic case for annuities

The economic case for annuities was first laid out by Menahem Yaari (1965), where he demonstrated assumptions under which rational individuals would use all their retirement

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1. While some risk-loving behaviors are observed—people buy lottery tickets with a vanishingly small chance of winning and they go to casinos where the odds favor the house—these risky behaviors are usually seen as entertainment worth paying small amounts for. People enjoy thinking about what they would do if they won a huge jackpot on the lottery or they like the excitement of watching the roulette wheel spin.

2. The Vanguard life expectancy tool can be found here: https://personal.vanguard.com/us/insights/retirement/plan-for-a-long-retirement-tool

savings to purchase an annuity rather than holding bonds. The assumptions were strong ones—for example, he assumed retirees did not wish to leave a bequest to their children and he ignored the fees charged on annuities. Subsequent literature has generalized Yaari's analysis while preserving the case for placing at least a part of retirement wealth into an annuity product. (Benartzi, Previtero and Thaler (2011) provide an excellent and intuitive summary of this literature.) For example, households can maintain funds for bequests by only annuitizing a portion of their retirements, and paying moderate fees is often "worth" the benefits from absolved longevity risk (Gong and Webb 2010).

From the outset, we note a distinction between the annuities often studied by academics and those utilized in the market. In the context of retirement security, academics often study "income annuities"—those products that are often purchased with a single premium and return a stream of income. In practice, many annuities also include an accumulation aspect, whereby there serve as tax-preferred saving vehicles, and are often barely or never annuitized at all—making the term "annuity" a confusing misnomer. We describe this distinction later in this paper.

An important development in the academic literature on annuities has been the analysis of deferred income annuities—a financial product that addresses longevity risk directly. Such a policy could be purchased at the date of retirement, or earlier by making contributions to a policy during working life. A deferred income annuity policy pays nothing until the person reaches old age, say 80 or 85 years, at which point it pays a fixed amount each month or quarter. This means that someone in their 60s or 70s can plan their expenditures knowing that if they live into their 80s or 90s they will be covered financially by the payout from their annuity policy plus their continuing Social Security benefits.

Economists have shown that under a range of assumptions about peoples' attitudes to risk, a deferred income annuity policy makes people better off (see Scott, Watson and Hu 2007, Gong and Webb 2010 and Horneff, Maurer, and Mitchell 2019). In economic models, people are made better off because deferred annuities offer an opportunity to purchase insurance against longevity risk cheaply—allowing retirees to keep much of their portfolio of assets intact for other purposes. Deferred income annuities are "cheaper" than immediate income annuities in that the stipend they provide is high relative to the amount they cost for two reasons. First, the annuity company can earn a return on the premium paid for many years before they start paying out benefits. Second, a fraction of those that buy deferred annuities will die before their annuity pays out, so their premiums go to support those that live into their 90s. This is the same as homeowners' insurance where those whose houses do not burn down subsidize those whose houses do burn down. Despite their obvious value, almost no one buys deferred annuities in practice.

The Horneff, Maurer and Mitchell (2019) paper, presented at the Brookings-Kellogg event at Northwestern May 9, 2019, provided formal analysis showing the value of deferred income annuities to retired households. They used a lifecycle model of consumption and retirement, adjusted and calibrated using data on actual US households. They included real-world institutional specifics about taxes and the cost of buying annuities. They examine the case where employer-sponsored 401(k) plans would automatically allocate 10 percent of contributions to a deferred annuity that paid income starting at age 85, as long as employees have at least $65,000 in their retirement fund. Contributing to a deferred income annuity would be the default option under employer plans, although individuals could choose to opt-out of the annuity purchase. They also limit the total committed to this annuity to no more than the limit under recent tax law changes.[3] As well as the 10 percent default plan, they also examine the optimal size of the contribution, given the lifecycle model's parameters. Their results indicate that individuals would be substantially better off with this default option, consuming $700 a year more on average at age 85 and $2,600 a year more at age 95. The consumption cost at age 50 would be only $3. Having the default annuity option would be of particular value to women, adding nearly $8,000 in welfare to female high school graduates.

Why people do not buy annuities

Economic models of rational decision-making under uncertainty use the framework of expected utility. Individuals evaluate their subjective well-being in possible future contingencies weighting the alternatives by the probability that each will happen. There is no shortage of examples where actual behavior does not match up with predictions from a model of expected utility. Making rational decisions under uncertainty can be very difficult to do and easy to get wrong. People find it hard to assess the likelihood of events they do not understand well and cannot control, and they may overestimate how well they can influence events where they use their own skills and judgment. For example, people are bombarded by news stories saying either the risk of floods and hurricanes has increased or stories saying global warming is a hoax. How do people form a rational judgment about the value of flood or hurricane insurance? A large majority of people judge themselves to be above average in driving skills which cannot be true, except in Lake Wobegon. People likely underestimate the probability they will crash their vehicles—one reason most states have compulsory liability insurance.

Behavioral economists are exploring the ways in which people make decisions that do not fit with the economic model of expected utility. Tversky and Kahneman (1979), pioneers in this field, developed "prospect theory" as a formal model that differs from expected utility theory. It is not clear that prospect theory can explain the puzzles of retirement decisions, but their work has opened the door to alternative ways of thinking.[4] One difficulty people have with retirement decisions is visualizing their lives a number of years into the future and seeing how decisions they make today will alter that future. This is particularly true if people are forced to think about unpleasant options, such as being frail and unable to take care of themselves. This contrasts with buying a lottery ticket where people like to visualize how their lives would change if they won the lottery.

Workers seem to feel differently about a benefit provided by an employer than they do about a benefit they purchase for themselves. This is important because retirees see the accumulation of funds in a 401(k) plan as "their" money by right and want to control it.

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3. Any amount above the limit, specified under the rules for qualified deferred annuities, would trigger a tax penalty or require forced payouts from the annuity prior to age 85.

4. In prospect theory people are assumed to overweight small probability events and this helps explain why people buy lottery tickets where they overestimate their chances of winning. Prospect theory also assumes individuals weigh losses more than gains from an initial starting point. Overweighting small probability events would suggest 30-year olds will overweight the probability they will live until age 90, whereas in practice there is a tendency to underweight this probability. Another example of underweighting small probability events occurred in the financial crisis where banks and regulators underestimated the small probability of a collapse of the housing market.

Retirees that follow the Yaari solution of putting all their retirement funds into an annuity would surrender access to the money and lose control over it. An employer-provided pension feels different; it is something the employer is providing for its workers. In addition, people may also overestimate their ability to invest money wisely, making them more likely to want control over their assets.[5]

Along similar lines, people may worry about income annuities paying benefits only for a limited time, or for deferred income annuities not paying at all. For example, a common reason given by near retirees for eschewing annuities is concern that the annuitant will die before the annuity has paid sufficient value to make the investment "worth it." This perspective represents a wrong-headed view, in our judgment, that annuities should be compared to financial products that offer a rate of return. If annuities are instead viewed as insurance products, the value is in the stability offered by the product—regardless of the degree to which the individual collects. Insurance companies have tried to address this concern by offering various ways to guarantee a minimum "payout"—although these payouts often drive up the cost of the product.

The decision about buying an annuity cannot be divorced from concerns about ill health as people age. We have said some people do not want to think about needing nursing home care, but those that do face up to that possibility still often choose against buying an annuity. Those that have substantial assets at the time they retire may decide to draw down these assets only slowly, leaving enough funds available to pay for a costly health problem if it occurs.[6] If they die without incurring such a cost, their children get the money.

One of the triumphs of behavioral economics is the finding that small changes in the way decisions are structured can make a big difference to how people behave. Thaler and Sunstein's book *Nudge* (2009) shows that if workers are automatically enrolled in a contributory retirement plan they are very likely to continue contributing. If the default option is enrollment, workers do not opt out of the plan, but if the default is that they make no retirement contribution then only a smaller fraction choose to opt in. These findings suggest an important reason why few people buy annuities. Most employer retirement plans (such as 401(k) plans) do not provide the option of contributing to an annuity, and almost no plans make the purchase of an annuity into a default option. We discuss later some of the reasons why employers do not have annuity options and how policymakers can impact that decision.

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5. The economic analysis of annuities typically compares the flow of benefits from an annuity to the flow of returns from the purchase of a safe bond—a Treasury security for example. The global economy today is one where interest rates are very low but where corporate profitability and the return on equities have been high. No one knows how these patterns may change in the future, but a retiree managing his or her own funds can choose to invest in equities.

6. People have several options for addressing long-term care risk through private insurance. Standalone long-term care insurance policies are expensive in terms of comparing expected benefits to premiums costs (an approximate expected value of only 40 cents for each dollar of contributions for men (Brown and Finkelstein 2011)). An increasingly popular option, too, is to purchase a long-term care rider on an annuity policy.

The bottom line on the discrepancy between rational and actual behavior

Models of rational economic behavior under uncertainty are always valuable as a guide but they may not correspond to the decisions people make. It is not up to policymakers to force people to save more or buy annuities if they choose not to do so, but it is worthwhile to understand why a discrepancy exists between rational and actual behavior—in particular whether it stems from inadequate information or from another type of market failure. The behavioral economics literature is, in our view, persuasive in saying it is worth nudging people in a direction that will leave them with greater retirement security.

Overview of annuities products and markets

Annuities are exceptionally complex products. While a theoretical annuity can be quite simple—such as a consumer trading a one-time premium for a stream of payments until death—annuities in practice as substantially more complex. In this section, we attempt to reconcile the theoretical annuities studied in academic papers and the wide range of options presented to consumers in the U.S.

Annuities in principle and practice

In theory, annuities are simple products designed to shift risk from individuals onto insurance companies—which can manage the risk by pooling across large groups of consumers. A straightforward income annuity contract is one where a consumer receives a certain amount of income each month for the duration of their life in exchange for a lump-sum payment. Indeed, these types of contracts are the ones that are often studied by academics—especially those engaged in retirement security—when considering the merits of annuities as part of a retirement portfolio.

In practice, however, annuities are substantially more complicated. These products are differentiated on a wide array of dimensions. Perhaps the most important distinction is whether the contract offers an accumulation phase whereby the consumer's premiums are invested in financial instruments, such as mutual funds, that change the value of the annuity over time. And the underlying investments in these annuities can vary, leading to an array of different terms, such as indexed annuities, variable annuities, and fixed annuities. Income annuities can also differ on their schedule of payouts, with some beginning immediately (immediate annuities are defined as those that payout within one year of purchase) and others beginning after a deferral period—sometimes lasting years or decades (deferred annuities). In addition, some annuities are included in "qualified accounts"—retirement accounts that confer tax benefits for saving—while others are held in non-qualified accounts.

Adding to the complications, annuities can offer a variety of different options that guarantee various levels of income and returns on investments. For example, many annuities with an investment component offer minimum guaranteed returns on some portion of the premiums, in addition to caps on the amount investments can earn. Many annuities offer various other guarantees and options that can reduce the link between longevity risk and annuity payouts. For example, some annuities guarantee return of principal (i.e., "cash refund") to beneficiaries if an owner dies before receiving the full principal. Other "period certain" annuities guarantee payouts over a set period of time, such as 10 or 15 years, regardless of whether the annuitants die during that period—with beneficiaries receiving the difference.

The list of potential tweaks, and the corresponding complexity, continues. Annuities vary in the structure and level of fees and charges. Consumers can purchase riders for benefits, such as long-term care insurance, that supplement the benefits, but also add to the cost. Importantly, too, consumers can elect varying frequencies for receiving their benefits—ranging from a one-time lump-sum payment to monthly checks for life. Since annuities also present an insurance component, annuities also vary in the creditworthiness of the underlying company offering the product. All told, these options present a dizzying collection of options that make comparing these products difficult, if not impossible. To take just one example, one annuity sales and education website—annuityguys.org—listed 37 different types of annuity products.

While explaining each of the differences in various types of annuities is beyond the scope of this brief, it is important to note that part of the confusion around annuities comes from the wide range of products offered to consumers. Annuities with no investment component, including those that offer an immediate monthly benefit and "longevity annuities" that offer a benefit many years in the future, are similar in nature to pure insurance products. In these cases, individuals are effectively paying insurance companies to pool risk and ensure a stream of income for life—making the product similar to other types of insurance products. The products that resemble insurance products the most are "longevity" annuities that offer payments beginning 15 to 20 years in the future, as these annuities are the products best designed to address risk.

On the flip side, variable annuities often do not end up being annuitized. As we explain later, these products are more akin to investment products—like a holding a mutual fund in a retirement account—but often with some sort of guaranteed return. In these cases, the annuity product may never result in the receipt of lifetime income, making the term "variable annuity" a misnomer. These characteristics mean than when discussing the role of annuities in retirement, variable annuities could easily be lumped in with 401(k)s rather than income annuities.

Provisions of the tax code drive many of the types of annuities offered in the marketplace. Trying to understand the tax implications of different annuity types adds to the confusion consumers feel as they consider an annuity purchase. Also, the way that these products are purchased is important, including differentiating between those that are purchased through an employment-sponsored retirement account versus an individual buying a policy from an agent or financial institution. Lastly, the distinction in payout structure, including lump-sum payments and deeply deferred annuities, is a critical difference among the different classes of annuities.

Understanding the tax implications of different classes of annuities is also important and must be seen within the broader context of the tax incentives for retirement saving. In the U.S., the tax code affords over $200 billion annually in tax benefits for saving, typically through the concept of deferral. Under deferral, savers (and their employers) can typically deduct contributions to retirement plans from federal income tax. These contributions are then invested and grow tax free until the saver elects to make distributions, at which time the distributions are taxed at ordinary income tax rates. The benefit lies in the fact that investments grow tax free and the income tax rate in retirement is typically lower relative to that in taxpayers' working years.

Tax laws limit how much workers can contribute to these types of accounts. In 2019, the limit on employee contributions is $19,000 and the limit on total contributions is $54,000. Deductions for contributions to IRAs, which are similar in structure to employer-sponsored accounts but are not sponsored by a company, are limited to $6,000 in 2019. Workers older than 50 are afforded catch up contributions—an additional $6,000 on employer-sponsored accounts and $1,000 on IRAs. Under current law, there is a minimum age when individuals can start drawing money out of their tax-preferred retirement savings accounts (age 59½) without facing a penalty. And then, starting at age 70½, there are minimum amounts that must be withdrawn in order to avoid facing a penalty. There is a schedule of required minimum distributions (RMDs) specifying a rising percentage of the tax-preferred assets that must be withdrawn each year from 70½ on. Annuities held in these tax-preferred accounts are subject to the same tax treatment as other investments, with the exception of certain types of qualified annuities which are exempt from the standard minimum distribution rules.

Accumulation annuities held outside of retirement accounts offer tax advantages, as well. Annuities that have an investment component are allowed to defer taxes on investment earnings until a distribution is taken. And while there are penalties for early withdrawals, as with 401(k)s, savers can typically keep their funds in an annuity without penalty until age 90. A 40 year-old, for example, could make a contribution to an annuity and allow it to grow tax-free for 50 years without paying any taxes. Moreover, unlike retirement accounts, savers can contribute to annuities without limit—providing a substantial advantage for high-income households seeking to shield substantial funds from tax liabilities.

Another difference between annuities held inside and outside of employment-sponsored accounts are the rules concerning pricing based on gender. In 1983, the Supreme Court ruled that all employer-sponsored retirement accounts must use unisex pricing.[7] A key implication of this was that pension payments must be equal in nominal terms for men and women, leading to a higher average benefit for women overall due to longer life expectancy. But the Supreme Court ruling also impacted annuities held within employer-sponsored saving accounts, with the rule affording female workers a roughly 3 percent cost savings relative to purchases outside of an employer accounts—which can (and usually do) offer gender-specific pricing.

The nature and form of the distributions from an annuity largely determines the fundamental function of the annuity. Annuities, broadly defined, can range from products that entirely resemble insurance products (where consumers pool risk through a well-capitalized insurance company, receiving a benefit in some cases and not receiving a benefit in others) to those that mostly resemble financial products (where savers direct investments towards a particular fund or investment and directly gain or lose from the investment's

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7. Arizona Governing Comm. v. Norris, 463 U.S. 1073 (1983).

performance). In most cases, consumers make this determination over time—making many types of annuities difficult to characterize.

This is especially acute with variable annuities, a product that is growing in popularity but in practice can be more like 401(k)s. Variable annuities are a way to shield high levels of income from taxation once the contribution limit on a 401(k) account has been reached. High-income individuals buy variable annuities using after-tax income, but the earnings on the funds invested are not subject to tax until the money is drawn out. The purchaser of the variable annuity can trade within the account without paying capital gains taxes on each transaction. In contrast to a standard 401(k), the saver may purchase an insurance guarantee as protection against low returns. Also, in contrast to a 401(k), the saver may leave the entire accumulated earnings in the account past age 70½ without needing to take withdrawals. Should the saver choose to take distributions, options include a lump-sum payout, periodic distributions (likely monthly), or converting some or all of the balance to a lifetime income stream. For those who choose to take their distributions as a lump-sum, the annuity effectively served a similar purpose as a 401(k)—with no contribution limit or required minimum distribution rules and yet including a minimum return guarantee and no upfront exclusion on the contributions.

With variable annuities, the income protections and principal guarantees can make many several forms, all grouped under the "living benefit" umbrella. For example, consumers can purchase a "Guaranteed Minimum Accumulation Benefit" to ensure a certain contract value after a set period of time, a "Guaranteed Minimum Benefit Amount" that establishes a baseline level of lifetime income if the assets are annuitized after a waiting period (such as one decade), and a Guaranteed Minimum Withdrawal Benefit (or Guaranteed Lifetime Withdrawal Benefit) that—similar to the Guaranteed Minimum Benefit Amount—provides a set minimum distribution for life. These protections typically cost in the range of 100 to 150 basis points annually, and are backed by the financial strength of the insurance company offering the product.

Annuities are often characterized by high commissions, although the commission is highly dependent on the product. While data on commissions charged are exceptionally difficult to find, the market research firm Wink reported that the weighted commission on annuities has fallen steeply over the past decade—from around 8 percent prior to the Great Recession to less than 6 percent today. But various reports indicate substantial variation among sellers and types of annuities, with "plain vanilla" immediate annuities (often called "SPIAs," or single premium income annuities) showing sales commissions of around 1 percent to 3 percent, and deferred income annuities, or longevity annuities, having commissions of around 2 to 4 percent. Variable annuities often have markedly higher commissions, coming in at 5 percent or higher. Several analyses report a positive correlation between the length of the surrender period and commissions, with shorter surrender periods driving some of the decline in average commissions.

This tour of the annuity landscape in practice illustrates how complex it is and how confusing it must seem to anyone thinking of buying an annuity. This complexity provides a practical reason why there is a gap between the academic literature that shows the benefit of annutization and the actual experience of retirees, most of whom do not buy annuities. Despite the theoretical appeal and preference among economists, a retirement saver has to be very determined to brave the annuity market.

The size of the U.S. market for annuities

Detailed information on the stock on annuities purchased and currently held is hard to find. According to the Investment Company Institute (ICI), the assets held as annuities outside of retirement accounts has grown from $1.4 trillion in 2009 to $2.1 trillion today—including both variable and fixed annuities. ICA data also imply that there are limited investments in annuities held within retirement accounts. Of the $1.6 trillion in variable annuities reserves invested in mutual funds, just $275 billion (17 percent) is in employer-sponsored retirement accounts and $195 billion (12 percent) is in IRAs.

As discussed earlier in this brief, the sparseness of annuities within retirement accounts may be due in part to the limited benefit of holding variable annuities in tax-preferred accounts, but may also be due to the low availability of annuity products in employer-based accounts and low take-up among those eligible. For example, a 2017 Deloitte survey of 148 plan sponsors found that just 6 percent offered in-plan annuitization (Deloitte 2017). Low availability was compounded by low take-up; an analysis prepared for the U.S. Department of Labor (2011) found that in 2002 only 6.1 percent of defined contribution plans were annuitized within one year of the account holders' retirement and this figure had fallen to only 4.1 percent by 2008. (Eventual annuitization rates were likely higher.)

Perhaps the most widely cited information on annual annuities sales comes from LIMRA. LIMRA data show that annuities sales in 2018 grew to $233 billion, an increase of 14 percent over 2017, with $100 billion in sales of variable annuities and another $133 billion in fixed annuity sales (Blay 2019). In a somewhat controversial article, the *Wall Street Journal* attributed the bump in sales in part to the demise of the Obama Administration's fiduciary rule, which would have required higher transparency around commissions and would have banned high-fee commissions if lower commissions were available (Eisen and Beilfuss 2019).

Policies to improve the annuities market

Currently only a small fraction of American families that retire with significant financial assets decide to purchase an annuity of any type. And those that do purchase annuities often buy products that are not pure annuities and do not guaranty lifetime income—making the products more comparable to mutual funds than to guaranteed lifetime income products. This longstanding lack of enthusiasm has led some to decide that it is not worth trying to move the needle on annuities. We disagree. Annuities are the norm in some developed countries—such as Israel (Hurwitz 2019) —where they are widely accepted as a key element of a sound retirement. In our judgment, it is possible to increase the acceptance of annuities, including deferred annuities, as a normal form of retirement saving. As annuity sales increase, the sales competition will intensify, ultimately pushing consumer costs down. Moreover, as has been demonstrated in other personal finance contexts, once a critical mass of people makes financial decisions in a certain way, this encourages others to follow suit (Duflo and Saez 2003, Burszten *et al.* 2014, for example). These so-called peer or herding effects can help amplify a small change in behavior into a more sweeping change in annuity popularity.

Lessons from Singapore and Australia

Both Singapore and Australia have compulsory retirement savings programs; Singapore also has a compulsory annuitization program once workers start to draw down their savings. We do not support creating a compulsory retirement system like that in Singapore or Australia, but it is worthwhile looking at these two countries to see if there are any lessons for US policy.[8]

In Singapore, employers and workers are required to contribute a high fraction of their income to a retirement (and health care) fund, which is converted to annuity at retirement.[9] While such paternalism would be resisted in America, Singapore's retirement system means that older citizens are well provided for in retirement and do not worry about exhausting their assets in old age. Indeed, Singapore has one of the longest expected lifespans of any country in the world—82.8 years compared to 78.7 in the United States—making management of retirement assets an especially acute concern.

Another useful example country is Australia. Australia has a compulsory retirement savings program, called superannuation, that amounts to a system of forced employer contributions to workers' defined contribution plans. (The contribution rate as a share of earnings has been increasing over time and is scheduled to rise to 12 percent by 2020.) Like the U.S. system, savers receive tax benefits for contributions, and participants benefit from economies of scale with respect to administrative fees. And like the U.S. system, a separate public pension system provides basic living expenses to most old-age citizens.

The Australian system, unlike Singapore, does not require annuitization. And in fact, few participants elect to do so. In 2012, for example, about half of eligible savers elected to take their assets as a lump-sum distribution. Of the remaining half, 98 percent selected a phased withdrawal product over an annuity—indicating that only around 1 percent of participants chose to annuitize (Agnew 2013).

One of the challenges with Australia's system is creating incentives for savers to preserve their assets, which is complicated by the existence of a generous means-tested benefit. Some time ago, low- and moderate-income households realized if they withdrew all their retirement savings they could spend the money as they wished and when it was all gone, they could apply for the Australian means-tested income support program for the elderly and live on that money. The amount of equity in a home was not counted in the means testing, so many Australians would pay off their mortgages with superannuation assets. Healthy retirees could often supplement their income by cash work that was unreported. (Something similar can happen in the United States with people who find ways to

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8. Of course, the United States does have the Social Security retirement program with compulsory payroll taxes where the benefits are paid out as lifetime income.

9. As of 2018, the employer's contribution is 17 percent for those up to age of 55 and decreases to 7.5 percent for those 65 and above. The employee's contribution is 20 percent up to age 55, above 55 to 60 years of age 13 percent, above 60 to 65 to 7.5 percent, and decreases to 5 percent for those 65 and above.

dispose of their assets to qualify for a nursing home paid for by Medicaid.[10]) These incentives to spend down asserts, rather than purchase an annuity, is a further obstacle to higher annuitization rates.

Both the Australia and Singapore systems are possible models for expansion in the U.S. Given the widespread popularity of Social Security, and the assumption that developed countries will maintain some sort of old-age insurance program, the practical question for policymakers seeking to dramatically expand retirement resources is whether to mandate some sort of private savings vehicle with annuitization as an option (like Australia's superannuation) or to offer some sort of tax-incentivized saving option, but to mandate annuitization with the accumulation at retirement.

At the outset, we note that the United States political economy is such that both forced private saving plans and compulsory annuitization are extreme reaches, at best. At the same time, the widespread popularity of Social Security and Medicare both make those programs' preservation extremely likely. Thus, most American retirees can expect lifetime income Social Security and inflation-adjusted health insurance protection for life upon reaching age 65. The key question is then, conditional on the benefits offered from Social Security and Medicare, whether further access to annuitization from private accounts would improve the welfare in retirement. While market purists may argue that personal finance decisions are outside the purview of the public sector, there are several arguments for government intervention in retirement decisions. Since increased purchase of annuities can help people avoid running out of money later in life, higher annuitization can relieve children and others from the burden of caregiving, reduce public expenditures aimed providing low-income old-age beneficiaries with a minimum level of benefits, and—to the extent that most annuities may be purchased with tax-preferred dollars—improve the ability of the $250 billion annual retirement tax expenditure budget to improve retirement well-being.

If policymakers determine that increased annuitization of private saving is indeed beneficial to the American public, there are two broad strategies to encourage wider annuitization. The first is a consumer-facing approach designed to change perceptions about annuities and "nudge" consumers towards purchasing annuities. Nudging people to save more is a way of moving people to a level of saving they will need once they get older without going all the way to a Singapore-style system. In particular, this approach can also include framing annuities to make them more appealing to consumers. A second approach is to address the availability and price of annuities. This strategy can include removing barriers to plan sponsors offering annuities in retirement accounts, regulatory reform to make annuities easier to purchase in IRAs and other tax-preferred accounts, and strategies to help life insurance companies better manage risk associated with annuity products.

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10. There are safeguards to prevent elderly from giving their assets to their children to qualify for Medicaid, but these are not perfect.

Putting annuities in employer retirement programs

The low uptake of annuities does not result purely from the unwillingness of savers to buy such products. The other big reason is that few employers have the option of purchasing an annuity as part of their employer plan retirement offerings.

Currently, someone retiring could go out on their own and buy an annuity, but the fees in the individual marketplace are high and employees may feel they lack the knowledge to choose a good product. (See section II for further discussion of why many Americans prefer not to purchase annuities.) Employers could offer annuities as part of their 401(k) offerings and negotiate for a group rate that would lower fees, but in practice few employers do this—in part due to employers' beliefs that offering annuities exposes them to considerable fiduciary risk. Employers are worried that they will be on the hook for annuity payments if the annuity provider they select for their workers goes broke. The risks to employers are typically not very great if they choose an annuity provider sensibly and continue to monitor the financial health of their selection, but many employers decide not to take the risk. For example, in a 2016 Willis Towers Watson survey on lifetime income solutions, 81 percent of plan sponsors indicated fiduciary risk was an important barrier in their decision to not consider lifetime income solutions as retirement options. Similarly, a survey of plan sponsors by the Government Accountability Office (GAO) found that of the 39 respondents that did not offer an annuity, 26 reported that their decision was partly due to concerns over the "resources required to obtain liability relief."

Legislation now in Congress attempts to remedy this problem. The Senate introduced the Retirement Enhancement and Savings Act[11] (RESA) and the House Ways and Means Committee passed the Setting Every Community up for Retirement Enhancement[12] (SECURE) Act, which try to get more annuities into workplace plans by making it easier for employers to protect themselves from future liability. Specifically, both RESA and the late-2018 House legislation contain safe harbor provisions developed largely by the insurance industry to protect employers from potential fiduciary liability for their selection of annuity providers.[13] As fiduciaries, employers are still expected to undertake an objective, thorough, and analytical search for annuity providers, but the legislative safe harbor provisions are intended to simplify and clarify this process, making it much more explicit, objective, and attainable.[14] The key point is that, under this safe harbor, employers would not be re-

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11. Retirement Enhancement and Savings Act of 2019, S. 972, 116th Cong. (2019).

12. Setting Every Community Up for Retirement Enhancement Act of 2019, H.R. 1994, 116th Cong. (2019).

13. A similar bill, Increasing Access to a Secure Retirement Act of 2017, H.R. 4604, 115th Congress (2017), was introduced in 2018 by Reps. Walberg (R-MI) and Rochester (D-Del.).

14. Under the provisions, a plan fiduciary would not be held liable for losses to participants owing to the annuity provider's inability to meet its financial obligations under an annuity contract if the fiduciary obtains written representations from the insurance company that it is licensed to offer annuity contracts, has for the previous seven years operated under a valid certificate of authority from its domiciliary state, has filed audited financials, maintains reserves that satisfy state requirements, is not operating under an order of supervision, rehabilitation or liquidation, and undergoes, every five years, a financial examination by the state. Fiduciaries also are not required to opt for the lowest cost annuity contract, although they are expected to take into account in their evaluation the cost of the contract and its value, benefits and features, as well as the financial strength of the insurer.

sponsible if the annuity provider enters insolvency as long as they have followed a reasonable path when choosing the provider. If concern over liability is indeed a major obstacle towards employer take-up of annuities, this legislation should lead to a rise in annuity offerings.

Framing annuity purchase as a portfolio decision

Most people who have saved for retirement have done so using tax-deferred 401(k)-style plans. Since very few employers currently offer an annuity option, this means workers reach retirement age and must decide what to do with their assets once they separate from their employer. In this paper, so far, we have framed the decision to buy an annuity as essentially an insurance decision, protecting households against running out of money if they live too long. Deferred annuities provide that insurance protection at low cost. What about more affluent households? Would it make sense for those holding, say, $1 million to $5 million to place a significant fraction of their portfolios into an immediate annuity when they retire? We stress that we are not financial advisors, individual circumstances will vary, and actual annuities sold in the market sometimes carry high fees and are overly complex. However, there is a case in principle for investing in an annuity as part of a rational retirement portfolio decision.

Consider a household which has sizable retirement fund at age 65. Holding equities in their portfolio with allow them to take advantage of the higher expected returns from this class of asset. Holding bonds will provide greater stability to the portfolio and protect against the big declines in equities that have happened in the recent past (2000–03 and 2008–09). A portfolio that splits the holdings between an equity fund and a bond fund is the standard way to cover both bases. Depending on the risk appetite of the household, they can hold 70 percent equities and 30 percent bonds, or a 60/40 split, and so on. If the household decides they want some lifetime income in addition to Social Security, they could buy an annuity with a portion of their assets and hold the same 60/40 or 70/30 split with the remainder. That is not the right way to think about the annuity decision, however. Holding an annuity provides stability in a retirement portfolio by essentially providing a monthly "paycheck," making it unnecessary to hold bonds, or hold the same amount in bonds.

Suppose the initial retirement fund is $1 million and the household buys an annuity for $400,000. Depending on the exact annuity purchased, this amount would yield about $25,000 to $28,000 in annual income for life for a married couple at age 65.[15] This income lasts as long as either member of the couple remains alive. If this sample household has $40,000 or $50,000 a year in Social Security benefits, they now have a lifetime income of $65,000 to $78,000 a year.[16] With a solid level of income as a backstop, this example retired couple still have $600,000 that they can keep *entirely in equities,* because they are covered against the ups and downs of the market. Effectively, they continue to have the 60/40 split they would have had before, but the 40 percent in bonds is now in an annuity

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15. See different options at AnnuityShopper.com

16. Once one member of the couple dies the Social Security benefit level will drop.

instead of being held in a bond fund. They can capture the return on equities with the remaining amount of their financial assets, cover vacations, unexpected expenses and either leave a bequest to their children or cover several years in a nursing home. There is a tradeoff, of course. If the couple dies young, they will not get back what they put into the annuity, never mind getting a positive return. On the other hand, if one or both of them live into their 90s, they will get a great return. That is the insurance aspect of an annuity purchase.

Framing deferred annuities to make them attractive to buyers

For economists it is natural to think of buying insurance against longevity risk, but to most people it is not obvious that this is a risk that needs to be insured and that makes deferred annuities a tough sell for providers of such policies. How can deferred annuities be made more attractive?

One approach is through financial education.[17] Teaching the arithmetic of compound interest may not be the best way to do this, rather it is better to help people visualize what their lives will be like at age 85 or 90, depending on how much money they have available. What will their housing situation look like if they are living just on Social Security? Will they have funds to pay for assistance with cleaning or preparing meals? Will they have enough to pay for a Medicare Advantage program and to pay for co-payments on drugs and doctor visits? No one likes to imagine being old and infirm but being in that situation is much better with a secure income. We are not overoptimistic about how much can be done with financial education, but it is an innocuous option at worst that could have a positive impact on a subset of savers.

Perhaps the most promising approach to financial education is to have employers provide guidance to their employees and those about to retire about how to manage their funds. The advantages of lifetime income, as well as the potential downsides, can be discussed and evaluated. An employee with a very low 401(k) balance is better off keeping those funds for emergency use. Their main source of retirement income will be Social Security and perhaps the value of their home. A very wealthy person probably does not need an annuity; they can ride out market swings and unexpected expenses, with their estate being the residual. Of course, the wealthy may use certain types of "annuities" as a tax avoidance mechanism. The targets for annuities are middle- or upper-middle-income households that might have had a pension decades ago, but do not have one now. They have saved for retirement but do not have enough to feel secure and can benefit from either an immediate income annuity or a deferred income annuity. Employers that can give guidance and negotiate group rates for employees wanting to purchase annuities could dramatically change the take-up rate for these policies.

In the paper presented at the Brookings-Kellogg annuities event May 9, 2019, Vanya Horneff, Raimond Maurer and Olivia S. Mitchell suggested employees in 401(k)-style plans

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17. A leader in the area of financial education is Annamaria Lusardi of the George Washington University School of Business, where she is the Director of the Global Financial Literacy Excellence Center (GFLEC) and has published widely on financial literacy and education.

should be automatically enrolled in deferred annuities unless they decide to opt-out. They use an economic model to show that workers would be better off if the take-up of such annuities would be higher. At the same event, Abigail Hurwitz argued that annuities would be more widely used if they were framed to employees in terms of the stream of retirement income that would be generated. They would be framed essentially as a form of pension to which employees would contribute. Hurwitz drew on her experience in Israel, which had compulsory annuities. Even after the compulsion was removed, many Israeli workers decided to take annuity options, having seen first-hand the advantages of lifetime income they provide.

Conclusion

Many economists are frustrated by the tepid demand for annuities because the economic logic behind them is so compelling, but few of the retirees who could benefit from annuities purchase them. We have discussed this paradox at length. In working on this retirement project, we often run into knowledgeable people who dismiss annuities. These include tax accountants, asset managers, and even some researchers. Some of the objections to annuities are well-taken: the annuity market is confusing; putting too much into an annuity can leave recipients cash-poor; and, fees can be high. That is why we have stressed the importance of both expanding the market for income annuities, so there is more competition, and involving employers in the provision of annuities so they can negotiate fees downwards and help avoid the confusion buyers may face.

There are also biases to be overcome. Financial advisors are often in the asset management business themselves, derive fees from the value of assets under management, or are judged and promoted based on the value of assets held by their clients. Having a significant portion of a retirement portfolio taken away into an annuity may be against the financial advisor's own financial gain. Many are dissuaded by annuities' reputations for carrying high fees, although this is not applicable to all annuities—especially many income annuities—and can be mitigated by lower-cost distribution channels. Deferred annuities are a product hard to explain and to sell. A leading annuity provider, TIAA, decided not to sell deferred annuities because they did not see a sufficiently large market.

Have annuities been tried and failed, or have they not been tried? The right way to think about annuities is to go back to the days when defined benefit pension plans were common. Employers promised their workers lifetime income through pension plans after sufficient years of service. People loved having these pensions even though they are in fact financed by the workers themselves. Economic analysis has clearly shown that it is total worker compensation that is determined by the marketplace, so that health insurance premiums, payroll taxes and pension contributions are all effectively paid for by wage rates that are lower than they would be in the absence of these costs.[18] In short, we think annuities were tried and succeeded. Unfortunately, the shift in institutional arrangements away from defined benefit plans also shifted worker perceptions about retirement assets, so that

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18. Many firms introduced pensions during wartime controls. They were not able to raise wages and so they used pensions and health insurance as a way of attracting workers during a time of labor shortage. At that time, the fringe benefits were probably a net plus to workers, but that changes once controls are lifted.

pension contributions were now seen as the property of the workers, as opposed to a free fringe benefit. As a result, people wanted to take control of the money, wanted to see high returns, and were unwilling to convert to annuities as an insurance strategy. If workers' mindsets can shift again to see guaranteed lifetime income as an important goal of their retirement security strategy, then annuities will become a vital part of the retirement security toolkit.

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The Retirement Security Project is dedicated to promoting common sense solutions to improve the retirement income prospects of millions of American workers. Nearly half of all workers do not have access to an employer-sponsored retirement savings plan or a traditional pension. Among workers who do have access to such a plan, the shift from defined benefit pension plans to defined contribution plans makes it even more important for individuals to save for their own retirement. To address these trends, RSP proposes research-based policy solutions aimed at helping middle- and low-income Americans to better prepare for a financially secure retirement.