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Using behavioral insights to increase annuitization rates:

The role of framing and anchoring

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ABSTRACT

In light of past academic literature as well as empirical evidence of an “annuity puzzle,” a behavioral approach is suggested in this document in aid of increasing annuitization rates. In particular, communicating savings as a monthly or yearly income stream (as opposed to a lump sum framing) and using a uniform set of assumptions is suggested. In addition, a recommended level of annuity prior to retirement is discussed, building on anchoring bias to help individuals making retirement decisions choose higher levels of annuities. This document points out questions, concerns, and future exploration needed.

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Introduction

Various countries around the world are challenged by the need to provide adequate post-retirement income as well as insurance against longevity risk. One of the most common products to provide such insurance is an annuity, a product paying a monthly (or yearly) pension for the rest of a retiree's life. The academic literature provides support for the necessity of annuities and debates on the specific level of optimal annuitization.

Several empirical studies report information on the fraction of people who have purchased annuities. The results vary largely across countries and characteristics of employees and organizations. However, evidence from the United States is very consistent across various studies, suggesting that annuitization rates are relatively low.

Different regulators are implementing or considering implementing a wide range of policies related to the payout phase. The United Kingdom had a mandatory annuity law that was repealed in 2014. The Netherlands mandates full annuitization, Chile offers only annuities or phased withdrawals, Israel adopted a mandatory minimum annuity requirement in 2008, and Singapore requires a combination of lump sum and deferred annuity provided by the government (Hurwitz, Sade, and Winter, 2019).

In the following, I review both the economic theory and some empirical evidence and suggest a behavioral approach to increasing annuitization rates in the United States. This approach would not involve mandating any level of annuitization.

This policy proposal is focused on framing as a means of increasing annuitization rates through better communication, specifically, by describing annuities to employees and employers as a stream of income and a source related to consumption. This could be achieved by reporting the level of expected annuity in the annual reports sent to participants in defined contribution plans and by encouraging providers to frame the accumulated account as an account designed for annuitization upon retirement. This recommendation should be accompanied by a set of well-defined, uniform assumptions to be used by all plans managers to calculate their employees' expected annuity. Furthermore, I suggest that an anchor in the form of a minimal target level for annuitization could be used to capture some of the effect of compulsory annuitization without the caveats of mandatory annuitization and hence may be useful for enhancing annuitization rates.

This document continues as follows: In Section 2, I review the related academic literature regarding the demand for annuities and the empirical evidence suggesting the existence of an "annuity puzzle"; in Section 3, I discuss mandatory annuitization; in Section 4, I briefly describe the decumulation phase in the United States; in Section 5, I present a behavioral approach to increasing annuitization, and in Section 6, I discuss further questions and concerns regarding the implementation of this proposal. In Section 7, I conclude.

Why annuities? The academic perspective

Researchers in economics have long been trying to better understand the nature of the choice between an annuity and a lump-sum withdrawal upon retirement. Yaari (1965) is

the first to note that a rational retiree with no bequest preferences in a world of fairly priced annuities gains from fully annuitizing her assets. In his seminal work, Yaari (1965) presents a theoretical framework of utility maximization under wealth constraints. His model, which has some strict assumptions related to the utility function[1], yields that consumer preferences are independent over time. Yaari further assumes that there is only one uncertainty in this choice mechanism, which is the time of death.

More recent economic literature demonstrates that annuities will still be preferable and rational for retirees even when dropping some of the rigid assumptions of Yaari's model (such as the utility function, the lack of a bequest motive, or the fair pricing of annuities)[2]. Gong and Webb (2010) argue that even at plausible levels of actuarial unfairness (deferred) annuities raise utility.

The literature provides evidence that individuals lack the skill to optimally draw money from their pension fund and smooth consumption[3]. These arguments all provide strong evidence that annuities have substantial value and that retirees should generally use annuities to smooth their consumption in retirement and to protect themselves from longevity risk.

The demand for annuities in practice

Empirical research documents different rates of annuitization across countries. Brown (2001) builds on data collected by the Health and Retirement Study (HRS)[4] and suggests that 48 percent of American households expect to annuitize their defined contribution plan[5] account balances, whereas Schaus (2005) shows that only 6 percent of American retirees (with defined contribution pension plans) choose to annuitize, and Pashchenko (2013) shows that between 0.4 and 12.2 percent of individuals aged 65–75 according to the 1998 HRS own annuities (depending on income quantile). Beshears, Choi, Laibson, Madrian, and Zeldes (2014) argue that less than 10 percent of defined contribution plan owners choose to purchase annuities, whereas Reichling and Smetters (2015), studying HRS data (1993–2102) of 169,000 households of individuals over age 55, find evidence of annuitization rates between 1.3 and 15.1 percent (depending on wealth quantiles). Other researchers find higher rates of annuitization in defined benefit[6] plans, public pension plans, and pension plans owned by specific employers (Alexandrova and Gatzert, 2019).

Similar trends are reported in other countries. Ganegoda and Bateman (2008) show that in Australia for the year 2008, only 19 people purchased new annuities. Goedde-

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[1] His assumption was that the utility function is a *Fisher utility function* of the form $V(c) = \int_0^T \alpha(t)g[c(t)]dt$, where αa subjective discount function and g is is a concave function.

[2] Such as Brown (2003), Davidoff, Brown, and Diamond (2005), Ganegoda and Bateman (2008), and Yogo (2016).

[3] Benartzi, Previtero, and Thaler (2011); Poterba, Venti, and Wise (2011).

[4] A very detailed nationally representative survey of Americans over the age of 50 (and their spouse regardless of their age).

[5] A defined contribution pension plan is one in which the employer, the employee, or both make contributions to a designated fund.

[6] A plan in which payments are calculated according to the seniority of work years and individuals' salary (typically the last salary).

Menke, Lehmensiek-Starke, and Nolte (2014) study individual preferences for annuitization in Germany and find that only 17.53 percent of participants in an online survey reported they have an annuity. Lee (2016) investigates data provided by the Korean Retirement Readiness Survey showing that only 39.9 percent of employees and 26 percent of self-employed workers hold private annuities.

Even in countries in which annuities are more popular (e.g., Switzerland and Chile) it is evident that there are policy influences favoring annuities. Bütler and Teppa (2005) examine annuitization choices in several Swiss pension funds, a country in which most retirees choose an annuity. They report that in Switzerland, an annuity is the default option, and suggest that most retirees choose the standard option offered by pension providers. James, Martinez, and Iglesias (2006) investigate the annuity market in Chile by calculating the "money's worth ratio" of annuities, providing evidence that annuities in Chile are among the "worthiest" (in the sense of annuity per investment) in the world, due to specific regulation in the Chilean market. It is thus not surprising to find that the purchase rates of annuities in Chile are extremely high, and higher than in other countries.

The gap between the theoretical value of annuities and empirical evidence suggesting that U.S. households are reluctant to annuitize their balances is known as the "annuity puzzle." As Modeligani (1985) writes: "It is a well-known fact that annuity contracts, other than in the form of group insurance through pension systems, are extremely rare. Why this should be so is a subject of considerable current interest. It is still ill-understood."

What explains the low demand for annuities?

Economists have been trying for some time to explain this annuity puzzle. The academic literature offers a wide range of arguments and explanations for the low demand for annuities.

There are several explanations related to the supply side of the annuity markets. Potential factors are adverse selection[7], pricing[8], and efficiency of the available products. Scott, Watson, and Hu (2006) examine the efficiency of different annuity products using a standard life-cycle framework. They conclude that delayed annuities[9] are preferred over standard annuities. However, delayed annuities rarely exist in practice and therefore the authors argue that low demand for annuities derives from the incompleteness of the annuity markets. Abraham and Harris (2014) illustrate the advantages of longevity annuities, offering protection against longevity risk at a much lower cost than immediate annuities.

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[7] The theory of adverse selection in insurance markets suggests that when buyers of insurance have more information than the insurers, coverage and risk will be positively correlated. Adverse selection in annuities markets was discussed by Finkelstein and Poterba (2004), Bütler and Teppa (2005), and others.

[8] Bütler, Staubli, and Zito (2008); Chalmers and Reuter (2012).

[9] Annuity contracts with payouts that are planned to begin in the future.

Other arguments suggest that the size of accumulations[10], lack of confidence in the stability of insurance companies[11], a shift of liabilities to captive reinsurers[12], and possible erosion of annuities value over time[13] play a role in understanding the annuity puzzle.

Socio-economic parameters, bequest motives, and demographic characteristics are largely described in past literature. Previous studies report that gender, risk aversion[14], perception of life expectancy, and time preferences[15] play a role in the decision to annuitize, and some argue that health status also plays a role, particularly because retirees wish to keep liquid assets for uncertain medical expenses[16]. The literature also contains studies on psychological and behavioral barriers to annuitization, such as complexity of the decision[17], defaults[18], difficulty in making irreversible decisions[19], framing[20], difficulty parting with accumulated money[21], mental accounting[22], availability errors[23] and ambiguity regarding one's own life expectancy[24].

Should annuitization be mandated?

Various governments are considering mandating annuitization. There are three main arguments for doing so, as discussed by V. Horneff, Kaschützke, Maurer, and Rogalla (2014): preventing moral hazard in social security systems, avoiding delay of tax payments (paid out of withdrawals), and preventing wealth from being transferred to the next generation. Mandatory annuitization has many other advantages, such as protection against longevity risk, shifting of investment risks, stabilization of consumption patterns, and reduction of adverse selection (by health condition) in the annuity market. It also has disadvantages such as the risk that a retiree will lack the resources needed for unexpected events (i.e., medical expenses), redistribution of wealth (due to pooling of longevity risk), and exposing

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[10] Bütler and Teppa (2005); Benartzi et al. (2011).

[11] Bütler and Teppa (2007).

[12] Koijen and Yogo (2016).

[13] Shu, Zeithammer, and Payne (2016); Beshears et al. (2014).

[14] Agnew, Anderson, Gerlach, and Szykman (2008).

[15] Warner and Pleeter (2001).

[16] Cappelletti, Guazzarotti, and Tommasino (2013); Sinclair and Smetters (2004); Gardner and Wadsworth (2004); Turra and Mitchell (2008).

[17] Brown, Kapteyn, Luttmer, and Mitchell (2017).

[18] Bütler and Teppa (2007); Agnew et al. (2008).

[19] Brown and Warshawsky (2004).

[20] Benartzi et al. (2011); Beshears, Choi, Laibson, Madrian and Zeldes (2013); Brown, Kling, Mullainathan, and Wrobel, (2008); Goldstein, Hal, Hershfield, and Benartzi (2015).

[21] Benartzi et al. (2011).

[22] Brown (2007); Benartzi et al. (2011).

[23] Hu and Scott (2007).

[24] D'Albis and Thibault (2012); Smith, Kerry, Taylor, and Sloan (2001); Payne, Sagara, Shu, Appelt, and Johnson (2012).

retirees to the risk of insurers' insolvency. It is important to note that regulation regarding the withdrawal phase is not trivial when there are borrowing constraints.

Practitioners as well as regulators are debating mandatory annuitization benefits. Several authors study mandatory annuitization considering two welfare effects—preventing poverty of retirees while limiting wealth allocation and bequests. In a theoretical framework exploring social security reform in the United States, Fuster, Imrohoroglu, and Imrohoroglu (2005) quantitatively estimate the welfare effect of introducing a personal security account scheme with or without mandatory annuitization. Under a setup of overlapping generations and types of individuals that differ in income and life expectancy, it is suggested that mandatory annuitization benefits most households.

W. Horneff, Maurer, Mitchell, and Dus (2006) compare different retirement payout approaches, within a life-time utility framework, to find an optimal retirement portfolio and examine the implications of compulsory annuitization. They show that the appropriate combination of a stand-alone life annuity and a phased withdrawal strategy (with diversified invested portfolio) depends on risk aversion. They conclude that making annuitization mandatory may cause significant utility losses for less risk-averse retirees if annuitization is compelled to be early.

Orth (2006) considers mandatory annuitization in the United States, analyzing its advantages and disadvantages, mainly by reviewing the experiences of other countries in this field. He concludes that many of the disadvantages can be mitigated while those remaining, such as increased administrative costs, are reasonable trade-offs for the gains of mandatory annuitization.

Different regulators around the globe disagree on the need to mandate the use of annuities and if mandated, on the appropriate design. The United Kingdom had a minimum annuity law that was repealed in 2014. In contrast, Israel adopted a mandatory minimum annuity in 2008 (Hurwitz et al., 2019). Other countries have a range of policies related to the withdrawal phase; V. Horneff et al. (2014) review different regulatory frameworks for the payout phase of funded pension systems in European countries and the United States. According to their review, in Austria and France, annuitization is required by law, while in Germany annuitization is required only for some of the contracts available in the markets. In Italy, 50 percent of funds are annuitized upon retirement and Switzerland allows for 25 percent of funds to be cashed out as a lump sum. Singapore mandates a combination of a lump sum and a deferred annuity provided by the government (Fong, Mitchell, and Koh, 2011). In India at least 40 percent of pension accumulations are designated to be annuitized by law. In the Netherlands all retirement wealth is subject to mandatory annuitization (Nijman and Brown, 2012), Sweden requires an annuity for a minimum period, and in Chile annuities and phased withdrawals are allowed.

Decumulation in the United States

Over 90 percent of American workers are covered by Social Security, paying a life annuity that provides a replacement rate of around 42 percent for the average worker (Nijman and Brown, 2012). Within the private pension scheme in the United States, there are no re-

strictions on retirees' lump-sum withdrawals, allowing a full lump-sum cash-out at retirement.[25] In fact, annuitization rates in the United States are relatively low and it is worth noting that annuity sales are dominated by variable annuities that in many cases function more as an investment product (Abraham and Harris, 2014).

Hence, extensive effort is underway to find ideas to promote annuitization. Prior studies and policy proposals highlight the possible contributions of behavioral economics to this task.

Previous papers by Brown (2009) and Gale, Iwry, John, and Walker (2008) illustrate the importance of defaults and automatic annuitization. In this document I suggest a more sensitive recommendation that would not mandate or compel individuals to annuitize.

A behavioral approach

Can annuitization rates be increased without imposing strict limitations on wealth allocations and preferences for bequest? Building on the extensive literature on behavioral biases and nudges, I suggest a different approach to push individuals toward higher rates of annuitization.

Framing

Past literature shows that individuals are very sensitive to the specific way annuities are framed. Beshears et al. (2014) study the effect of different frames on hypothetical annuitization choices, using two large online surveys of 1,000 (Survey 1) and 4,130 (Survey 2) U.S. residents aged 50 to 75 during August 2011 and June 2012. Respondents to their surveys were randomly assigned to eight groups. Each group was presented with a different frame of the annuitization decision.[26] They conclude that flexibility, control,[27] and investment framings are significantly reducing the demand for annuities. This result is in line with previous findings of Brown, Kling, Mullainathan, and Wrobel (2008). Using an online survey conducted in December 2007 of 1,342 individuals, they find that retirees separate investment from consumption decisions. Therefore, framing the annuitization decision as a consumption decision, namely, using words such as "spend" and "payment" rather than "invest" and "earning," yields higher annuitization rates. Their assumption proved right in an online survey. Agnew et al. (2008) provide evidence of differences in the demand for annuities (in an experimental framework) in light of negative versus positive framing.

Goldstein, Hershfield, and Benartzi (2016), in three experiments, find a framing effect related to higher sensitivity to amounts expressed as an annuity, compared to amounts

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[25] A review of annuitization policies worldwide is available in Mitchell, Piggott, and Takayama (2011).

[26] They used different decision "frames" such as good deal (adding the sentence "The guaranteed lifetime income option gives you higher payments than you would get by buying an identical product from an insurance company because your employer will not charge you fees"), total payment, investment framing, flexibility and control, longevity coverage, and mortality credits.

[27] For example, they added the following text for one of the groups: "Choosing a bigger lump sum gives you more control over your investments and more flexibility over the timing of your spending."

expressed as a lump sum, possibly due to an illusion of wealth (especially at higher monetary amounts). The method used in these surveys is based on asking respondents to increase their saving rates. Some participants received information on prior savings presented in a capital frame (e.g., "you saved $100,000) while others received information framed as an annuity (e.g., "you saved enough to pay for a $500 annuity").

This is a key point, considering that annuitization rates are higher in defined benefit plans, in which the benefits are frames as an income stream, than in cash balance plans that are framed as a stock of capital (Beshears et al. 2018). Benartzi et al. (2011) provide empirical evidence based on past research and a new sample of 112 retirement plans showing that the annuitization rate among participants of defined benefits plans is 53 percent on average, compared to only 41 percent in the cash balance plans. Their conjecture is that defined benefit plans promote annuitization by communicating the benefits as monthly or yearly income.

This idea is supported by the results of Hurwitz and Sade (2019), providing evidence of very high annuitization rates in a defined contribution plan in Israel (Figure 1). In particular, the analysis of decumulation choices of pension insurance policy holders reveals that about 59 percent of the savers chose to fully annuitize their accounts (for accumulations higher than USD 142,000).[28] This result is interesting since in Israel, annuities are also framed as a stream of income in the defined contribution scheme (defined benefit plans have been closed to new enrollees in the private market since 1995). The concept of a "pension," in fact, was framed as a contribution to a stream of annuities. Moreover, most of the pension funds were managed in the past by the labor unions (rather than employers) that contributed to the branding of annuities. The framing of annuities as being related to future consumption was very effective and influenced other products and providers not related to the labor unions. Subsequently, the Israeli regulator demanded the reporting of expected annuities in the annual reports as I will further elaborate in this document.

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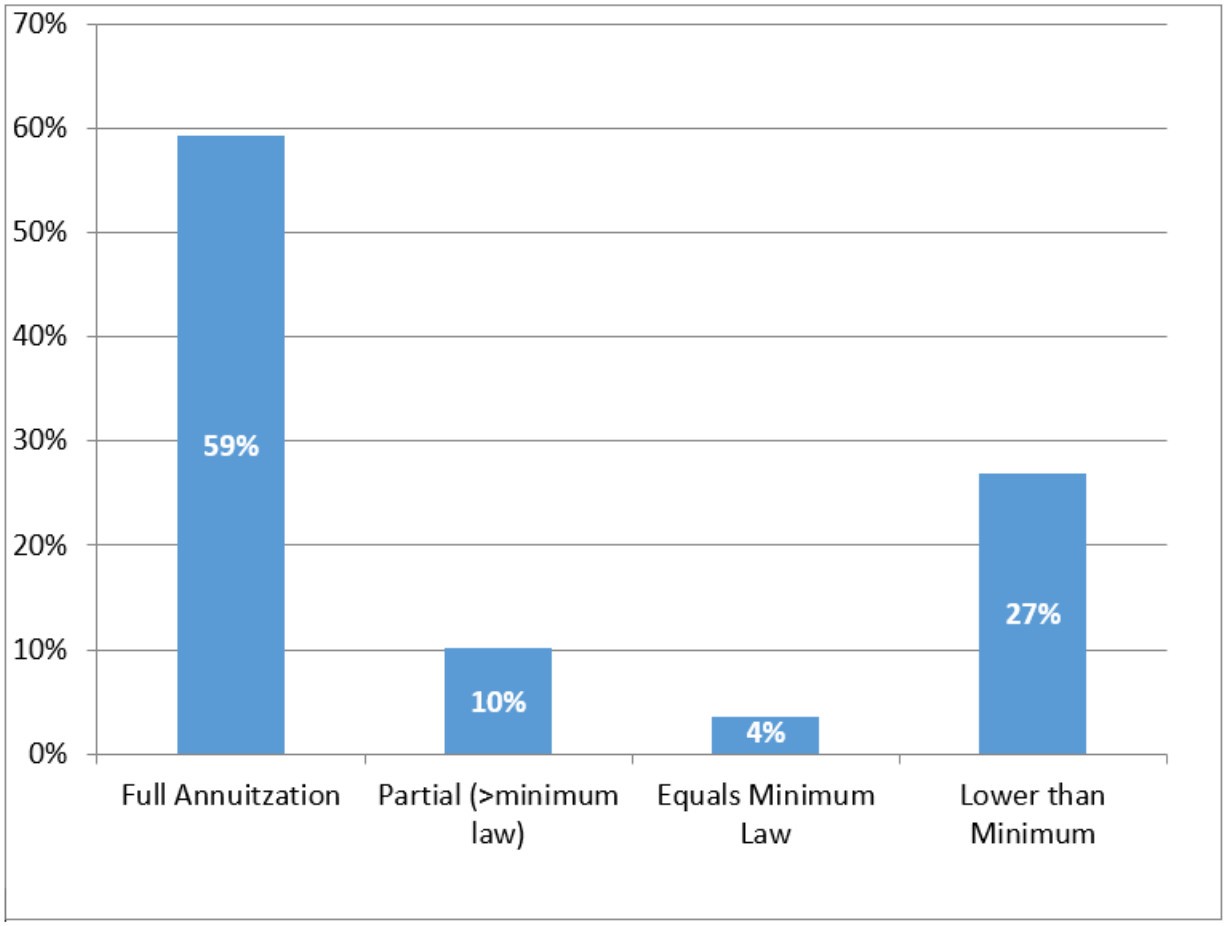
[28] Israel has a mandatory minimum annuity law that applies only to funds accumulated after 2008; the data analyzed in Hurwitz and Sade (2019) are related to payout choices from 2009–2013.

Figure 1. Annuitization rates of an Israeli defined contribution plan, 2009–2013



Source: Author calculation based on data from Hurwitz and Sade (2019), for accumulated accounts higher than USD 142,000. Full annuitization = Fully annuitized accounts. Partial annuitization = Partially annuitized accounts, with the annuity value higher than the minimum required by law. Equals minimum law = Annuities equal to the legal mandatory minimal level. Lower than minimum = Accounts partly annuitized, but total annuitization value is lower that the mandatory level (mandatory level does not apply for funds accumulated prior to 2008; hence some of the retirees are not restricted by this law).

Building on these findings, the first suggested step is to better communicate annuities as a stream of income and as a source related to consumption. This could be achieved by reporting the level of expected annuity in the annual reports sent to participants in defined contribution plans as suggested by Baily, Harris and Iwry (2019) and by encouraging providers to frame the accumulated account as funds designated for purchasing an annuity upon retirement. Coe, Belbase, and Wu (2016) provide supportive evidence for this suggestion by showing that in an experimental framework, participants receiving annuity information (in a chart indicating how much insurance is needed to buy a 15-year, monthly fixed annuity) increase their insurance coverage compared to a baseline scenario.

This idea has been discussed before; in fact, most 401(k) plans already report this. However, as pointed out by Professor Jamie Hopkins in an interview in MarketWatch,[29] it is important to create a unified set of accepted assumptions according to which the projections and calculations of expected annuities would be carried out by the different providers.

A good example of this are the requirements set by the Israeli Ministry of Finance. In 2014, the Israeli authorities disseminated guidelines to all plan managers for reforming the presentation of both the annual and the quarterly pension reports. These guidelines refer to the structure of the reports, their components (including a requirement to report the expected annuity), and specific binding instructions for the assumptions to be used to calculate future annuities. (In particular, the regulator sets the interest rate, assumptions on future contributions to the fund, expected CPI (consumer price index), the date on which the benefit is to be received. and the annuity conversion factor.)

Anchoring and financial decisions

The literature described above supports the conjecture that people are sensitive both to the framing of the annuity and to values provided by other parties regarding the appropriate levels of annuitization. Hence, I suggest that a policy that will better frame annuities as consumption products should be accompanied by providing a minimal "target level" for annuitization that has the potential to positively influence the demand for annuities by anchoring choices toward this level.

The anchoring phenomenon, first described by Tversky and Kahneman (1974), refers to cases in which under uncertainty, people anchor on values that come to mind and adjust these numbers to estimations that seem plausible to them. The initial belief is possibly irrelevant and uninformative.

The economic literature contains many instances of the anchoring phenomenon appearing in various negotiation conditions, including, among other, anchors in organizational economics as shown in Camerer and Malmendier (2007) and union negotiations over wages as shown in Neale and Bazerman (1992). Anchors have also been reported in evaluations of housing prices as shown by Northcraft and Neale (1987) and many others. Anchors are in common use for explaining financial phenomena as well. Baker, Pan, and Wurgler (2012) show that prior stock price peaks tend to serve as anchors in various aspects of merger and acquisition activities.

Previous research investigates the relation between long-term saving decisions and different aspects of the anchoring bias. In particular Brown, Kapteyn, and Mitchell (2016) use an experimental framework and demonstrate that an old-age anchor point increases the tendency of individuals to declare that they will postpone claims for social security benefits.

Benarzi and Thaler (2007) suggest that in cases employers match their employees' contribution to a pension of up to 6 percent of the employees' wage, many people contribute exactly 6 percent to their pension pot. Coe et al. (2016) investigate individual decision-making processes related to life insurance. They suggest that individuals find it difficult to calculate the level of life insurance coverage they should have. They propose that as a result

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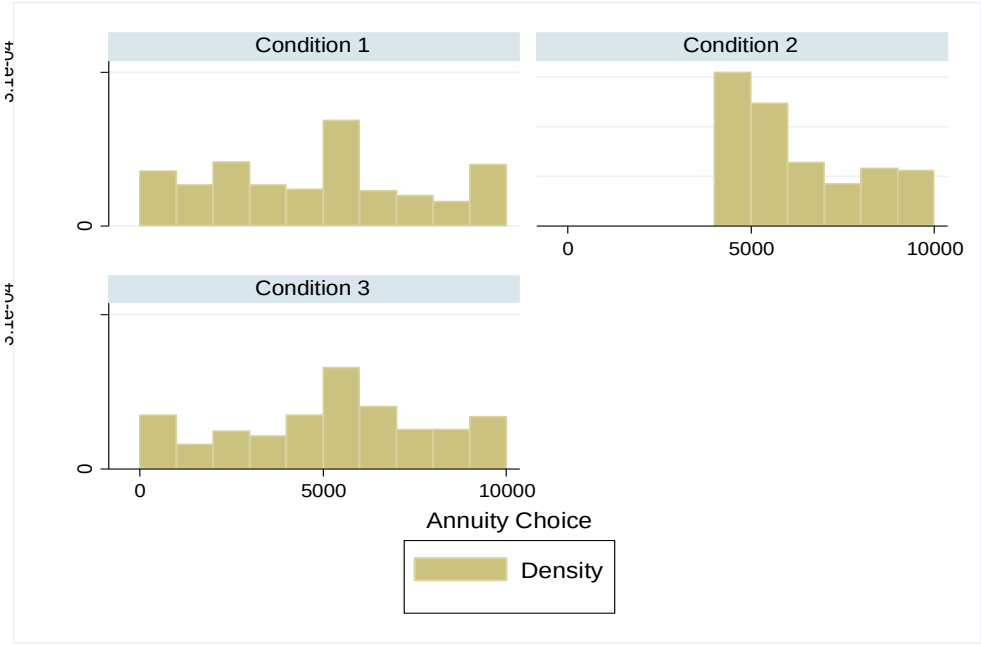
[29] https://www.marketwatch.com/story/are-annuities-coming-to-your-401k-2018-08-08

people tend to rely on anchors, such as the employer's default amount or an agent's recommendation. Choi, Laibson, Mardrian, and Metrik (2004) show that having a conservative investment default acts as an anchor for participants in 401(k) pension plans, even for active members who change their pension plans often. And Butler and Teppa (2005) find that the annuity option (compared with a lump sum) is better anchored in defined benefit plans than in defined contribution plans. Taking into consideration Brown et al. (2017), who provide evidence of the sensitivity of annuity valuations to anchoring effects and the complexity of the decision to annuitize, I argue that anchors may be useful to enhance annuitization rates.

A recent experimental study by Hurwitz et al. (2019) investigates the behavioral effect of the initiation (related to the Israeli experience) and repeal (related to the U.K. experience) of mandatory annuitization laws. The survey and experimental results (which involved both students and a representative sample of the Israeli population) presented in the paper suggest that the mandatory minimum annuity is used as a signal, leading to an anchor that on average, given the parameters used in the study, increases the annuity amounts chosen. This paper further indicates that the introduction of a mandatory minimum annuity law in the experimental settings changed the entire distribution of chosen annuities (toward higher annuities) and did not merely shift the distribution toward the minimum value. Hurwitz et al. (2019) also investigate, using an experimental framework, the consequences of repealing mandatory annuitization: The results of a set of surveys show that annuities chosen by participants in a repeal condition (i.e., who were told that a mandatory annuitization regulation was recently repealed) were higher than annuitization rates in a control group in which no specific annuitization level was mentioned (Figure 2).

Figure 2. Annuity distributions by conditions for a representative sample of the Israeli population.



Source: Hurwitz, Sade, and Winter. (2019). Condition 1 = No requirement; Condition 2 = mandatory annuitization; Condition 3 = repeal of mandatory annuitization.

Given that the effect of mandatory annuitization is partly behavioral and taking into consideration the results of Hurwitz et al. (2019) suggesting that even a repeal of such legislation does not shift the distribution of annuities back to their original levels, it seems that the essence of the regulation is related to the anchoring and adjustment toward the signaled value. Hence, a suggested minimal target level for annuitization may capture some of the effect of compulsory annuitization without the downsides of a more rigid policy. This suggestion is in line with Choi, Haisley, Kurkoski, and Massey (2017), who provide evidence from randomized field experiments of 401(k) saving choices that illustrates the importance of anchoring cues in making saving behavior salient.

Status quo bias, inertia, and annuitization

Status quo bias refers to the significant tendency of decision makers to choose not to move from their current status. It was described by both Kahneman (1992) and Samuelson and Zeckhauser (1988), who illustrate that people considering an alternative to the status quo

often consider disadvantages more than advantages of the second option. To explain the status quo bias, Samuelson and Zeckhauser (1988) quote Samuel Johnson: "To do nothing is within the power of all men" and in a series of experiments they explore the option to maintain the current or previous decision (to do nothing).

Status quo bias influences many decisions, from resistance to reforms (Fernandez and Rodrik (1991) to the choice of electrical service provider (Hartman, Doane, and Woo, 1991) or the choice of car insurance (Johnson, Hershey, Meszaros and Kunreuther, 1993). Financial and investment decisions have also been found to be affected by the status quo bias. Ameriks and Zeldes (2004) deal with portfolio choices, while Choi et al. (2004) investigate 401(k) saving behavior, analyzing the effect of the default asset allocation options on the behavior of 401(k) savers (the distribution of stocks and bonds). In doing so they relate procrastination and status quo bias, claiming that they are very close.

Samuelson and Zeckhauser (1988) examine the allocation of retirement contributions between TIAA (bonds) and CREF (stocks) funds of Harvard faculty members, showing that most people do not change the distribution of premiums between the funds. A similar phenomenon related to the tendency to remain in a current position is inertia, meaning the preference for actions that require less effort. One explanation for inertia, offered by Samuelson and Zeckhauser (1988), is that it results from the presence of uncertainty. To illustrate it, one should recall that in theory, a decision-making process requires the accrual of all knowledge of all alternatives and their probabilities. If the alternatives are in fact unknown or unclear, it could lead to the desire not to change the current status—inertia.

Madrian and Shea (2001) study automatic enrollment of 401(k) savers, showing that 401(k) participation is higher under automatic enrollment and that participants retain the default contribution rate and fund allocation. Thaler and Benarzi (2004) also suggest that inertia is one of the reasons households save too little. Others such as Ameriks and Zeldes (2004) suggest the presence of inertia in allocation of investment portfolios.

Taking this extensive literature into account, I argue that inertia and status quo may have a part in the low rates of annuitization in several countries. In addition to Bütler and Teppa (2005), Brown (2009), and Gale et al. (2008), who suggest that defaults may increase annuitization rates, I suggest that if interventions to help people change become more commonly based on a behavioral perspective, the changes have the potential to be long lasting. This may partly explain relatively high annuitization rates in countries other the United States, such as Israel, in which a large fraction of retirees was choosing to annuitize even prior to the mandatory annuity requirement.[30]

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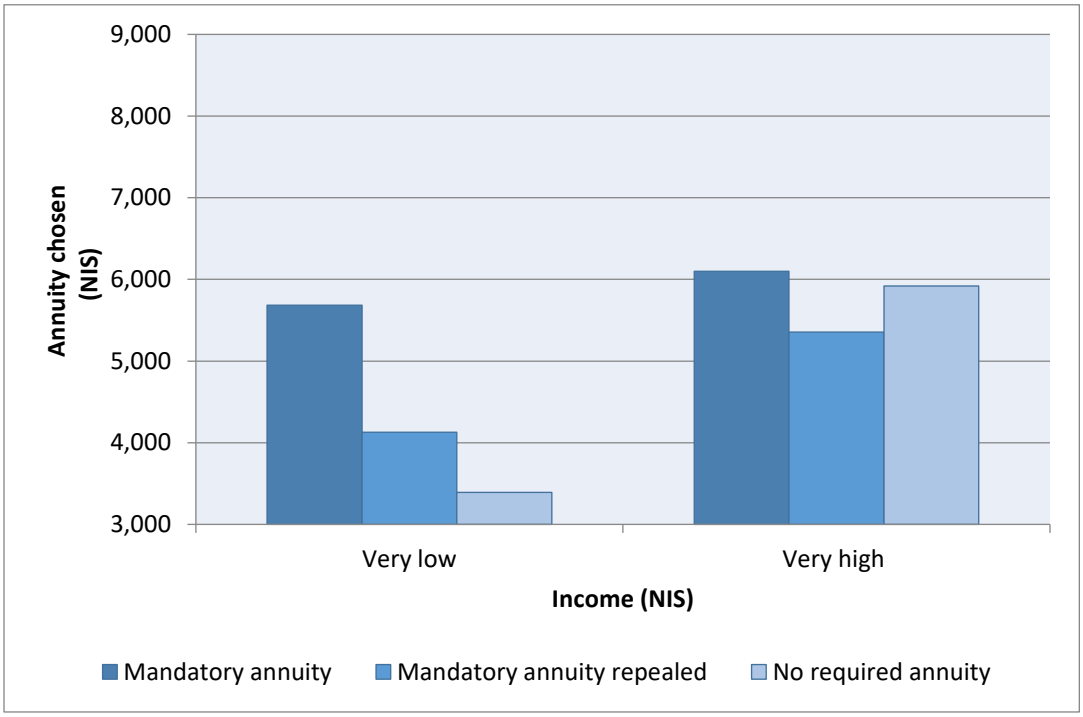
[30] Indeed, the Israeli market is a complex system with pension funds, provident funds, and pension insurance policies. While in pension funds annuitization was the default option, in pension insurance policies it was not. Yet, annuitization rates were high in this product as well. For a review of the Israeli market for annuities, see Hurwitz et al. (2019).

Questions and concerns

The appropriate level

Hurwitz et al. (2019) report that the effect of the introduction of a mandatory annuitization requirement differs between people with high and low income. The results of an additional laboratory experiment presented in the paper suggest that the relation between a person's expected level of consumption and the regulatory mandatory minimum requirement matters. In particular, the results show that while setting a value did increase chosen annuities among individuals with low income, there was no effect among individuals with self-reported high income (Figure 3).

Figure 3. Mean annuity amount chosen by Israeli representative sample survey participants for different incomes and annuity requirements. NIS = New Israeli shekels.



Source: Hurwitz, Sade and Winter. (2019). Mandatory annuitization requirements increase annuitization rates only among individuals with very low reported income.

Therefore, the level of suggested annuity should be carefully considered for each economy and for different groups of the population. While it would be very simple to suggest a "one size fits all" target level of annuity upon retirement, further considerations need to be discussed.

There are several possible mechanisms:

1. Setting a target "recommended" annuity only for individuals with low accumulated funds.

2. Setting a target "recommended" annuity personally calculated as a percentage of total accumulations.

3. Setting a target "recommended" annuity personally calculated as a percentage of wages prior to retirement (this could be based on a target substitution rate).

Further experimental work is recommended in this direction.

Implementation

To implement this proposal, consideration regarding the calculation and dissemination of the recommended annuity should be discussed.

One approach, in line with Gale and Harris's (2011) method, is to implement an online calculator that would recommend a target annuity level based on personal characteristics. A link to this online tool could be disseminated in various ways, such as through the online portal of the Social Security Administration (SSA) and in social security statements that are sent to some individuals[31].

Limitations of anchoring

Finally, I should note that there are limitations to anchoring. In particular, in a set of experiments, Chapman and Johnson (1994) provide evidence that vey extreme anchors may have small effects compared to anchors that are close to the expected value. Furthermore, they suggest that the anchoring effect occurs only if the anchor and the preference judgment are on the same scale.

These limitations should be well considered. While they support the recommendation to set a target level of suggested annuity, rather than a percentage substitution rate, that is not at the same scale as income and consumption, the specific level of the anchor (recommended annuity) should be carefully designed.

Conclusion

The combined trends of increased life expectancy, occupational instability, and the move to defined contribution plans are challenges faced by many Americans who need to plan for retirement to protect themselves from longevity risk. Academics as well as regulators

. . .

[31] Individuals over age 60 who are not receiving benefits and who do not have an online account with the SSA.

are putting much effort into ensuring that individuals have a sufficient flow of post-retirement income. Annuities are often recommended to achieve this goal, and some regulators even go a step further by fully or partly mandating the use of annuities. However, the literature demonstrates that full annuitization may not be optimal for all retirees (Nijman and Brown, 2012) and that mandating a level of annuitization may have unintended consequences for some retirees (Hurwitz et al., 2019).

Building on previous findings that demonstrate the potential of behavioral biases to affect financial decisions, this present proposal is based on the notion that one can influence the demand for different payout choices and longevity insurance products without mandating their use.

In particular, two major steps are being discussed:

1. Framing aimed at better communication that describes annuities as a future stream of income and a source of future consumption, accompanied by a set of well-defined assumptions to be used to calculate the different parameters to be reported.
2. Using anchoring in the form of a minimal target level for annuitization.

Further work is needed to determine the appropriate values and assumptions related to the first step recommended in this document. Further investigation is also needed to find the appropriate levels of minimal annuities to propose to individuals with different characteristics and varying income quantiles. Other implementation issues should be further investigated.

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Retirement Security Project
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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.