

**Testimony for the ERISA Advisory Council on  
Ways to Help Participants Make Better Decisions in Risk-Transfer Transactions**

by Erzo F.P. Luttmer, May 28, 2015

Executive Summary

- For most people, choosing between an annuity stream and a lump-sum payout is a cognitively challenging task. This finding is based on the research of others as well as my own research.
- Given that these cognitive challenges are inherent in the choice between an annuity and a lump-sum amount, better information by itself is unlikely to be enough to ensure that people make good choices. Supplementing information provision with an appropriate “choice architecture” will be more effective in helping participants make choices that are in their best interest.
- There is a solid economic case for risk related to defined-benefit pensions to be transferred from the employers to insurance companies, but only if such transfers do not lead to a decrease in the fraction of the participant’s wealth that is annuitized.
- Recommendations:
  1. Provide information in terms of the consumption or income stream that the participant would have under each choice, rather than in terms of the actuarial value of the choices. Thus, provide an “apples-to-apples” comparison in terms of the monthly payout that each option can provide, rather than in terms of the actuarial value of each option.
  2. Enable lump-sum payouts for very small defined-benefit pensions.
  3. When possible, use “choice architecture” to help participants make decisions that are in their best interest:
    - a. Any risk-transfer transaction should include as an option, available to the participant to choose, an annuity that pays out the same stream of benefits as the pension plan.
    - b. The annuity option should be the default for someone leaving the pension plan.
    - c. Forbid or discourage employers from offering a lump-sum payout for pension plans that themselves did not have a lump-sum option.
    - d. Require or encourage employers that offer a lump-sum option to allow for a *partial* lump-sum payout.

## Testimony

My name is Erzo Luttmer and I am the Dartmouth Professor in Economics at Dartmouth College, a Research Associate at the National Bureau of Economic Research (NBER), a Research Fellow at the Institute for the Study of Labor (IZA), and a Fellow at the Network for the Study of Pensions, Aging, and Retirement (NETSPAR).

Thank you for inviting me to testify on the types of information that participants would need to make informed decisions in risk-transfer transactions involving defined-benefit pensions. This is an important issue and I am grateful for the opportunity to testify. My testimony is entirely my own and does not necessarily reflect the views of any of the organizations with which I am affiliated.

My comments consist of four main points.

- First, for most people, choosing between an annuity stream and a lump-sum payout is a cognitively challenging task.
- Second, given that these cognitive challenges are inherent in the choice between an annuity and a lump-sum amount, better information by itself is unlikely to be enough to ensure that people make good choices.
- Third, there is a solid economic case for risk related to defined-benefit pensions to be transferred from the employers to insurance companies, but only if such transfers do not lead to a decrease in the fraction of the participant's wealth that is annuitized.
- Finally, I offer recommendations regarding information provision and choice architecture factors that allow pension-related risk to be transferred from employers to insurers while guiding participants to keep their defined-benefit pension wealth annuitized.

### **Cognitive Challenges in Making Annuitization Decisions**

My first main point is that choosing between an annuity and a lump-sum payout is typically a cognitively challenging task. Jeffrey Brown, Olivia Mitchell, Arie Kapteyn, and I have explored the cognitive challenges of this choice in our recent working paper entitled "Cognitive Constraints on Valuing Annuities."<sup>1</sup> As described in our study, we asked a representative sample of about 2000 adults in the U.S. to make several hypothetical choices between a lump-sum amount and the annuity with which they are most familiar, namely their Social Security benefits.

In one module, we elicit the highest price that individuals are willing to pay to *buy* an inflation-indexed \$100 annuity, though we do not explicitly mention the term "annuity." That is, we ask them to make a series of choices between option A, having their expected monthly Social Security benefits reduced by \$100, and option B, receiving their expected Social Security benefits but making a one-time lump-sum payment when they retire. By asking this question a number of times for different lump-sum amounts, we find the lump-sum amount such that they like both options equally well. In effect, this lump-sum amount is the highest price that people are willing to pay for a \$100/month Social Security Annuity. The median respondent is willing to pay at most \$3,000 (payable at retirement) to avoid the \$100 benefit cut. In other words, the

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<sup>1</sup> The working paper is available at [http://www.nber.org/~luttmer/ssannuity\\_paper.pdf](http://www.nber.org/~luttmer/ssannuity_paper.pdf).

median respondent is willing to buy an inflation-indexed \$100/month annuity for at most \$3000.<sup>2</sup> This is much less than the actuarially fair amount of about \$17,000.

We also elicit the lowest price that these same individuals are willing to accept to *sell* an inflation-indexed \$100 annuity. This time, we ask them to make a series of choices between option C, having their expected monthly Social Security benefits increased by \$100, and option D, receiving their expected Social Security benefits but receiving a one-time lump-sum payment when they retire. As before, we ask this question a number of times for different lump-sum amounts, which allows us to find the lump-sum amount such that they like both options equally well. The resulting lump-sum amount is the lowest price at which people are willing to sell a \$100/month Social Security Annuity. The median respondent needs to receive a payment of \$12,500 (receivable when they retire) to forgo the \$100 benefit increase. In other words, the median respondent is willing to sell an inflation-indexed \$100/month annuity only if she receives a price of at least \$12,500.

This is an unexpected result. Standard economic theory does not recognize cognitive constraints and predicts that people are willing to sell extra units of a good at lower price than what they are willing to pay to make up for units of a good they lost. But our experiment shows the opposite: people are willing to sell extra Social Security they receive only if the price is four times higher than what they would be willing to pay to undo an equal reduction in their Social Security benefits. The benefit of using hypothetical choices is that we can observe the buying price and the selling price for the same individual. It is conceivable that the difference between the buying price and selling price would be less for choices that are not hypothetical, when more is at stake and when people have more time to decide. However, given that we find a fourfold difference in the buying and selling price, I believe it is very unlikely this difference would disappear for choices that are not hypothetical.

We also report a second unexpected result. In standard economic theory, when individuals have different preferences, those who have a taste for a particular good are both willing to pay more to get more of it, and require a higher price when asked to sell it, compared to those who lack a taste for that good. In other words, we expect those willing to pay more than average to also demand higher-than-average prices when selling. Instead, we find the opposite. Those who require a higher-than-average selling price for a monthly \$100 annuity (suggesting they value annuities more than the average person) were willing to pay a lower-than-average price to purchase a monthly \$100 annuity (suggesting they value annuities less than the average person).

Both of these unexpected results apply to a wide range of respondents. Yet the discrepancy between the selling price and the buying price is significantly lower for the better educated, those who score higher on a numeracy test, and the more financially literate. Moreover, the second unexpected result, where those who demanded high prices were only willing to pay relatively little, effectively disappears when we focus on the most cognitively savvy individuals.

From these two unexpected results and from the finding that these results become weaker for more cognitively savvy people, we conclude that choice between a lump sum and an annuity is a

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<sup>2</sup> The vast majority (91%) indicate that the amount they are willing to pay to buy the annuity is not constrained by their ability to pay; they expect to have more than enough money at retirement to pay the lump-sum amount.

cognitively challenging task that leads people to make choices that are typically inconsistent with standard economic theory. As a result, the standard economic result that people are able to elect what is in their own best interest does not necessarily apply in the context of annuity choices.

Upon reflection, it is unsurprising that deciding between an annuity and a lump-sum amount is cognitively challenging. To make this choice properly, people must judge how much they wish to consume in future years, consider the probability of dying at different ages, evaluate the likely returns on their other financial assets, assess the likelihood of large medical expenses, and weigh a host of other factors. When you have trouble figuring out how to value a good, many would agree that it is a good rule of thumb to be reluctant to buy or sell it. We think this explains our results. People have trouble figuring out how valuable an annuity is to them. As a result, they are reluctant to buy the annuity, unless of course the terms are relatively favorable to them, i.e., at a relatively low price. Similarly, they are reluctant to sell an annuity, unless of course the terms are relatively favorable to them, i.e., they receive a relatively high price. Finally, the more trouble someone has valuing the annuity, the more reluctant they are to trade, resulting in both a higher selling price and a lower buying price. This explains our second unexpected result.

Other researchers have also found evidence that questions whether individuals are able to make decisions that are in their best interest when faced with a choice between an annuity and a lump sum. Jeffrey Brown and coauthors have shown that the choice between an annuity and a lump-sum amount is significantly affected by how the choice is presented.<sup>3</sup> When it is presented in terms of consumption – making clear that with an annuity you can consume the same amount no matter how long you live – a majority of respondents favor an annuity over a lump-sum amount with the same actuarial value. But if the same annuity is presented as an investment with an uncertain payback depending on how long you live, a majority favor the lump-sum amount. Though this result conflicts with rational behavior, which should not depend on how a choice is presented, it is easy to see how it can arise. An annuity differs from all other forms of insurance that we typically buy. It pays out more if something good happens – we live long – whereas other insurance pays out more if something bad happens – e.g., our house burns down. Hence, it is easy for people not to recognize that an annuity provides insurance. In that case, an annuity looks like a risky product – you lose much of the principal if you die early – and people tend to avoid risky investments.

### **Better Information May Not Be Enough**

This brings me to my second main point: providing people with better information about the choice between an annuity and a lump sum is unlikely enough to ensure they make a good choice.

In research with Jeffrey Liebman, I have carried out an extensive information intervention (a brochure and a 20-minute web tutorial) explaining the effects of working longer on future Social Security benefits to about 800 working Americans close to retirement.<sup>4</sup> Our intervention did

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<sup>3</sup> Brown, Jeffrey R., Jeffrey R. Kling, Sendhil Mullainathan, and Marian Wrobel. 2008. “Why Don’t People Insure Late Life Consumption? A Framing Explanation of the Under-Annuity Puzzle.” *American Economic Review*. 98(2): 304–309. <http://nrs.harvard.edu/urn-3:HUL.InstRepos:2799056>

<sup>4</sup> Jeffrey B. Liebman and Erzo F.P. Luttmer. 2015. “Would People Behave Differently If They Better Understood Social Security? Evidence From a Field Experiment,” *American Economic Journal: Economic Policy*. 7(1): 275-299. [http://www.nber.org/~luttmer/ssexperiment\\_paper.pdf](http://www.nber.org/~luttmer/ssexperiment_paper.pdf)

influence retirement decisions of some of our sample members, but overall it had only a relatively small impact on individuals' understanding of what determines their Social Security benefits and how their labor supply affects their benefits.

The effects on knowledge were limited, even though understanding determinants of Social Security benefits is arguably easier than making a tradeoff between an annuity and a lump sum and despite that our intervention was not just a simple disclosure but had people participate in a 20-minute online tutorial.

John Beshears and co-authors have examined different ways of presenting hypothetical choices between lump-sum amounts and annuities.<sup>5</sup> As with the other research mentioned, they don't describe annuities using the "A"-word; rather they describe them as a "stream of fixed payments over your lifetime" or "guaranteed lifetime income." They replicate the earlier finding that people are less likely to choose an annuity if it is presented as an investment product (rather than as an income stream). Furthermore, they find that people are less likely to choose an annuity if they are told that a lump-sum amount gives them "*more control over [their] investments and more flexibility over the timing of [their] spending.*"

Interestingly, four other treatments, which explained beneficial features of annuitization, had no meaningful effects on annuitization. In particular, annuitization choices were not meaningfully affected by explaining that "*Choosing more guaranteed income gives you more assurance that you will not outlive your savings, since the monthly payments will continue as long as you live*" or explaining that "*The monthly payment from the guaranteed lifetime income option is much higher than the interest you would receive from investing the lump sum. The guaranteed income option stops payments when you are no longer alive. In return, the guaranteed income option delivers very high pay-outs as long as you live. You are giving up payments when you are no longer alive (and don't need the money) and receiving extra-large payments as long as you are alive (and need the money).*" Both of these are clear explanations of the key benefits of annuities. Given that neither of them had a detectable impact on annuitization leads me to conclude that the power of information provision to help people make better annuitization choices is limited.

### **What Are the Right Outcomes?**

Economic theory tells us it is efficient for risk to be carried by the party best able to absorb it, for example, the party that is best able to diversify the risk. In the case of pension-related risk, the three potential parties for carrying this risk are the employer, the participant, and insurers.

I think that participants, i.e., employees or retirees, are virtually never best able to carry pension-related risk. An individual cannot effectively diversify longevity risk or market risk – he can at best share this risk with his spouse and heirs, which is a small pool of people. An employer is better able to carry individual longevity risk than a single participant because the employer can pool this risk across its participants – the higher pension payments to participants who live long will be offset by lower pension payments to participants who die early. Still, an employer faces aggregate longevity risk – due to unforeseen changes in overall life expectancies – and market risk. Arguably, insurance companies that also sell life insurance policies are better able to carry

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<sup>5</sup> Beshears, John, James J. Choi, David Laibson, Brigitte C. Madrian, and Stephen P. Zeldes. 2014. "What Makes Annuitization More Appealing?" *Journal of Public Economics*. 116: 2–16.  
<http://www.hbs.edu/faculty/Publication%20Files/annuitization.pdf>

longevity risk because rising life expectancies reduce life insurance payouts but increase annuity payouts, and vice versa. Thus, for insurance companies, these risks can balance out, at least to some extent. Also, companies that specialize in selling annuities can reap economies of scale in the administration of paying out the annuity stream. In short, the party that is best able to carry pension-related risk is almost never the participant, could conceivably be the employer, but is most likely an insurance company. This means there is a good economic case for transferring pension-related risk from an employer to an insurance company, but not to employees or retirees.

Should individuals hold their pension wealth in terms of annuities or as a lump sum? Economic theory predicts that, if annuities are priced actuarially fairly, individuals should annuitize a large fraction of their retirement wealth. The only wealth that should not be annuitized is wealth intended for one-time expenses (e.g., inheritance or a once-in-a-lifetime vacation), or wealth that is held to self-insure against certain risks (say, nursing home expenses). In practice, we observe people holding much less in annuitized wealth than economic theory predicts they should, and economists refer to this discrepancy as the “annuity puzzle.”

Two factors that together probably go a long way towards explaining this puzzle are that individuals cannot purchase annuities at actuarially fair prices in the market (due to adverse selection and markups in pricing), and that individuals face cognitive challenges in understanding the insurance value of annuities (e.g., they see them as risky and hard-to-evaluate assets rather than as a form of insurance).

Thus, my third main point is that there is a solid economic case for pension-related risk to be transferred from the employer to an insurance company, but only if such transfers do not lead to a decrease in the fraction of the participant’s wealth that is annuitized.

### **Recommendations**

What structure will enable firms to transfer their pension-related risk to a party better able to carry this risk, but will still ensure that the participants’ retirement wealth remains largely annuitized? Here I offer three recommendations.

#### **1: Provide information in terms of the consumption or income stream that the participant would have under each choice, rather than in terms of the actuarial value of the choices.**

As noted above, providing information is unlikely to be sufficient in helping many to make the right choice for them. However, it will likely help some, especially if the choices are presented using a “consumption frame” rather than an “investment frame.” A consumption frame highlights how much a person can consume or spend in each year of his or her life. A rough example of comparing the lump-sum payout to the pension using a consumption frame would be:

*Your pension will pay you \$1500 per month starting in the month when you turn 65 and continue to do so for however long you live.*

*If you elect the lump-sum option and deposit it in an account that pays 3% per year, how long this money last depends on how you spend it. If you do not spend any of the money until you reach age 65, and you start spending \$1000 per month from age 65 onward, your money will last as long as you live and, when you die, you can leave the remaining funds to charity or to your heirs. If you start spending \$1500 per month from age 65 onward, your money will last until age*

85. *You could spend your money down faster if the rate of return rises above 3% and you would need to spend it down more slowly if the rate of return falls below 3%.*

*If you elect the lump-sum option and use it to purchase an annuity from “company XYZ”, then this annuity will start paying you \$1400 per month from age 65 onward for however long you live.*

In the example above, the figures would need to be based on the actual characteristics of the pension plan, on a realistic rate of return, and on the current price of an annuity that is actually available to the participant from a specified company (“company XYZ”).

The most informative apples-to-apples comparison of the pension plan and the lump-sum payout is between the monthly payout from the pension plan and the monthly payout from an annuity that the participant could actually purchase with the lump-sum payout (given current market prices), that starts payouts at the same date as the pension plan, and that has the same payouts to survivors as the pension plan.

A comparison of the actuarial value of the pension plan to the dollar value of the lump-sum payout is *not* a useful comparison. Because a pension offers longevity insurance, the value to the participant is greater than the actuarial value. However, focusing on the actuarial value of the pension encourages the participant to think of the pension as a financial asset rather than as a form of insurance, i.e., it puts the participant in the “investment frame.” As a result, the participant can be misled into ignoring the insurance value and choosing the option with the higher actuarial value. To drive home this point: most insurance products have an actuarial value below their price, but we would not want to choose whether or not to purchase car insurance based on whether the actuarial value of car insurance is below its price. The second issue with a comparison that mentions actuarial value is how the actuarial value is determined; unless it is based on actual market rates (e.g., the current price of an annuity with the same payout stream as the pension), it is potentially subject to manipulation by the employer.

## **2: Enable lump-sum payouts for very small defined-benefit pensions.**

When the pension is small (say, less than \$25,000 in actuarial value), there is not much pension-risk involved because the pension will typically be only a small part of the participant’s retirement income. Hence, for very small pensions, the administrative cost of administering the pension is high relative to the longevity insurance it provides, and replacing the pension by a lump-sum payout can make sense. My third recommendation (below) applies to all but the smallest pensions.

## **3: When possible, use “choice architecture” to help participants make decisions that are in their best interest.**

I use the term “choice architecture” broadly to refer to how choices are structured, including whether there are defaults and what choices are available. Given the cognitive challenges that individuals face in choosing between a lump sum and an annuity and given the limits to information provision in resolving these challenges, I believe that the way choices are structured offers the best path to helping participants make choices that are in their best interest. I realize that the advisory council indicated a preference to focus on information provision, but I would

like to encourage the council to also consider choice architecture. I defer to others on which suggestions below can be implemented given legal and institutional constraints.

*Suggestion 1: Any risk-transfer transaction should include as an option, available to the participant to choose, an annuity that pays out the same stream of benefits as the pension plan.* This provision would guard against the concern that people who want to leave the pension plan because of concerns that the pension plan may not pay the promised benefits can only do so by turning their pension annuity into a lump sum. Moreover, the employer is likely better able than individual participants to negotiate an annuity at favorable terms.

*Suggestion 2: The annuity option should be the default for someone leaving the pension plan.* This will lead some people who have difficulty in choosing between a lump-sum payout and an annuity payout to select the annuity if they decide to leave the pension plan.

*Suggestion 3: Forbid or discourage employers from offering a lump-sum payout for pension plans that themselves did not have a lump-sum option.* Offering a lump-sum payout leads to adverse selection. Those who expect to have a short life span will take the lump-sum payout, leaving those in the pension plan to have disproportionately long life spans (i.e., to be adversely selected in the expected pension payouts, possibly putting the pension solvency at risk). Instead, I would suggest requiring or encouraging employers that have a risk-transfer transaction to offer their participants only an annuity from a third party (but not a lump sum) instead of their pension. A weaker form of this suggestion would be to limit a lump-sum option to a relatively small fraction (say, 25%) of the actuarial value of the pension, with the remainder of the actuarial value being provided in the form of an annuity.

*Suggestion 4: Require or encourage employers that offer a lump-sum option to allow for a partial lump-sum payout.* Research by Beshears et al. (2014) has shown, for hypothetical annuity choices, that people annuitize a higher fraction of their pension wealth when it is possible to partially annuitize than when they face an all-or-nothing choice. This research suggests participants who have the option of receiving *part* of their pension in the form of a lump-sum payment with the remainder provided as an annuity (either in the form of the pension or in the form of an annuity from a third party) will on average annuitize more of their pension wealth than those who can choose only between receiving their entire pension in the form of a lump sum or not. Thus, if my suggestion 3 (forbidding lump-sum payouts) is not feasible, suggestion 4 can help encourage participants in holding annuitized pension wealth.

## **Conclusions**

To conclude, my research shows that many people face cognitive challenges in choosing between a lump-sum amount and an annuity stream. The degree to which better information can help people make better choices is limited, since these challenges are only minimally related to lack of information. Consequently, I would recommend designing an appropriate choice architecture to help participants make choices in their best interest.