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CAN RETIREMENT PLANS PROVIDE SAFE INCOME?
FEATURING NOBEL LAUREATE RICHARD THALER

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Welcome and Introduction:

STEPHANIE AARONSON, Vice President and Director, Economic Studies
The Brookings Institution

Speaker:

RICHARD THALER, Charles R. Walgreen Distinguished Service Professor
University of Chicago Booth School of Business

Panel: Lifetime Income Without Annuities:

MODERATOR: WILLIAM GALE
Arjay and Frances Fearing Miller Chair in Federal Economic Policy
Director, Retirement Security Project, The Brookings Institution

DAVID JOHN, Senior Strategic Policy Advisor, AARP Public Policy Institute
Nonresident Senior Fellow, Economic Studies, The Brookings Institution

MOSHE MILEVSKY, Professor, Schulich School of Business
York University

MICHAEL L. DAVIS, Head of Defined Contribution Plan Specialists
T. Rowe Price

Panel: Reducing Key Regulatory Barriers to Annuities in D.C. Plans:

MODERATOR: WILLIAM GALE
Arjay and Frances Fearing Miller Chair in Federal Economic Policy
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J. MARK IWRY, Visiting Scholar, Wharton School at University of Pennsylvania
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PHYLLIS C. BORZI, Former Assistant Secretary for Employee Benefits Security
U.S. Department of Labor

KELLI HUELER, Chief Executive Officer, Hueler Income Solutions

Discussion:

MODERATOR: WILLIAM GALE
Arjay and Frances Fearing Miller Chair in Federal Economic Policy
Director, Retirement Security Project, The Brookings Institution

RICHARD THALER, Charles R. Walgreen Distinguished Service Professor
University of Chicago Booth School of Business

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P R O C E E D I N G S

MS. AARONSON: Good morning.

AUDIENCE: Good morning.

MS. AARONSON: Good morning. And welcome to Brookings. I'm Stephanie Aaronson, Vice President and Director of the Economic Studies Program here.

Thank you for joining us this morning for: *Can Retirement Plans Provide Safe Income*?

Before we begin I want to take the opportunity to thank Bill Gale for organizing today's event. To all of our authors and discussants for their participation, and to Anna Dawson for making it all happen.

The topic we are here to discuss today couldn't be more urgent. Each day 10,000 Americans reach retirement age. We regularly hear about the challenges that Americans face in saving enough for retirement. On aggregate, U.S. households face a deficit of nearly $4 trillion in retirement savings, and there's been significant public debate about a range of policies aimed at reducing this deficit, including inducements to longer working lives and higher savings.

But of course benefits in Social Security and defined benefits are paid for life, but Social Security was never intended to provide full retirement income, and defined benefits plans are dwindling in numbers. Thus the rising number of people who are enrolled in defined contribution plans, like 401-Ks face the challenge of figuring out how to make their retirement savings last through the remainder of their lives, a task that is made difficult to do, in part to what economists euphemistically call "longevity risk", which is just the fact that individuals don't know when they'll die.

As a result people may spend too much early in retirement and run out of financial resources before reaching the ends of their lives. Or, if they spend their savings too slowly they will have forgone some consumption they might otherwise have enjoyed.

This conference focuses on several potential solutions to managing risk in retirement. One option is better policy for annuities. Modern annuities have been around for decades, and they currently represent an industry with over $2 trillion in assets in the U.S., but as will be discussed this morning, there are barriers to their wider use which need to be addressed through better policymaking.

A second option includes pooled investment trusts and tontines, new and old ways of addressing these same issues. The fact that we face such a huge shortfall in retirement savings and that we need vehicles such as annuities and other options to manage retirement income, points to the limitations of traditional economic models in which individuals behave rationally and have perfect foresight of their futures.

In such models, individuals would save enough for retirement and would faultlessly manage their spending. To reconcile this discrepancy the study of retirement has come to depend substantially on the insights of behavioral economics, which argues that we need to focus on the ways in which individual behavior deviates from the classical model.

In the case of retirement, for instance, this means acknowledging that individuals have myopic saving behavior, and imperfect foresight about health and longevity.

With that in mind, it is my great pleasure to welcome our Keynote Speaker today, Richard Thaler.

Professor Thaler is the Charles R. Walgreen Distinguished Service Professor of Behavioral Science and Economics at the University of Chicago's Booth School of Business. He is also a past President of the American Economic Association, and most notably, he is the recipient of the 2017 Nobel Prize in Economics for his work on behavioral economics.

His work on topics such as limited rationality, social preferences and lack of self-control has revolutionized how economists analyze a broad array of problems including retirement. Moreover, Professor Thaler has also played a significant role in popularizing the insights of behavioral economics and its implications for policy.

His work points to larger truths that have propelled economics toward a more holistic understanding of our agency as people who, while perhaps not fully rational, and occasionally lacking in foresight, can nonetheless, with the right incentives and tools, make better choices for ourselves.

Upon winning the Nobel Prize Richard Thaler said, "In order to do good economics you have to keep in mind that people are human."

I would like to add that it's about good economics, but it's also about taking up economics in the cause of doing good. I hope we'll take a step in that direction today.

And on that note, and on behalf of Brookings, I'm delighted to welcome, Richard Thaler. (Applause)

MR. THALER: Well, thank you very much. Thanks for having me. They are two very nice papers that I was able to see, only mildly redacted -- (laughter) -- I was trying to figure out the formula for what you blacked out, but --

So why -- retirement saving is a topic I've been interested in since well before I even knew what retirement might be like. And so why is it a topic that a behavioral economist would be interested in? It includes two of the things I've spent a lot of my life thinking about. One is self-control problems, and the other is what we call bounded rationality, and to see why that's the case think about what the standard economic model is of saving for retirement.

It's called the life-cycle theory of saving, and it assumes that what people do is -- starting possibly in high school -- they think about what they're going to make over the course of their lifetime, and what rates of return they'll get on various investments.

Then they'll determine the optimal path of consumption over their lifetime. Maybe they want to live it up when they're young, or when they're retired, or give it all to their kids, what have you. Anyway they solved that problem. Invest accordingly and then implement that plan, perfectly.

Now, that's a hard problem, that's a really hard problem. In fact, I don't know a single economist who claims to have solved that problem for himself.

My friend, David Laibson, a guy way smarter than me, who has the mathematical skills to solve that problem, once when I made a comment like this, he said, no, he hadn't -- he hadn't solved it. And then he had recently married, and I asked him what provisions he had made for the probability of divorce. (Laughter)

And then he folded. And in spite of the fact he married a mathematician, so she could have helped out with the math, not that he needs it.

So, it's a really hard problem. I can tell you, my personal solution to this problem is I just plan to work until I die. And that, you know, I think that's a good problem except it really only works if your job doesn't have any real work. (Laughter) So for those who have to actually do something resembling work they have to think harder about retirement.

So, behavioral economists have, myself included, and many of my friends, have worked on the front end of this problem along with several of the people on this panel, especially Mark Iwry, who always knows what the laws are, in trying to make 401(k) plans easier to navigate.

And so things like automatic enrollment, automatic escalation, or what Shlomo Bernatzi and I have called *Save More Tomorrow*, the introduction of target-date funds and other sensible default investment vehicles.

All of these things have been introduced to make it easier for people who can't solve that math problem to just do whatever the default is, and that plus Social Security, we hope will get them something sensible. Of course, a problem for another day is, there's still 40 percent of American workers who don't have a saving plan at their work. Like I said that's a topic for another day.

But what we are here to talk about today is, now you've reached my age, and you have some pot of money, or not, and you have to figure out how to make it last. And if the first problem is hard, this one is way harder.

And the reason is that the saving for retirement problem you can simplify in the following way. You can say, let's suppose I plan to work until I'm 65, and you guesstimate some amount of money that you'll want to add to Social Security to give you a reasonable cushion, and you aim for that.

And then you can adjust, hopefully, the actual retirement age, so if you are running short you work a few years longer, if you've hit it big you quit a little earlier. And you know that might not be bad.

The so-called "decumulation" problem, how you draw down, the problem is there's nothing like age 65. You may know, when you retire, that you're in poor health, and cash out and live it up, but no one knows that they are a high risk to live to a hundred. So, you have to worry about getting unlucky and living to a hundred.

So that's the problem these guys are working to solve, is what do you do for the unlucky people that get to live a long time.

So, I should say, just on the side, that this, the decumulation problem has been exacerbated by the demise of a once important social norm, a social norm that applied in my parents' generation which was: the first thing you do is pay off the mortgage. And if you look at the data from, say, 1980, and you look at mortgage debt for people in their 80s -- or sorry -- in their 60s, it's essentially zero.

People bought a house, they got a 30-year mortgage and they paid it off. Now, people in their 60s, not only do they not have enough money in their 401(k) plan, they have debt, and they may have car loans on top of that. So the problem is even harder than it might have been.

So, we are going to hear about some solutions today and I will not try to preview those. I get to come back afterwards. (Laughter)

One spoiler alert, a tontine is not a French pastry -- (laughter) -- so just don't get too excited about that. Instead, I have a pet idea that I'd like to add to the mix of policy ideas that are going to be discussed today, and maybe we can talk about this at the end. And the idea is to allow people to buy into more Social Security benefits and --

Now, this may seem like a wild and crazy idea, but actually all the math has already been done by the Social Security Administration. And the reason is this, if you retire at 63 you get a benefit of X, if you retire at 70 you get X plus 50 percent or something like that, and each year you work, the actuary at the Social Security Administration has calculated how to adjust your benefits.

The same is true if you start claiming and then start making too much money, they reduce your current benefits and add on, so all the math is done. What I'm proposing is that people would be allowed to take a portion of their 401(k) benefits when they retire and send it to the SSA, up to some cap, say, 250,000 -- 100,000 actually would do a lot that's more than something like two-thirds of the current account balances in 401(k) plans, so 100,000 would do a fair amount of good.

Now what would this get you? It would get you the only indexed annuity -- so price adjusted -- that's guaranteed by the Federal Government. It would get you that at fair actuarial value. No one in the private sector is prepared to do either of those things, or as far as I know there are no indexed annuities, and certainly none guaranteed by the government.

One of the things you're going to be hearing about today has the term longevity risk, and what that means for an individual is you live long, what that means for an insurance company is that, perish the thought, we find a cure for cancer, or for heart disease, and life expectancies go up by five years, and then all insurance companies selling annuities go broke.

For four years I've been facetiously -- I have to -- telling my students, if you if you want to get rich here's a plan, first you establish a residency in some Caribbean Island with no extradition treaty -- (laughter) -- then you open up an insurance company and sell earthquake insurance, and you collect premiums until the big one hits, and then you head for your private jet, go directly to your island and live happily ever after.

This is kind of similar to offering annuities in the private sector on a big scale, because the equivalent of the big earthquake is some major change to longevity, and that could be a problem.

Let me make one last comment and then -- two last comments -- and then turn it over to the people with real content. One of the things we'll hear about is that people don't like annuities because they want to leave bequests to their kids. I think we want to disabuse people of this idea. First of all if you want to leave bequest to your kids do it now while you're around, and they can thank you. (Laughter)

And otherwise you're going to end up leaving money to some 60-year-old who doesn't need it, and probably could have used it earlier in life. And the best possible bequest somebody my age can give, is to promise never to move in with my kids.

The last idea I will float, and I don't know how to do this, but I would like to get it into the mix of ideas, is linking these retirement income solutions to buy-ins to assisted living. So you'll hear lots of talk about delayed -- what do we call them -- the annuities that --

SPEAKER: Deferred.

MR. THALER: -- deferred annuities, deferred annuities, and so buy an annuity that will start when I'm 85, and what I would like to do is -- what I would like to see is somebody selling that, that says at 85 you get a key to the assisted-living center, and that kind of solves all the rest of the problems, right? Because Medicare will take care of your health bills, and the assisted living will feed you.

And so I think there's a solution there that involves the public and private sector in interesting ways that I haven't seen written about, and maybe we'll get to talk about that at the end too.

Thanks for much for having me, and enjoy the rest of the day. (Applause)

MR. GALE: All right. Thank you very much. My name is Bill Gayle. I'm the Head of the Retirement Security Project here at the Brookings Institution. It's great to see so many people here on a morning when the Muller report is also being released.

I want to start by thanking Richard Thaler for the excellent presentation. I have learned an enormous amount of economics, psychology, humor, et cetera, from you over the years. And I learned some more that this morning. Quite honestly, I can't think of anyone else who has changed the way I, and we, think about retirement saving, than you have.

So, thank you for today. And thank you for all your work. We are all indebted to you.

And as Richard alluded to, in the world of annuities and lifetime income the idea of living to 100 or 110 is the bad news that we are trying to protect against. If you ever want an example of why people call economics "the dismal science", that's probably one of the best.

Before we start, I'd also like to thank the Laura and John Arnold Foundation for funding the research that went into this conference and the conference itself. The Arnold Foundation has been a consistent supporter of RSP, we very much appreciate that and we hope that it's been worth it from the Arnolds' perspective also.

Before we start I was trying to summarize the conference yesterday, and I realized it was a National Haiku Day, so here we go. This will focus on: *How best to balance consumption and lifespan risk, safe lifetime income*. And that's our whole -- that's our whole message today.

So, the standard way to provide lifetime income is through an annuity, as has been mentioned, that can be a Social Security plan, a Defined Benefit plan, or through something sold by a life insurance company.

But it turns out annuity is not the only way to generate safe or lifetime income. And our next session focuses on ways to provide a lifetime income that do not involve annuities.

You should have bios of everyone so I'll be very short, in introducing people.

We'll start with David John who will present a jointly-authored paper on *New Approaches to Lifetime Income*. As a co-author of this paper I can tell you that I am confident that there will be fewer redactions in the paper than in the Muller report. David is a Senior Strategic Policy Advisor at the AARP Public Policy Institute, and he's a Nonresident Senior Fellow here.

David will be followed by Moshe Milevsky who is a Professor of the Schulich School of Business at York University in Toronto. His presentation will focus on tontines, that very mysterious, non-pastry item, a subject on which he is one of the world's experts. If you don't know what a tontine is, I'm not going to steal his thunder. If you waited this long you can wait another 20 minutes to hear from the expert himself.

Our final speaker will be Michael Davis. He's the Head of Defined Contribution Plans -- I'm sorry -- the Head of -- Defined Contribution Plan Specialist, at T. Rowe Price, and he will offer comments on the topic of: *Lifetime Income through Defined Contribution Plans*.

After that we'll bring everyone up, we'll ask a few questions, and then we'll have questions and answers with the audience.

So, David, the podium is all yours.

MR. JOHN: All right. Well, thanks Bill. Let's see, just first here, earthquake insurance. No, I'm making my plans for the future here. (Laughter)

As the Professor said, converting your retirement savings into lifetime income is one of the most complex financial decisions that an individual has to make in their lifetime. You have a wide variety of unknowns, et cetera, et cetera.

Now, periodically, I will go into a room and close the door and I will do an exercise. And I'll say, alright, now you're going to retire tomorrow at such-and-such an age, here's what you've got in assets, et cetera. And now what are you going to do about it? What are you going to take care of, et cetera?

And I would also at times have a little jar with slips of paper of unknown, or surprise events. You know, you've been diagnosed with an illness; you've just won the lottery, a wide variety of other things. And usually after I sit down, and I try to work this out, and I do this every day at least eight hours a day, with degrees in finance and economics, and I usually end up with a splitting headache, and go off for coffee or an early lunch.

The simple fact is that this is difficult. And most people say precisely the same thing. In a recent survey, as you see, 73 percent of Americans said they don't have the skills to do this -- the financial skills -- 79 percent said they don't think their neighbors do either, when it comes down to it. Everybody discounts their neighbors; that's the thing.

As the U.K.'s NEST, National Employment Savings Trust has said, "Research has shown that even the most financially capable individuals can make irrational and suboptimal choices when it comes to financial matters, or divert those -- making those choices out of regret aversion."

In other words, if it's a hard decision and we don't have to make it immediately, we probably won't. And if we do have to make it immediately, we'll probably budget. So what we need is, as has been suggested, an automatic retirement income solution that works as well as the many automatic mechanisms available for the saver.

This is an impossible-to-read slide, but it will be in the eventual paper, so this is a survey that the British NEST System did of individuals asking what they want.

The top one here is basically, they want income that grows with inflation, they want protection from investment risk, they also want flexibility, et cetera, et cetera. Basically they want anything that will give them, as has been said, a stable easy to understand, consistent retirement income, and in the U.S. context, to supplement their Social Security benefits.

Now, obviously annuities are a potential solution here. They offer just about every feature that the consumers want, except for a few problems. They're wildly unpopular, all you have to do basically, is just use the word "annuity", and there actually was at least one study where people described the properties of an annuity, and people loved it, up until the time that the "A" word was used, and then they hated it at the same time.

They're expensive, they're not flexible. Usually people have the idea that if you make a choice with an annuity, you're stuck with it. And of course then there's a proverbial: what happens if I walk off a curb and a bus hits me?

Still, it is a solution for certain individuals. Now, this is not a problem that is limited to the United States alone, virtually every major country that has a retirement savings system, and that's an increasing number in the world, is now focusing on the question of: what do we do about converting savings into income?

The Australians, and there was a tweet yesterday from Jeremy Cooper, who's one of the Australian experts in their superannuation system, pointing out a poll that showed that most Australians have the same worry about running out of money, despite the fact that they are required to save for retirement through this super system.

So Australia is looking at something called Comprehensive Income Products For Retirement, clearly a phrase that was not created by a marketing expert in the slightest, but basically they are now in the process of implementing this, and all super plans will be required to offer this in roughly 2024, or so. They're going to have the framework passed this year.

In the United Kingdom, the House of Commons Committee on Work and Pensions has recommended the government implement a similar solution, the government seems distracted by some minor kerfuffle at the moment, and haven't done anything at this point, but the British NEST System has proposed a rather detailed plan for how to implement an alternative solution.

In Canada we have seven major pension stakeholders calling for longevity risk pooling, and in the most recent budget the Canadian Government has actually proposed to create a tontine, not French pastry.

Last but not least, in New Zealand they actually have a triennial review of their savings system the KiwiSaver. And I just learned this yesterday -- too late to put it on the slide -- that next week they actually have a conference as part of that triennial review looking at retirement income solutions. So this is not a U.S. problem, this is a global problem.

So what do we see in these proposals that are out there at the moment? They have several common elements. First off there is, as an alternative to an annuity, a pooled managed payout fund, and we'll discuss that a little bit further in a moment.

They also have an additional amount set aside for emergencies or other needs. In other words, something so that the flow of income doesn't depend or be changed if you pull out a little bit of money here and there because, either you've got a medical emergency, the car goes (inaudible) at an inconvenient time, or you just want to visit a relative.

And last but not least, there is some form of tail risk protection in the form of either a longevity annuity, or a self-annuitized feature, such as something that is not a French pastry.

If we look at the managed payout fund, the pool's managed payout funds, these actually exist, and they exist in a variety of countries. So, for instance, Shell Oil has this kind of a mechanism available for their employees in the Netherlands. It's an actively traded fund with a fairly high proportion of equities so that you get the income that an individual needs, but it also has a significant amount of countercyclical alternative investments to limit any sort of a reduction in the event that the markets go down.

You'll see an example portfolio there that actually is one that exists in one of the retail funds in the U.S., as you see, in addition to having a fairly significant amount of stocks there are also a variety of other things, and all to investments.

The key factor here is that payouts vary, so if you look at this particular retail fund in the U.S., it will set a target amount of income for the year, and it will pay that amount in 12 installments throughout the year. If the market has gone down significantly the following year the payout may be less, if it's gone up it may be more, but because of the alternative investments the risk is ameliorated to some extent.

This long quote from Bonnie G. MacDonald, one of the experts in Canada, in a recent op-ed in *The Globe and Mail*, a Canadian newspaper, discusses why you get a better return. It says essentially, you get much more than you would have achieved on your own -- and I'm paraphrasing here -- because you have reduced fees, the same kind of reduced fees that you would have seen in a traditional defined benefit plan pool.

Plus the fact you have a professional organization that is managing this, so you have economies of scale, better asset purchasing power, better opportunity to diversify investments, et cetera, et cetera. This has a real potential to provide retirement income with the flexibility to change your mind.

But it's not for everyone. This equally hard to read slide, which also will be in the paper, looks at some of the features that determine which people should pick which solution.

On one hand, we have the probability-based people, probability base would use this pooled managed payout system. Essentially they're looking at a lifestyle goal that is their overall lifestyle, they depend on one income area, they want a diversified portfolio with growth so that they can meet this goal; and the investment account will basically be their entire retirement income, or a significant part of it.

The alternative is the safety first people, and these are the people for whom the annuity is intended. They prioritize their goals, and they want to match the risk level with their priorities. So the first priority is likely to be something like, paying housing expense, having food, paying medical expenses and things along that line.

They will then choose assets to match those goals, and these people have the feeling that they will get one shot at fixing their retirement income, so they better do it the right way, and for that reason they are much more interested in looking at an annuity, or something along that line.

And an investment account, if there is one, is going to be basically for luxuries, or travel, or something along that line.

Now, one alternative to the investment account, the pooled investment account, is the non-French pastry tontine -- and I think I've overused that -- (laughter) -- this is an asset pool that pays investors a regular income, this is a traditional thing. And basically, it's in most cases a closed pool, although it doesn't have to, and as investors die off the proceeds from the investments are divided among fewer and fewer people, so therefore, basically, the investments go up there.

In the early 20th Century the tontine was --essentially accounted for roughly two-thirds of the life insurance market in the United States, it represented 7 percent of the national wealth, and roughly half the households in the country had one at that point.

They were also, as so much else was in financial world in the early 20th Century, grossly abused and to the point that the New York State Legislature banned them in 1906, and since then they've fallen out of favor. However, there are modern tontines that are coming up for retirements.

You'll hear first-hand, so I'm not going to go into any detail on this. The key factor here is that a traditional tontine, in theory, would pay its highest benefits towards the end of life, and this is not the way retirement income actually is spent.

People typically will spend more early in life, then it will gradually tail off, and in the United States there are higher expenses towards the end of life, typically associated with health care. Something none of us really want to talk about.

As you'll hear, however, the modern tontine theorists have created mechanisms that would smooth this income out over retirement -- the entire space of their retirement, and therefore solve this problem. But I'm not going to go into that, to any further detail at this point.

So what are we proposing, however? What are we going to do to help people come up with the same kind of a decent solution that they would have gotten otherwise?

We propose three parts. And this may sound a little bit familiar, from a few minutes ago, a managed payout fund, an emergency fund, and longevity annuity or other form of protection. And this is a package. This is not separate elements, this is something that you would be put into, the managed payout fund is also not part of the target date fund. The use of the target date fund ends upon retirement.

An individual could be, gradually, moved into the managed payout fund at say age 55, 58, this is what the fund in the Netherlands does. Or, it could be all at once at a time that the individual chooses to retire.

The fund would hopefully include many different companies' funds, this is not the matter of the XYZ corporation managed payout fund; this is a large pool of fund -- pool of money that represents the retirement savings of, hopefully, hundreds and thousands of people all at once. The transfer is not irreversible, so in the event that the transfer starts at age 55 and at age 58 an individual changes jobs, the money can just be simply rolled out of the managed payout fund and into the new employer's fund.

Also, if the individual chooses some alternate course of action, they could take the money out and use it for something else.

one of the things I discovered when we were searching this paper, I talked to a variety of colleagues who were retired. And many of them said, gee, I wish I knew now -- or I knew then what I know now, because circumstances change, and I needed to have some flexibility to adjust my retirement plans for the new realities that pop up every other day or so.

The advantage of this fund is that it provides you with that flexibility. You're not locked into a contract. And as a separate fund serving many employers if you have, throughout your career, a couple of 401(k) plans, a couple of IRAs, whether you saved them on your own, or there's something that your previous 401(k) was rolled over into, you could then move that money into this fund, and it would all be treated as your retirement fund, period. It's a way of aggregating your retirement money to come up with a decent solution.

Last but not least, the retirees would receive a monthly check, that's the American norm. The payments would be structured to meet the required minimum distribution rules, however those are changed or adjusted going in the future, and the fund would be designed so they could have subdivisions, so they could handle both traditional accounts and Roth after-tax accounts.

When you come to the purchase of the longevity annuity if you have a longevity annuity, and you're not using one of the self-annuitizing features here, either that could be handled as the QLAC that was developed by the Treasury Department when Mark Iwry was there, in other words, all at once.

Or you could, as the British NEST System proposed, delay this so that you're accumulating the money over a space of years to purchase that, but the actual purchase doesn't come up until, say, age 75 or 78, with payments beginning at say age 85. That way, if circumstances change, re health care problems, you don't necessarily have to spend the money and therefore lose it there.

And finally, to help our friends in the industry, this could also be offered as an individual product for individual savers, obviously at a slightly higher fee level. In other words, this is something that could be available to people of all ages, of all savings vehicles, et cetera, et cetera.

We think that this has the potential to make a real difference in the way people look at their retirement solutions, because they're not -- you don't come in and you sit down with the HR Department, and they either say, here, we're going to hand you a lump of money. And if you've been in a perfect solution where you've been in an automatic system all along, and you have no experience in managing your money yourself it's now up to you, or you're not locked into a situation where you've made a decision, you're anxious about that decision, and now you're stuck with it regardless of what happens.

So, this is the beginning of a discussion. This is not a perfect solution it is an attempt at the first one, at making one. One of the things we want to hear are questions, comments and answers about: what's right and what's wrong with this. So, hopefully we will start that process during the Q&A, and we can continue it for some time afterwards.

And with that, I'm going to turn the stage over to Professor Milevsky. (Applause)

MR. MILEVSKY: Thank you. It's a pleasure, an honor to be here today. My presentation is entitled: *From Tontines to Annuities*, where you'll finally learn what they really are. They've actually been in the news quite a bit, and to echo what David was saying, this is a global problem the issue of how to draw down or to decumulate assets, Canada's budget, it's where I'm from in Toronto, proposed about three or four weeks ago, a managed payout fund.

And I'll just highlight that their requirement is that all you need is 10 members to be part of this managed payout fund, and they're still writing legislation. But the point here is to, again, elaborate the fact that this is a global issue not just a local U.S. one.

Also, this is a good point to remind you, I'm from Canada, so if things get too partisan here, I'll plead Canadian as we go forward. (Laughter)

So this did not start until -- in earnest until the 17th Century, so this a bit of a history lesson, and I apologize for the next five or ten minutes. I'm going to take you back to the 17th Century where both English and the French Governments are in need of funds to fight wars. They're fighting wars against each other obviously, and they both decide to implement this scheme.

What they would do is they would borrow money from an annuitant, or a subscriber, sometimes called an investor, and they would take that money, government would take that money, you have to understand this is the 17th Century before long-term government bonds, or central banks, and so on, and the minimum investment was a £100 at the time. Late-1690s, £100 would be about 10,000 today, so this was an investment for wealthy people.

And they would give that hundred pounds to the government, and the government would, in exchange, promise to give them interest. There was one other player in this besides the investor and the government who takes the money, and that was a nominee, a third party, possibly one of the two, but a third party, and you'll see their role in a minute.

And over time this investor would receive coupons or interest payments, it would be a dividend, and that dividend would continue, it would be £10, so think of it as a 10 percent government bond. You just handed £100 to the government, they're going to give you 10 percent, but they'd give you a little bit extra, every year they'd give you just a little bit extra.

I think of it, if I can use a term that some people might be familiar with, an indexed annuity, where they tell you, well, you're going to get 3 percent plus a little bit more depending on the performance of the market, or depending on some spread. It was a similar thing where you'd get a little bit more depending on an event which I'll describe in a moment, but as long as your nominee was alive.

As soon as your nominee, the person you had selected to be the nominee, passed away, those payments would end and you got absolutely nothing, your bond dies with your nominee.

So let me go through a numerical example so that people understand this. These things actually existed. This isn't from an Agatha Christie novel or a Simpsons' episode, these were very, very popular instruments that were used to finance government debt in a sense.

So let's imagine that we have 20 people, a syndicate of 20 people, and they each hand over a £100 to the government, they have £2,000, they can go off and fight a war for a couple of months, and they'd all be guaranteed 10 percent interest.

So if at the end of the year all 10 of these investors, syndicate members, were still alive they'd get a £10 dividend, or a £10 payment. It's simply the 200 divided by the 20 survivors. Don't overthink this, this is very simple, this is a percent coupon payment.

But now let's imagine, now let's imagine that at the end of the second year four people pass away, four people pass away, sixteen people are left from the syndicate at the end of the second year. So, they all come to a hotel in Downtown London, that's how it would work, and the exchequer would wheel in £200 worth of coins, and they would distribute it to the 16 survivors.

So, each one of these 16 survivors would get their share, which is £200 divided by 16, and that would be £12.50, which is the 10 percent interest that they were guaranteed plus the 2.5, which is from the four people that didn't show up. And this was known, at least in modern-day actuarial terms, as mortality credits.

There was no debate as to why you were getting that. Nobody was sitting in that room in the hotel saying, now why is my annuity paying me only 12.50? It was very clear: 200 in the numerator, we have 16 in the denominator. This is what your payment is going to be.

Now, let's walk this process through, see very clearly what happens as the pool declines. So, let's imagine that we are now at year 20 or 30 and we have -- let's imagine that we have four people left, these four people would all be receiving £50 -- you'll have to do it in your head -- the graphic isn't working.

If we have four people that are in the denominator, and we have £200 in the numerator, we're going to have each person walking away with £50 because that's the amount that's going to be distributed. So, where is that £50 coming from? It's £10 interest, and it's £40 what we called mortality credit.

Now, let's think about this for a moment: are you sitting there in the year 1720 and saying, gee, those £50 that I'm getting from the tontine I shouldn't have locked in that thing in 1693. You know, the Fed was about to tighten interest rates, I would have waited a year I would have gotten at least 1 percent more on my tontine, 11 percent.

The majority of the £50 that you're getting is these mortality credits. Interest rates become less and less important later on. You're not sitting there with regret and worrying that you tightened it, or that you lock this in at the time of a bad interest rate.

Now let's go to the very, very end. Let's imagine that we have that winner at the very, very end, and she's hired hitmen to knock off those three people, anyway she gets a £200 annuity for life.

By the way this never happened, these were Dukes and Earls and Barons, they didn't kill each other for money, they did it for honor and respect, but this how -- (laughter) -- this is how this tontine works. Okay?

Now, some of you might be wondering, where did the -- where did the principal go, Moshe? We handed £100 to the government. Where did the principal go? It's gone. It's gone. And if you want to think about it, it's not that somebody's keeping it, it's amortized so that this is part of the 10 percent dividend that you're getting.

You can think of it in terms of zero-coupon bonds. We have a portfolio of strips, there's nothing left at the very end. And that's how this works.

Now, what is the payout structure of this Lorenzo tontine look like? Lorenzo is the name of the person that's associated with it, Lorenzo Tonti in 1650 proposes it to Cardinal Mazarin in France. He did not invent it, I think there's something called the "Stigler law of eponymy," anybody that's named for something, that's not the person that invented it. And in his case it wasn't him, it goes back hundreds of years.

But this is what the structure looks like -- and I think David alluded to this earlier -- and this is a problem, it's not very optimal. Early on you're getting your 10 percent, or whatever the interest rate is, but as people are dying off and we have less and less people in the denominator, we are getting larger and larger payments. Now, we don't know exactly what you're going to get if you survive to 90, it depends on everybody else in the pool.

If everybody else in the hotel survives you're going to get less, if there are less survivors you get more, so there's this band of uncertainty over time, but that's the payout structure, and we look at this today and we say, so only if you're 99 you're to going to get big payouts, the winner is a centenarian. That's obviously not a very optimal structure.

So let's compare life annuities in tontines to make sure we understand the difference between them. In a life annuity -- let's start at the right -- as people die the total paid out to the group declines over time. In a life annuity if you're an actuary for the insurance company, and more people are passing away than what you expected, you say, oh, that's great, we don't have to pay this group of people as much because we'll have less to pay out.

On the flip side, the payments are going to stay relatively constant to the people that have purchased them. You buy an annuity that's paying you $1,000 a month, you get $1,000 a month for the rest of your life. Right? That's on the annuity side.

On the tontine side the total interest paid each year to the group is known in advance. King William III would send £200 every year to Downtown London, and he would say, you figure it out how to split it. We don't want longevity risk on our government books, here's £200, you work it out amongst yourselves.

You all figure out a way to live a long time, you're going to get less payments, less people survive you get bigger payments. We don't have longevity risk on our books. On the flip side though, the payments to the survivors are going to increase because as people die off you're getting larger payments, you saw the picture before.

Now, the first, or one of the greatest economists, Adam Smith, who was actually a fan of these things, he was writing in the 18th Century and he was debating in the Wealth of Nations whether government should borrow with annuities which were quite popular, or with tontines. Should governments borrow and promise you a fixed payment for the rest of your life? Or should government say, look, here's the money for the syndicate, you spread it.

And he said, do you know what, people tend to think that they're healthier than everyone else, you know, the Lake Wobegon Effect, so what you want to do is you want to sell tontines, you can get away with doing it for less.

In fact, I learned about the Hamilton Project here, so I thought I'd have to mention this. Alexander Hamilton was a very big fan of these things, and one of his suggestions was to settle Revolutionary War debt by combining these and creating a tontine.

Congress didn't like the idea, they felt it was too British, it was very politically sensitive at the time, but these were extremely popular interests, part of the discourse and part of the debate about whether or not we should finance it with tontines or finance it with annuities.

So we now get to the audience-participation part, and with Professor Thaler in the audience, I'm extremely nervous now.

But here's the way I would like to do this. I would like you to imagine that you are about to retire from a 401(k), 403 (b) Plan, and your plan sponsor gives you two options, and two options only, two options only, you can get a 14 percent life annuity.

What does that mean? For every $100,000 they're going to give you $14,000 a year for the rest of your life. You have a 100,000 in the account you're going to get $14,000 per year, nominal terms, for the rest of your life, you.

Or, you could select the tontine which pays $8,000 initially. Why would you take the 8,000 if you can take the fourteen-? Well, because you're looking around and you're saying that payment is going to increase over time. And in about seven to ten years if other people pass away you're going to get more and more. And who knows? If you survive to the very, very end you're going to be getting hundreds of thousands of dollars.

So, I'd like you to take this seriously for a moment, think about it -- and with a show of hands -- you've got 100,000 in your retirement account, would you say: I'm going to go with the annuity that pays me $14,000 a year forever. Or do you go with the tontine, take the hair cut early on of 8,000, but you know that that thing is increasing?

Show of hands, who would say: do you know what, give me the 14 percent annuity? Show of hands; all right, interesting.

Who would say: no, no, no, I'll take the tontine? I'll take the tontine? All right. And why is nobody yelling diversify motion? Maybe so motivated by -- (Laughter)

So, here's where it gets interesting, if you had more than 60 seconds to think about it, you would take a look around you to see who else is in the pool. Who else is in the syndicate? Oh, no, no, no, he gets up at 4:00 a.m. to jog, there's no way I'm getting in a pool with him. Right? You'd want to know something about who the syndicate is.

You would want to know what the credit rating is of the entity guaranteeing the 14 percent. Yeah, that's really nice, you're promising me 20 percent for life but you're a Triple-C, you're not going to be around for 10 years, let alone my life.

Credit rating, that's going to be -- you might skew towards the tontine, because you say, well, at least there's no risk because the entity has just has to pay the fixed amount, I don't have to worry about longevity risk.

Risk aversion and consumption preferences, some people might say, my preference isn't to have an increasing stream towards the end of my life, I want to enjoy it earlier.

So, yeah I like the idea of the tontine, but I don't want to have to wait till a hundred to get the money, I want it now. So, I'm going to take the annuity that pays me more, consumption preferences, intertemporal elasticity of substitution, is what an economist would call it.

Pricing in the term structure of interest rates: if you're a quant you sit and say, wait a minute Moshe, is 8 percent and 14 percent a fair tradeoff? I can't do this in my head, let me compute the present value of the payments, maybe the 8 percent is better.

Long-term inflation expectations: some of you might say, hey, I like the idea of increasing nominal payments because it's an inflation hedge. It's this inflation hedge that involves nominal bonds, it's inflation that's coming from demographics, from mortality, and I live in a country where we really worry about the long term, so the tontines payment would be preferable.

So these would all be decisions people would have to make, but the idea is that at least now you understand what an annuity is because you understand the extreme version which is the tontine.

It's actually very interesting; when you take a look at some data that I have access to, on what annuities people buy? Here's an annuity puzzle, and very few people choose to actively purchase income annuities, but when you look at their purchases there are three major types. One is a life-only annuity where people say, I want the most income I possibly can get for the rest of my life, and I don't want guarantees or death benefits or anything, that's known as a life-only.

There's life with a guaranteed period, many of you will know this, where you can say, I want the next 10 years of payments, even if I'm dead it'll go to the kids, it'll go to my spouse.

And there's a third type which is a cash or installment refund. What that means is, look, I'm going to buy the annuity, but if I pass away early what I want is to get the money back so that the family gets some of it. You only gave me back 50,000. I gave you 100,000 a few years ago, give the 50,000 back.

Can anybody, please, guess: 2011, 2019, which is the most popular type amongst the ten billion or so of SPS that people purchase? Do they like the one that economists would advocate? Take pure longevity insurance, take the life-only. Do they say, no, I want to guarantee just in case something happens in 5, 10, 15 years? Or do they say, hey, I want my money back. I want my money back at death?

Any guesses which is the most popular? In 2011, we had 25 percent of people selecting what we would call the life-only, what Menahem Yaari would have called "pure actuarial notes", he's the person that put mortality credits and longevity insurance into the life-cycle model.

Twenty-five percent, 2011 we have 56 percent selecting life with guarantee, and cash installment refund is 18 percent. Front-forward to 2019, we have the majority of people saying, no, no, no, give me the cash or installment refund.

So, in some sense even those that are purchasing SPS, we look at those eight- to 10 billion, and say, well, you know it's not that bad. Most of them are watering down the mortality credits by saying, look, I want to get my money back at death, because of the fact that I want to know that at least this money is going to be protected.

Only 14 percent are selecting the life-only, so I would say the annuity puzzle is even greater than what you think it is.

While I show you some data -- and I believe I have about seven more minutes -- the same data also tells me how many people select an annuity with inflation protection. In 2011, 96 percent said, I'm not interested in a CPI-U linked annuity. In 2019 it's 97 percent, it's only about 3 percent even ask for a COLA, a COLA, just a nominal COLA, and the CPI-U, nobody asked for it anymore. So, I think only economists buy real annuities, the public out there says I want a nominal annuity.

So, let me get back to the history and wrap this up. This choice that I gave the audience, tontine or annuity, tontine -- it's not hypothetical, it was actually available to all investors a couple of hundred years ago. The 1693 tontine that I mentioned to you with the syndicate and the £100 gave people an option.

So William III, Mary II, King and Queen of England, they're fighting Louis XIV, they both need money. There's an act that's passed in Parliament in 1693 called the Million Act to finance the war with France. They needed £1 million and people were given the exact same choice I gave the audience here.

They were told: you can give us £100 and we will give you 14 percent for the rest of your life as long as you live, 1693. Or, we will sell you a tontine and the tontine will pay percent, the numerator will be 10 percent, the syndicate will get 10 percent for seven years, and then afterwards, in the year 1700, they're going to reduce the payment to 7 percent; 10 percent initially, 7 percent later, and that picture shows you how it would work.

So, you get 14 percent if you want the annuity, and if you select the tontine it's initially high, but it's going to be reduced, and for those of you that are looking at this and wondering, now that that's a weird way to design it.

Why would they give you more early on and then less later? And the answer is, is that they were starting to think about optimizing the tontine structure. They were saying, early on where there's a lot of survivors, we have a large denominator so we have to have a large numerator, but later on as people start to die off we have a smaller denominator, we can have a smaller numerator. They were trying to levelize the expected cash flows.

They were looking at the picture that you saw earlier and saying, that's not very optimal, I don't want to get tons of money later on, so they would front-load it, and this is the idea that I'd like to take going forward.

In fact, these documents available in the National Archives in the U.K., it's fascinating, where you can actually go and see the names of people that selected the tontine, and the names of the people that selected the annuity, and much like this audience here no name appears in both lists.

Some people said, hey, I'm going with the tontine. And some people said, hey, I'm going with the annuity, and there was -- in my examination, there's very little, if any, diversification. And if you actually write down a model and you say, well, you know you're trying to optimize something, do you diversify, because it comes down to your views on longevity it's very difficult to come up with an equilibrium, where, no, you put 60 percent tontine or 40 percent annuity.

But it's actually quite interesting. I found that whole experience fascinating.

Yes, the data comes to us; yeah, they opened up their archives to me. I was there for a couple of months. They were really nice, and I asked them, you know, how do I thank you? You know, you don't pay, you just show up there.

And I said, well, anytime you talk about this, or you show the documents, please thank us at the National Archives, and that's how you show your support. So that's what I'm doing with this slide right over here. In fact, I'll go even one step further, that's me in front of the National Archives -- (laughter) -- there.

And just to round this up. That's some of the old tontine documents.

(Laughter) And they were yelling at me, I touched it without gloves, so I had to, you know, put on the gloves.

So, what does the optimal structure look like? What does the optimal structure look like? So, you know, I would say that if we were to design one of these, you know, you have to think about whether you want to have mortality guarantee, or not mortality guarantee, so there's sort of typography of tontine versus annuity.

So, let's take a look at this. We have bonds and we have stocks, there's no reason that the numerator has to be coupons from a bond, this can be dividends from corporate stocks, bonds and stocks. You can have mortality guaranteed where the insurance company says, look, we'll promise you the 14 percent forever, but we need capital and reserves, and this is going to be costly, or you can have mortality not guaranteed, and in the upper right-hand corner I have the tontine.

So, it's purely bonds, very long duration, and mortality is not -- nothing is guaranteed -- systemic mortality, you're absorbing in the pool.

As we move down the fixed immediate annuity, otherwise known as the single premium income annuity, would also be bond-based, it has shorter duration because the cash flows are earlier on, but the mortality is guaranteed. And you pay for the guarantee. You want 14 percent for the rest of your life, somebody has got to set aside capital and reserves, and that's going to be costly.

Then you have something called the natural tontine which gets to the design that I alluded to earlier, the 17th Century design where they're trying to levelize payments. Where they say, well, early on we'll have large payments, and we'll have the payments decline in the numerator, so that on average we are expecting a flatter payment structure, that will be a natural tontine.

You have in Australia and others, group self-annuitization schemes, the pooled schemes which can be bond based, but it can also be equity based, so you can have a mixture of instruments, where mortality isn't necessarily guaranteed but it's smooth. It's not at the end of every year we count survivors; it's at the end of every few years we count survivors.

And we take a bit of the credits from last year and we use it for this year, they're smoothing -- it looks like something is guaranteed -- but they're smoothing it over long periods of time, which is why I put it well under the tontine structure.

You have pooled annuity funds where they would say, look, immediately every year what we're going to do is we're going to take a look at the survivors and we're going to give dividends on the S&P 500 Index to the survivors. You have variable immediate annuities, where, well they are guaranteeing you in some sense a mortality table that's equity based.

But the point of this picture is to get people thinking that, when you're buying an instrument that pays you for the rest of your life, there are two ways to do it. You can do it where somebody guarantees an amount for the rest of your life, a mortality basis for the rest of your life, and there's one when, look, you're going to get it for the rest of your life, but everybody in that pool is going to share it with you. And if they all live a long time you're going to get less, and vice-versa in the other direction. That's one dimension.

And the other dimension is bonds versus stocks. You know, why are we doing it fixed income? We could do it equity. I would start simply, with fixed income first and then move to equity. But those are the two dimensions, and when we talk about, when we talk about pooled solutions and non-pooled solutions, and mortality credits, and annuities and PELS.

I think it's important to have this picture in our head so that we say, all right, are you guaranteeing me something? Are we not guaranteeing? Is it being smooth? So, that's the picture that I'd like to leave you with.

So, conclusion: final thoughts. I think tontine thinking is more important than tontine structure. You know, I'm not here to sell a particular structure, the payout should increase or decline, real or nominal.

It's just about thinking that mortality credits are an asset class and those asset classes, that can be shared by, you know, to use the language of investing, it's an alpha, it's an alpha, it's orthogonal to everything else, you're getting -- you're going to get hundreds of basis points more because of the fact that you were willing to put money in the pool.

And some people say I don't want to put money in the pool, I want it to go to the kids and family, fine. You're not interested in that alpha for whatever reason, but the idea is to think about that as something that's available to share, and stop mixing up the annuity with the mortality credits.

There are two things we like about annuities, smooth, predictable, income that's going to be there forever as we get older and we can't manage our investments, and then there's mortality credits. You may not like mortality credits and the pooling, and you think of adverse selection concerns, and how much am I getting. Okay. But the idea of a smooth income, I think that that makes sense independently of whether you like the pooling concept.

I think it's also important to remind people that insurance companies charge for absorbing longevity risk. You know, there's a myth, especially when you're teaching sort of finance or economics 101, that a great example of diversifiable risk is mortality, because if you put enough people in a pool, the law of large numbers says that it goes to zero.

Not if you have systemic mortality risk, I mean that is going to affect everybody in the pool. The law of large numbers is going to break down, and the insurance companies have to charge for that. In fact, they charge for it both ways, on the longevity side, and on the mortality side, on both sides they charge for it.

And the question is: do you want to pay for something like that? Do you really need protection against systematic longevity risk? Or do you say, you know, I have Social Security, I have other sources of income, I don't mind gambling to absorb that on my personal balance sheet, because it's an expensive thing to insure against, systemic longevity risk. You may not be interested in doing that, in which case the tontine would be better for you.

I personally would say that we should offer a portfolio choice between sharing systemic longevity risk with others and transferring it to an insurance company. I think that's the way it should be positioned. Do you want to absorb it on your balance sheet? Do you want to take it on the balance sheet of the corporation? Or do you want the syndicate?

So, think of it as a triangle. The insurance company guarantees it, the syndicate absorbs it, you take it on yourself on your personal balance sheet.

My last and final comment is, I think that when we talk about retirement planning and we are all concerned nobody's buying the annuity, explain the tontine first, explain how it works historically, very easy to understand, the numerator is the fixed amount, denominator shrinks, and if people recoil and say, oh, my goodness, what a horrible way to design something, I'm going to live longer.

But they say, well, there's something -- there's something that's tamer and that's called an annuity. And the insurance company guarantees it, and you don't have to worry about people knocking each other off, and the predictable thing -- ah, oh, that's available too? Okay, yeah, maybe sign me up. Thank you very much. I appreciate it. (Applause)

MR. DAVIS: Good morning. How's everybody? Fabulous.

My name is Michael Davis. I am more than honored to be here. I see a lot of people that I've known a long time, and as I always say, I don't say old friends anymore, we say friends of long-standing. People at a certain age, they only hear the "old" part.

So, really happy to be here and to address a topic that we just think is so very important, retirement income. I'm happy to be a discussant for the paper, the paper entitled: *From Saving to Spending*, written by individuals that I hold in very high regard, not only for their decades of leadership and retirement thought but for the people that they are.

So, thank you for all that you're doing.

I'm also happy to be here with Phyllis Borzi. So, people may or may not know that I was Phyllis' Deputy in the Administration for four years. She was Assistant Secretary of EBSA, the Employee Benefits Security Administration in the DOL. She has done tons around retirement and health benefits security. And I want to thank you for everything you've done, Phyllis. It's great to have you here.

It's also great just to be able to represent the professionals at T. Rowe Price. DC assets are about half of the total assets we have at the firm. We spend a lot of time thinking about it, and a number of people are here who do that work. So, I want to thank them for what they do and the passion they bring to these discussions.

So, retirement income, as I said, has become a central tenet of a lot of these broad retirement discussions, and they're becoming a lot more central to what we think about at the firm.

So, the statement here is sort of a central tenet of what we are talking about at the firm around retirement income. And it's certainly reflected in this paper. What the paper talks about is that while annuities can certainly provide a meaningful role, there are certainly a wider variety of retirement delivery vehicles that should be considered as well. We would agree with that.

A lot of people on the agenda so far have talked about the importance of choice. This principle, as I said, is in concert with our research and our conclusion that given the documented heterogeneity in retirement spending profiles and needs, Americans should have the right to choose how they want to receive lifetime income.

And this declaration that's on this page before you was developed by the leaders of our retirement practices across the firm and reflects our thinking, and it's based on research for years, that people really want choice. And the profiles that they present going into retirement are quite separate and distinct, and they need and deserve options to be able to address those very, very different needs.

So any one-size-fits-all sort of retirement income solution that does not honor those distinctive needs, we would say is suboptimal.

So, in this paper we celebrate the variety of solutions that the writers have proposed to address differing retirement needs. The paper posits a variety of solutions including bond ladders, annuities, redesigned tontines, as we've talked about, and managed payout funds, among others.

And we're delighted to see this discussion that speaks to the range of retiree needs, and alternatives that should be developed to address them.

So, why should employers care at all about retirement delivery anyway? It's a key question. Years ago plan sponsors were not as excited about keeping assets in plan post-retirement, they viewed them as, you know, the additional costs that were involved, additional exposures that would be realized.

But we have seen an evolution with respect to plan sponsor thought, and we've also seen an evolution with respect to participant inclinations.

And so what this chart shows on the left is participant activity and their propensity to stay in plan post-retirement. So, what you see with respect to that -- I don't know if there's a pointer here -- but what you see with respect to the colored bars is 2016, '17 and '18, the increased proportion of plan assets that participants are keeping in plan post-retirement.

This is a significant signal. Again, this is proprietary data from T. Rowe Price's record-keeping operation. Obviously a limited pool of data, but it also is reflected in broader data from the University of Michigan's HRS Study, where you see from 2012, the gray bar on the left; 2016 the blue bar on the right, again, increased proportion of assets that are being kept in plan post-retirement. That is a significant evolution.

We think there are a variety of reasons that might be driving it. Some of it could be increased attention to the value of fiduciary oversight. Thanks Phyllis. The conversations around fiduciary rule we think may be having an impact. As well as just an interest by plan sponsors to main scale, dry plan costs down by keeping more assets in the plan. We are certainly seeing a big change in behavior, as I've said.

We're also seeing different preferences with respect to plan sponsors themselves. So, this again is proprietary research that the firm did, it was led by our DC Strategist Lorie Latham, who is here with us today. What you see on the left is preferences that we found among larger employers.

The bar on the far right is 50 percent, that is half of those respondents said that they would prefer to keep assets in plan post-retirement, that is a significant shift.

So, if you had asked this same question maybe 10 years ago you likely would not have seen that same percentage. The other big bar you see there, 38.6, is those who have expressed no preference. We think over time as these conversations continue around retirement income, that bar will certainly go down.

On the left you see data among smaller employers as defined by those with less than 500 million in total assets. In this case the result is a little bit more muted, about 30 percent of those plan sponsors said that they would prefer to keep assets in plan post-retirement. But still, we think that's a very, very strong signal, and very indicative of where plan sponsors -- a plan sponsor thought is going.

So, there is a differing profile of participants in these plans as far as their replacement with respect to Social Security benefits. So, given this increased inclination for assets to stay in plan, the profiles of those retirees become a more important area of focus.

So as we said earlier, there's a great heterogeneity in retiree profiles exhibited in several ways as, on this chart, by their reliance on Social Security benefits. Some have argued that because of Social Security retirees are, effectively, over-annuitized.

But we find that this is more a function of their level of earnings. This is the Social Security data, and it illustrates the replacement percentage that Social Security benefits will provide at a targeted, pre-retirement income replacement rate of 75 percent.

So for very low earners, the bar on the far left, it suggests that it will provide

Social Security with enough income to hip the 75 percent replacement rate.

Installment income from Social Security for these earners can do a good job of meeting their basic needs, but for the great many within this group who have not been able to afford accumulated retirement savings, have the challenges to be able to meet unexpected spending needs in a retirement.

For higher earners, and those represented on the far right, Social Security benefits will replace much less income on a relative basis, yet they are much more likely to have been able to accumulate greater retirement savings.

However, they have to have the tools and ability to be able to access sort of advice that will be able to help them in a retirement.

And I'm sure my good friend, Kelli Hueler, will talk a lot about those tools when she comes up to the stage.

But this profile is very indicative of the breadth of retiree profiles, and suggests that a single solve for these disparate needs is not the right way to go. Also diverse and flexible solutions may be key to both adoption and ultimate utility across the spectrum of retirees, but this is just one lens through which to see heterogeneity.

Other firms such as JPMorgan and others have done interesting research on these retiree spending patterns and the difference among them, and suggests the need for differing solutions to address the needs.

So, plan sponsors do really have the fulcrum of retirement benefit delivery, and trying to match these participant journeys with preference and products that can address them is not an insignificant task.

There are a variety of objectives and preferences that need to be (inaudible) for as shown on this page, from liquidity to inflation protection, and it's just a range of demographic issues that need to be considered. And this is where optionality, we think, is really, really, really important.

As mentioned, there are a variety of solutions available to address the disparate preferences that are resident in any one plan. These solutions can range in breadth, purpose and complexity, and include such strategies as systematic withdrawals, bond ladders, deferred and immediate annuities. We talked about tontines already, and managed payout funds.

So the bulk of the firm's, T. Rowe Price's focus, has been on the ladder with the managed payout funds. We've spent a lot of innovative attention in this area, and we are going to launch a Retirement 2020 Income Fund, in fact, this year.

The way that fund will work is it will provide a 5 percent annualized rate payable monthly to fund participants, based on the 60-month trailing net asset value average of those participants in the fund.

Now, David talked about not having this be part of a target date. This is a target date but it wouldn't be necessarily the QDIA, they would have to reelect closer to retirement within five years of retirement into it. We think that's a better way to do it. You don't want to have the one-size-fits-all as a QDIA, they would have to elect affirmatively to go into the fund. The fund wouldn't even show up for other investors that aren't close to retirement.

So, it's a way that we have thought to sort of operationalize this, because of all the operational issues that have to be considered, it's only going to be available to clients on our record-keeping platform for now, and we plan to launch it this year probably in June. But we know we are not alone in this pursuit, and there are many, many others that are pursuing similar strategies.

So, we thought the paper was very provocative, it was great reading. We all enjoyed it. I think it provoked a number of questions that we would want to posit and have people think about. One is, what about future generations of retirees? So if you think about the current generation of retirees, they still have, for the most part, access to defined benefit annuity payments.

But if you think about millennials, they're probably not going to have that.

So, what does that mean with respect to their profile of preferences for retirement income and how different could they be?

Another big question, we've talked a lot about tontines, and having been a former regulator, the question becomes: how will they be regulated? Who will regulate them? How will they be regulated? How will they be treated by ERISA and other regulatory schemes?

But obviously, I'm sure that's something we'll talk about a little bit later in the presentation. So, thanks so much for your time. I look forward to talking with you later. (Applause)

(Off-the-record discussion)

MR. GALE: All right. I want to thank the discussants, David and our discussants for that interesting discussion. I want to start with a question for each of you, and then we'll turn it to the audience.

David, actually two questions for you. One is, do you have anything you'd like to say in response to the two comments? And second, you mentioned in the pooled investment that the returns would be variable depending on actual market returns, how much could the pooled investment stabilize returns? For example, if we had a situation like 2007 or 2009, how much would -- how much of a hit would current retirees have to take?

MR. JOHN: Let's see. This is on, right? Good. First off, I'd like to thank both discussions. I actually don't have anything to add there.

I would just, one point to add is, that in the scheme that -- the European version of the word for fund -- that Shell employees have, most of them actually, at retirement, choose to have the managed payout fund instead of an annuity. So even with a period of volatility or some volatility they still choose to have that option rather than to lock themselves into an immediate annuity.

As far as the up and down, obviously market conditions -- a total market collapse is going to cause a serious problem, I did see some studies as we were looking at some of the research here that suggested, with some of the stop gaps, that volatility could be a maximum of, say, 10 percent of payout.

So, in other words, if you received $100 in a normal year, it might go down to 90, or something along that line. Obviously the realities would be different, and would depend on the circumstances.

MR. GALE: Moshe, thank you for that great presentation on a topic that I think we all need some -- needed some fundamental information about. One question I found myself thinking about, was David proposed an automatic retirement structure in his paper, your presentation sort of goes the other way. It says, look, it's more complicated, you've got this annuity versus a tontine. Do you do you see any useful -- you know, any way or any useful way for choice architecture or defaults to enter into the discussion about tontines?

MR. MILEVSKY: You know, the word "choice architecture" is a very sacred word, so I'll be careful with you using that. I'm looking, yeah. (Laughter)

I think it's -- let me note to two things. I think the word "annuity" is a meaningless word. It's like saying the word "fund". Do you like funds? Do you like funds, equity stock, bond, mutual, ETF, venture capital? It's a meaningless -- I think the word "annuity" has reached that point.

I mean you could have an indexed annuity with no living benefit that has nothing to do with lifetime income, and you can have a fixed annuity, you can have a VA that has no -- so I think we have to be careful.

When we say default someone into an annuity, or nudge people into an annuity. Do you mean the historical annuity where we have pooling and mortality credits? I can't get out then. I can't -- I shouldn't be allowed to get out because if I get sick, I'll say I want my money back, and that's anti selection, and the pool falls apart.

So it's very, very different than defaulting people into a mutual fund, or a target date fund, or a life-cycle fund where, look, you know, 90 percent of people don't pay attention. But if you are and you're not happy you can change your mind tomorrow, it's liquid.

You can't do that with these things because you break the pooling. So, when you say, would you recommend, or advocate, or create a choice where people are defaulted into one of these things, you're not going to be able to do it into an annuity because of the fact -- what we would call, and what an economist would call annuity, because then they can't get out.

And if you say, no, no, no, they'll be able to get out. Oh, you can call an annuity but it isn't anymore, there's no mortality pooling. So, maybe there's a path where you're getting warnings. Warnings six years from now you're annuitized. Warning, three years from now you're annuitized. Red envelope, you are annuitized today, you can't get out, and we gave you six years of warning.

Maybe that's the way to do this, as opposed to say, everybody would get defaulted into a percentage, defaulted into -- that's part of the confusion over what does the word annuity mean, I'm afraid.

You know, when somebody gets up and says, I hate annuities, I hate them. What annuity are you talking about exactly? Well, you know the expensive kinds with high surrender charges and high fees.

And then you describe to them the old instrument that's been around for three thousand years that people used well before pensions, retire you're getting -- oh, no, that's great, I love that thing, but I hate the -- well that's in -- that's what it used to be. So, anyway, I'm going on and on here. But I hope you get the point.

MR. GALE: I do not only get the point, I hope everybody else did. David, Mark and I, along with a woman named Lena Walker, wrote a paper about a decade ago that talked about that sort of two-year warning, three-year warning. The idea was to put people into monthly payments for two years and then -- as a default, and then if they -- at the end of two years they could either default into another two years, or they could choose to annuitize, or they could choose to cash out.

MR. MILEVSKY: Maybe that's where I got the idea. Sorry. I know I read it somewhere, it's never original but I guess that's where I read it.

MR. GALE: Fair enough. Michael you stressed the emphasis -- you stressed the importance of giving people lots of choices, lots of options, that sort of runs opposite to the automatic approach. Just, can you comment on how you're thinking about?

MR. DAVIS: Well, we're thinking primarily of employer-sponsor plans and the default. And that the problem is, if you embed something in the default you're solving a single problem that may not be the same for each of those individual participants.

So what we would say, is you have to have some kind of -- and I don't want to use the word "choice architecture", although I love "nudge", I know it's a protected term, but he's really right about it, Because we just think that if you look at the different profiles of the individuals in any typical plan their needs in retirement are so disparate that if you try to solve them with one product, it's probably not the right way to go.

So, there's got to be an architecture that enables people to have choice. It could be delivered through managed account; it could be delivered through out-of-plan options, but at the end of the day there's got to be a mechanism to solve the disparate needs that people have on the way out. It's a much more complex problem.

MR. GALE: All right. Great. Thank you. Let's turn to the questions that -- right here.

MS. FEINBERG: Victoria Feinberg, retiree from the Department of Defense. And I will use another sacred word which is acronym by Daniel Kahneman, "what you see is all there is". And I'm afraid that both the economists and the public only see, or believe that only what they see is all there is.

Case in point, I would love to get inflation indexed annuity. I don't worry that tomorrow I will fall under a bus, what I worry about is that my insurance company will run into this island protected from extradition, but even worse so today I think it's only one or two companies that offer inflation-indexed annuities in the United States, one. Thank you, Bob.

By the way, Bob knows more about it than I do. But my point is that the theories are excellent but in practice, as a retiree with assets, I just don't see a practical way to invest into the inflation indexed annuity, and then schemes -- and other schemes have this problem of running away from you.

MR. MILEVSKY: I'm wondering if I could take that. There are three or four comments I want to make. First of all, you can buy inflation index funds, inflation index bonds, I presume you're not going to annuitize it 100 percent.

Why does the annuity have to be the thing that's inflation-indexed? If what you want is inflation protection there are other assets that are much cheaper, the reserve requirements. If you tell me I've annuitized 100 percent, because I believe, you know, everybody should annuitize 100 percent. Then yeah you've got a -- but other -- and that's number one.

SPEAKER: (Crosstalk)

MR. MILEVSKY: Yeah. The other point I want to make, and this is this misconception. Well, you know, if everybody -- if we developed a cure for cancer, God willing, insurance companies are going to go bust.

I mean, you understand that they are selling two things, they're selling annuities, and they're selling life insurance. So, their annuity business might show a loss because mortality has declined, but if mortality declines their life insurance business is going to do very well. They have to pay out when people die, and if people aren't dying they don't have to pay out.

So good insurance companies manage that, they hedge that, and they actually sell, you know, they'll say, well, we have a hole in the seven-year bucket, we need to sell some longevity insurance to balance it out.

So, this idea that they're all going to get into trouble. Pension funds will get into trouble because they don't have a balance book. They don't sell life insurance and annuity, so that it's going to be --

But the final point, and it really gets to the essence, when people are asked: do you want a real annuity? On the screen, you know, 200,000 people quote annuities on an annual basis. And you have a choice. Do you want real or nominal? 99.9 percent, no, no, no, give me the nominal, as soon as they learn that the real ones are going to give them a big haircut upfront.

So, you might want one. I'm an economist, I might want one. We are a very small group.

I remember being at a meeting of the American Economic Association with Jeff Brown and with Mike Orszag, and we were talking about designing the ideal annuity. So, first of all we want some flexibility because we don't want mortality risk entirely absorbed by the company. We wanted real payments; we wanted a bumper at the end because of health care.

And we designed this brilliant annuity, and Jeff said to me, and there's only seven people who will ever buy it. And we are all in the room right over here. (Laughter)

QUESTIONER: Josh Gotbaum, also of Brookings. David, one question that Moshe had just adverted to, which I think is worth your talking a little more about is, how might this architecture become something that is chosen? In other words, we are in a market for retirement products are you -- assuming that this is something that employers would choose as a preferred approach as -- in effect, to the default on the default? Or are you arguing that this would come into the market in full competition in Michael's split? How does this -- how does this survive that, Moshe, only seven people understand it, and only three people will buy it?

MR. JOHN: Well, first off, once again, this is not an annuity product this is a managed payout fund with an annuity at the very end, or some other longevity protection. So, I would actually suggest that it would start as in the market, and in competition, but much as automatic enrollment rapidly overtook the rest of the methods to start to save and invest, that I believe that one of the problems that people face when they have a lot of choices, is that they freeze. They do nothing.

This way they'll at least moved into something that provides them with an income vehicle, and it also allows those, whether it's 7 or 700 or 7 million, who actually do the research to find something else that is more optimal to them then they have the ability to move into that. They're not locked into one solution as they would be with an annuity product.

So I believe that this will take the same course that automatic enrollment will take, that people will see, oh, good, there's the decision, I don't have to worry about this anymore, I can look at other things. And then as their circumstances change they may move into one of the other products that are available.

MR. DAVIS: Can I comment on that as well? I would just say with respect to employers, I think they would want safe harbor with respect to the selection of that provider, I think that would be really important. And if that's not clear, they're not likely to do it and, you know, outside of an ERISA context, maybe in a public plan environment, there might even be more flexibility to think about it and pursue it with the more urgency.

MR. GALE: We have a lot of questions and no more time for this session. But we're going to -- we will get the other group up here after the next session, and feel free to ask questions for this session or the next session, in the other session.

Let me thank all of you for wonderful presentations, and for the discussion. (Applause)

MR. GALE: Okay, so we will quickly turn to the second session which returns to the traditional of lifetime income, which is annuities. Something that Moshe just said in the discussion reminded me that at RSP we made an effort about a decade ago to get people to stop saying annuities and start saying lifetime income, and Mark Iwry had this idea that people would have to put a dollar in a jar every time they said annuities, and we would all have pizza every month. In turns out we had lots of pizza (laughter). Old habits are hard to break.

Anyway, Mark will present the paper on this, on how to reduce regulatory barriers to annuities in defined contributions plans. Mark is known to everyone in the pension world, has many titles, wears many hats; he is currently a visiting scholar at the Wharton School of the University of Pennsylvania, and a non-resident fellow here at the Brookings Institution, and of course, he was the lead person at the Treasury Department for eight years in the Obama Administration on Pension Policy.

His first discussant will be Phyllis Borzi. For many years she served as the Assistant Secretary for Employee Benefit Security in the Labor Department, and obviously, was a key player in all of the decisions regarding the issues we will be discussing this next session.

Kelli Hueler will be out second discussant. She is the CEO of Hueler Income Solutions, which offers an independent platform for people to make annuity choices and other financial choices. After the presentations we will get everyone up here and we will continue the group conversation. So, over to you Mark.

MR. IWRY: Thank you Bill. I would suggest that there's no more tired, shop-worn, hackneyed cliché in the retirement policy field, than the old one about how the private pension system has shifted from defined benefit plans to defined contribution plans.

We know that’s not really right, or at least, it's not really a helpful framing of our understanding of what's happening. It's really not so much a shift from DB to DC, as it is a shift from defined to undefined. From defined benefits and/or defined contributions under employer plans, to undefined benefits, and undefined contributions largely in 401Ks and IRAs. From employer sponsored, employer designed, defined/designed, and funded pension plans that protect individuals from the risk of not saving at all, the risk of poor investments, to some degree the risk of inflation, to some degree longevity risk, maybe counter-party risk, over to savings arrangements that require people to take those risks, the individual to bear most of those risks, often without employer contributions, or without employer protection from a lot of those risk and costs.

A major casualty of this shift of risk-bearing from employers and institutions to individuals, who are the least able to bear these risks and longevity risks, of course, given our ignorance of our ultimate life span, is perhaps the most difficult for individuals to bear. A major casualty of that risk shift is that loss of the solution to the dilemma that Richard described so well, that Bill haiku-ed so well (laughter), and that we've been talking about thus far between the need to protect against outliving your assets, and the need to at least maximize in a reasonable way your standard of living and your optionality; your liquidity.

The solution to that dilemma, in part, has been of course, guaranteed lifetime income; be in Social Security or defined benefit pensions. With the erosion of DBs and the shift to a savings system rather than a pension system, we've got much more liquidity, much less security, and yet for many savers, the ultimate outcome. The ultimate outcome that they desire is income; that is to replace their paycheck when they were working with a pension paycheck that is predictable, guaranteed, and adequate.

After Social Security and DBs, the next most prevalent solution for guaranteed income has, of course, been this creature we've been talking about, the annuity, the financial product or contract offered by an insurance company, typically to an individual who pays once or over time in order to get regular payments, often monthly for the rest of their life or for a term of years.

And Moshe, as you pointed out very eloquently a few minutes ago, that’s a kind of classic income annuity. But there are different kinds and the use of the word is often confusing. We've got commercial life annuities that do pay income like that. We've got variable ones that don’t guarantee a fixed amount, but will invest and provide a variable dollar amount every month, or every quarter, or year. And then we've got, as Moshe was just saying, a variable annuity that can pay regular income, but usually is not used that way; usually it's used as an investment vehicle or an accumulation of assets vehicle that is taxed preferred.

So we've got immediate annuities, as Bill was saying earlier, we've got deferred annuities; the deeply deferred ones like this qualified longevity annuity contract or QLAC that we started when I was at Treasury a few years ago. It could defer all the way to age 80 or 85; we've got single premium ones, where you make one payment to the insurance company; we've got accumulation ones where you could make payments over time in order to dollar cost average the risk of buying your annuity when insurance interest rates -- when interest rates and, therefore, the insurance convergence of your dollars into a stream of income are disadvantageous. You can spread that by buying it over a period of time. And you’ve got individual annuities versus group contracts.

So the group contract concept brings us to this notion of having annuities and plans. An employer plan is a particularly apt place to lodge an annuity because you’ve got the group purchasing, you’ve got bargaining power, you’ve got fiduciaries who are negotiating the annuities on behalf of the individuals. You presumably will get institutional pricing, therefore, rather than the higher retail prices. And you'll get professional guidance if it's an ERISA plan up to the point that ERISA would permit, and especially professional care and a diligence and loyalty under ERISA to the people covered by the annuities.

So why don’t more people buy them? We've already alluded to some of these reasons so I won't belabor it, but just to run down quickly, the list includes at least a dozen different reasons; social security might be enough of an annuity for you, your family might be there to support you in the sort of traditional way, interest rates are low nowadays so it doesn’t seem like a good time to buy; that’s been true, of course, for years; annuities can be perceived as having high costs and, indeed, again to your point Moshe, depending on what kind of annuity and where and who's selling it and so forth, the costs can, indeed involve high commissions, high surrender charges, etc., and the distribution network for annuities, traditionally, is pretty elaborate. Brokers and agents, some people refer to 200,000 golfing brokers (laughter) out there who are looking for families who might not otherwise buy an annuity, and they are actually putting their time in around the kitchen table to sell the idea that guaranteed lifetime income would be good. And then the question is: are they offering it on terms that are reasonable, and is the market working?

Often, unfortunately, the market is not working so well. And the complexity, the non-uniformity, and the lack of transparency in the product features, tends to defeat price comparison. You can't compare one annuity to another, in many instances, because the terminology for all the bells and whistles and features on the annuity is disparate; it's not the same. You don’t even know whether you're comparing apples and oranges, or apples and pears; each one sounds different.

They're behavioral reasons why people don’t go for annuities. The wealth illusion: people think that when they’ve got an account balance it's worth a lot more in terms of income than they really discover it is worth. There's what David referred to earlier, what if I get hit by the proverbial bus as I leave the insurance office having bought the annuity and then all the money goes to the insurance company unless I buy a death benefit, which then dilutes the mortality credit transfers that Moshe was talking about, though not entirely.

People don’t see it as insurance. All too often they see it as an investment because it's being marketed very often as an investment. So that framing gets in the way. If they see it as an investment, they compare it to other investments and forget the insurance value of the annuity.

And the regulatory factors that impede the market here; not to mention, by the way, the bias against insurance agents, agents the insurance industry, all the syndicated columnists and financial columnists that have written negatively on annuities in the past, partly because they are referring to certain kinds of annuities, certain kinds of commissions and terms that not all annuities have.

So we're going to focus on three regulatory problems. One and the most salient, plan sponsors fear a fiduciary liability if they put an annuity in their 401k or other plan, and it turns out years later that the annuity provider, the insurance company goes belly-up. Second the limited portability of annuities. And third, the required minimum distribution rules, which are a kind of brooding on the presence on top of this whole area of lifetime income, even though they don't directly relate to annuities per se.

So, the first problem: fear a fiduciary liability on the part of the plan sponsor. Clearly this nightmare of buying an annuity for my employees and then finding later that the annuity carrier is unable to make good on its obligations to pay the pensions, is one that has haunted the corporate sector. ERISA counsel, in-house or outside counsel, have tended to be concerned that there is some liability to worry about, potentially here when an ERISA fiduciary makes that decision to purchase an annuity for employees, whether they are giving it to employees, or just offering it to employees as an employee choice.

I do think that we absolutely need a safe harbor, and Bill and David and I, and Victoria believe that whether or not that fear, on the part of the employer, is exaggerated -- and I do think it is exaggerated; there's a statute of limitations as Phyllis has pointed out -- in ERISA there are other reasons why this is magnified, and whether or not a given employer is using this as a pretext for avoiding the trouble and extended conversation involved in engaging in an annuity purchase, or whether they are truly deterred by this, and if this fear went away they would actually move forward with an annuity, we've got both kinds; a fiduciary safe harbor is absolutely necessary.

ERISA expects each plan, since there is no safe harbor at this point, to do its own independent assessment and analysis of the insurer's claims paying ability, or financial strength, and the typical recourse is to hire a consultant who's an expert in this area, to advise on which carriers are a good bet, are a prudent choice under ERISA for the employees pensions.

The idea of a safe harbor is to streamline the process and give certainty so the plan sponsors and fiduciaries know, if I do these three steps, or if I walk through these six elements of a kind of recipe, I'm done; there's no uncertainty about it, it's not going to be ambiguous, it's clear and crisp. And so our view is that that is the way to go to have a safe harbor that streamlines the process, that provides certainty, and that reflects the analysis that normally fiduciaries normally go through, that is: what is the financial strength of the carrier, how sound are they, what are the terms of the contract, what is the cost, etc.

Without some quality standard looking at the financial strength of the insurance carrier, we think that you could be looking at a variety of insurance companies, some of which may be below investment grade in their credit ratings, and even though we do have state regulation and a state guarantee association system, which need to be very much kept in mind, we think that if we were starting a safe harbor, constructing a safe harbor from scratch, we would use a financial strength criterion that is not fuzzy. It's not the current law, which is you have to analyze it and do a tremendous amount of due diligence in comparing carriers and their claims paying ability, and their other attributes, but would be objective and clear.

So, rating agencies, do they have, let's say, two ratings for major agencies that are at least above a specified level, and maybe no ratings below a different specified level. Now there are pros and cons here. The rating agencies go a huge black eye in 2008, blamed for part of the Great Recession for over rating certain famous derivative type products, they're not entirely free of conflict, they do ratings typically for companies, insurance companies, that pay them to do the rating; there are all sorts of issues there of independence, but in our view, the question is: what's the alternative to using the major rating agencies ratings as, at least, a major part of a safe harbor.

The precedence is there, labor regs used to use the rating agencies as one factor to take into account in assessing the strength of a carrier under ERISA. The market does this now in all sorts of ways. The Fidelity website, for example, has an annuity selection, and all those carriers that Fidelity is showing have been checked out by Fidelity; but the one thing they tell you after the name of the carrier, is its ratings by the major rating agencies, and they are all well in the A range, A and above, on Fidelity's website.

You could have legislation alternatively direct the Labor Department to figure out exactly how to construct this criterion, perhaps in consultation with Treasury's

Federal insurance office with NEIC, National Association of Insurance Commissioners, the Academy of Actuaries, perhaps; and other neutral respected organizations.

Is there an alternative to using the rating agencies? Well, certainly the expert consultants are the current alternative, but does it make sense for every 401k plan, who is interested in having an annuity, to have to hire its own consultant to assess the self-same issue: how strong financially is X insurance company, or the following two dozen insurance companies.

Socially inefficient, you could have -- if you didn't have a rating criterion in a financial strength safe harbor, you could at least have some single entity that pulls together this assessment of the insurance industry and provides their judgment as to whether it is prudent.

So, if you look at other precedence and recommendations of the bipartisan policy commission, even/or including the Trump Administration Treasury, which issued a report in October of 2017 on this; they have also looked to the notion of either rating agencies, or some objective other third party which could be created that's maybe more independent that the rating agencies.

Another option would be simply, at a minimum, if you were to say, Congress has already made its decision, the legislation is on track, we want to get legislation enacted now that has a lot of favorable provisions, ERISA secure, and Martin Baily, Ben Harris, and I have written separately about that legislation on the website. We want to get that done. There is a fiduciary safe harbor in that that doesn't have financial strength ratings; it has regulatory approval in the normal course by the states.

If this would hold that up, is it worth it? We are not making a political judgment here. We're saying if we were designing a safe harbor from scratch, we would include financial ratings. Many of us are very much in favor of getting that legislation past so that it's a different question what is politically feasible to change, if anything, in the legislation now.

If you just disclosed ratings in a very conspicuous compilation, and one nonprofit party put that out, here's the major carriers -- all the carriers -- here are their ratings, publicly available information from the various major rating agencies, that could, by itself, help, even where a legislative safe harbor has no element of financial strength -- comparative financial strength in it. And that might develop on its own in the market.

I would also note that there is a possible related safe harbor that one could add through legislation, whether now or later legislation, that would provide a safe harbor to put an annuity into a plan that has a default that is a qualified default investment alternative, QDIA, codifying the guidance that Phyllis Borzi and I developed when we were at Labor and Treasury during the Obama Administration.

Right now, the guidance takes the form of a Treasury ruling and a letter from Phyllis to Mark, which we thought would move the market (laughter). It could be elevated, perhaps, a tad (laughter), maybe a notice-and-comment regulation. Phyllis and I would not regard that as a step up, necessarily, but the market might, so we would recommend that, as well for imbedded annuities, to put an annuity in a target date fund as the fixed income exposure of that fund and then eventually, after lots of warnings, they get the red envelope that Moshe was describing: now you're in it, you could get out of it until now. And that warning could be when you are retiring.

The other quick points I would make here are that there is a portability problem with annuities, it's readily solved. If you have one in a plan and the plan stops offering it, the record keeper stops, or it's changed, what have you, you can't get it out of the plan to continue contributing to it, we could let the rules allow a specific exception for this as a rollover to an IRA so the person can continue to contribute provided it's not abused to just do this for one or two senior people, as opposed to unavailability that’s truly unavailable for everyone.

The other issue I will quickly touch on is that the RMD rules, required minimum distributions, age 70.5 you have to start taking -- not taking your money out of savings, but taking your money out of tax-favored savings; out of the retirement plan or IRA, and putting into a taxable account, or consuming, if that's what you want to do. Those rules are not a well-targeted regime. They are intended to prevent tax deferral from going too far; basically estate planning, people who are very well off and would want to just postpone taking the money and leave it to their heirs.

Most Americans are not in that category. We, therefore, would propose a radical simplification of the RMD rules, mainly to totally exempt the smaller and the average saver from these required minimum distribution rules which can get complex, which have a 50% excise tax. That's pretty scary, hanging over a lot of the elderly people in this country.

And we proposed something like this when I was at Treasury in the Obama Administration. Chairman Neal who is the Ways and Means Chairman, and I think, the Tax Writing Committee Chairman who, in all of our history, cares more about retirement savings and retirement security that any other tax committee chairman, senate, or house that we've ever had. He's proposed something like this, and the republican house has proposed this kind of legislation when they were in the majority late last year. This should cost less revenue that one might otherwise think, because regular folks with small accounts cannot afford to let the money build up forever on a tax deferred basis. They need to live on it so they are going to take it out anyway, and it's going to be taxed anyway.

We have a number of other proposals. We'll save those for the discussion, period, but we're hoping that the kinds of things we are talking about here will help restore the pension to the private pension system. Thank you (applause).

MS. BORZI: Good afternoon, I guess it might be afternoon by now (laughter), we're sort of on the cusp. First of all I want to thank Brookings very much, and Bill, for inviting me to participate in this discussion.

When I left the Department of Labor a lot of the reporters, you know, did exit interview kind of things, and most of them asked me what I was proudest of, and most of them asked me what unfinished business I left behind. And what I said to all of them is, because of my long-standing interest in guaranteed lifetime income, this was actually a topic that I was very disappointed that I wasn't able to bring farther along. And so I do appreciate the ability to talk about these issues today, and do hope that the discussion continues because there is a lot to say, a lot of great ideas out there, including a number of them that are in this paper.

Let me -- I want to try to pace myself because the hardest thing for me to do is to keep it to 10 minutes, because there is so much to say. So, I'm going to talk mostly about the annuity safe harbor because I want to share with you some of the thinking that went on at the Department of Labor, as we considered this, because we spent a lot of time on it. And then I just briefly have a couple of comments, primarily the required minimum distribution, as someone who's had to cope with those. I have some great suggestions on how to make it easier for those of us who are old enough, over 70.5, and have to take these things.

So let me start with the first topic, which is: how do we encourage more plan sponsors to offer opportunities for their DC plan participants to select guaranteed lifetime income options? There is no question in my mind for my 40 plus years in the business, that the most important actor in this scene is the employer. The employer is the fulcrum for helping people to navigate their choices.

There's clearly a need for safe harbor. I agree with that. I think there is some disagreement as to how it should look. I don't think the disagreement actually is from a policy point of view. I think it's from a business point of view; a revenue point of view, a market share point of view.

Let me talk a minute about what's a safe harbor. Mark actually talked about the need for clear and crisp conditions in a safe harbor, so you check the box; boom, boom, boom, and you're off the hook. That isn't happening.

A safe harbor is designed to protect people that are the beneficiary of the safe harbor, but one of the reasons in 1975, on my first day of law school, that I concluded that I wanted to work in the ERISA area, is because nothing is clear and crisp (laughter). And if people tell you that that is the truth, they are either uninformed or lying (laughter); and I don't know which is the worst.

But the purpose of a safe harbor is to point people to a direction that shapes their due diligence discussions. I agree that we need a safe harbor, but it's not as simple as five little checkpoints. And the poorly designed safe harbor is actually less useful and more dangerous to plan sponsors, than a safe harbor that helps you narrow your choices, helps you do your due diligence, but in a way that doesn't protect only the plan sponsor, but also protects the participants. And that to me is the greatest disappointment and weakness in what the current legislation has. I won't be -- my politics are my politics -- this is not political because we have misguided democrats who support this as well as misguided republicans.

The current safe harbor that Congress is considering, I wouldn't call a safe harbor. I would just call it ratification for anything -- any insurance company or any insurance product that isn't a bottomed dweller in the market place. It is designed to be very protective of plan sponsors because it basically says you can select almost anything, unless the insurance company is under investigation by the state insurance department, you can select any carrier and you can offer them any product, and plan sponsor you're off the hook.

The plan sponsors that I know, and that I have worked with, have not spent their lifetime trying to help their participants have good, solid retirement income only to throw it away by offering a substandard product. The notion that we ought to have a safe harbor is a good one, but the safe harbor needs to be focused more, as the paper suggests, on financial solvency; the financial strength of the institution.

You know, when I was in private law practice and actually, one of the flaws, or one of the disadvantages of being in the benefits business is friends and family often ask you for advice (laughter). When people ask me for advice on how to select an annuity, either an individual annuity or plan sponsors would ask about selection of annuities that they wanted to offer to their employees, I used the Mother Rule. And Professor Thaler referred to this in his remarks this morning.

The Mother Rule is very simple, if the alternative to providing a good, solid annuity for your mother is that she would forever live with you (laughter) would you select this carrier and this product (laughter)? And the Mother Rule has kept -- has retained its good stead to me, and millions of other people. The safe harbor in the legislation, and this is the last thing I'll say about it because it pains me to even talk about it, flunks the Mother Rule.

So, if we were designing a safe harbor, I think the criterion in the paper made perfect sense to me. We need some sort of financial strength test, and at the Department of Labor when we looked at this issue, obviously the first thing we thought about is to bootstrap on the existing credit ratings. There was a significant problem, however, and that was, that is illegal under Dodd-Frank. A provision Dodd-Frank directed federal regulators to remove from all of the regulatory pronouncements, whether they be notice-and-comment rulemaking, other kinds of guidance, any reliance on credit ratings, and it was, as Mark pointed out, because there was such distrust of the behavior and the ability of existing credit ratings at the time that Dodd ratings agencies, at the time of Dodd-Frank to adequately deal with these issues.

So that was off the table. Believe me; we tried. We tried every euphemism in the book to figure out if we structured a safe harbor; could we use a credit rating. Because one of the other issues for plan sponsors is: if you're going to have a safe harbor and you're going to say you need to have these particular -- these are the measures, the metrics, of financial solvency that you need to look at, you need to have them publicly available, or easily available sources so it doesn't take the plan sponsor a lot of time and effort and money to be able to identify the strongest companies in the marketplace.

So, ideally, Congress would change Dodd-Frank and put credit ratings back on the table, but the paper -- when you read the paper you will see that the authors of the paper have done a terrific job. It's setting out other measures, other metrics. So I do think that financial solvency is the way to go in terms of structuring a safe harbor.

The point of the safe harbor is to narrow down the due diligence decision; not to let every product in the marketplace through the safe harbor. There is one suggestion, however, I would make to the paper, and that is -- and this comes out of the work that we did in conjunction with the conflict of interest rule -- I think, in terms of a safe harbor, which is to reduce the need for plan sponsors to do extensive additional due diligence, I think the type of products that would be eligible for safe harbors, you know, financial solvency and financial strength helps narrow down the insurance companies whose products would be available, but I do think, for purposes of the safe harbor, it ought to be limited to products whose sole purpose is to provide guaranteed retirement income.

You know, as regulators, the question we're always asked is: what's the problem you're trying to solve. And the problem you're trying to solve here in creating a safe harbor is you want to protect against insurer insolvency, and you want to make sure that people have the opportunity to select a guaranteed lifetime income product. And the problem in the insurance marketplace is that there is a proliferation of products that have other objectives. So I would limit any safe harbor to immediate deferred or longevity annuities. You can have -- if the plan sponsor wants to offer variable annuities or fixed index annuities, that’s fine, but not within the safe harbor, because then you'd have to have enhanced due diligence to see whether those products, that aren’t designed primarily to provide guaranteed lifetime income, may fit.

I'm more than out of time, but let me just give you my idea on required minimum distributions. You know, IRAs are not required to provide a required minimum distribution; they just have to tell you that it's available. And that, for me, personally, and for millions of other retirees, causes a great deal of confusion, particularly in the first year that you're eligible. I think the rule ought to be the same for distributions, whether it's an IRA or not, and actually, I would defer to Professor Thaler's idea that distribution of the annual required minimum distribution amount should be automatic unless the person opts out. And then we could have a long discussion about how some need for tax withholding, mandatory tax withholding is the same. But I'm going to stop, because I'm way over time. Thank you very much.

MR. HUELER: We're not afternoon yet, but we're getting close. Thanks for all of you staying so patiently. It's always an interesting exercise to be the last person after all of this amazing information has been bantered around. I want to thank Mark very much for inviting me. I'm Kelli Hueler. I think David mentioned I'm CEO of Hueler Companies. That is not a household name, so let's just put that out there. And I'll give you a quick understanding, or introduction, so that you know how we fit into this picture.

I'm not a regulator. I have great admiration for Phyllis and Mark and the things that they've done, and they know that I've been a soldier in the lifetime income effort for, really, the better part of two decades. So I'll just tell you quickly that I founded the firm in 1987 and our sole responsibility was focused on helping employers, fiduciaries, sort of satisfy the needs around procuring, selecting and procuring, contracts for their defined contribution plans on the insurance side, so you may have understood it as, in the day, GICs; today that would be considered stable value.

So, we cut our teeth in working side by side and standing shoulder to shoulder with the fiduciary decisions that needed to be made by the large employer to protect and insure appropriate delivery of insurance products into their plan. That taught us everything we needed to know about the insurance industry in terms of structure, and contract structure, but also, how the whole purchasing process worked. I was actually asked in 1999, many years after starting the firm to come to Japan and speak on the rule of stable value in the defined contribution system in the U.S. And it was at that meeting that I had the opportunity to spend a couple of days meeting one on one with Japanese insurers, and if you can all think back, in '99, we were looking at zero percent interest rates, and a rapidly aging population, and the Japanese were struggling mightily to try to create -- I would say guaranteed is a good word -- but stable and sustainable income for their people into the future with this massive wave of retirees and folks that were facing zero interest rates.

That was really the point and time where the longevity light bulb went off. I just never had thought about longevity and the pay outside of what we were doing. It was so focused on doing what needed to get done to create the benefit of stability inside the plan, and that was really my moment of conversion. That was my moment of A-ha; we are a system that is lacking in addressing the payout phase and distributions of these hard-earned savings that are accumulating in our prior retirement system.

So that's my background. As part of that and how that relates to the paper, Mark and I have had great discussions about this; and he knows how deeply I admire his work, and we agree that there are some very critically important points of discussion in that paper. We also agree that the legislation that is moving, and that has made tremendous progress to date, has taken a yeoman's work and effort, and we are very thankful to Congressman Neal and others that have worked on that.

And at this point, I can tell you from working this many years with plan sponsors, you really have to recognize that we are not going to get much further without a safe harbor. It's just not going to happen, and we can all debate what's good and what's better; and Phyllis, you point out eloquently how you view that. Help me with this -- can somebody give me a -- there we go, but here's what I want you to think about for a moment. Today, we are losing assets at a very rapid pace out of these plans that are rolling over to create lifetime income, sustainable lifetime income elsewhere, because employers are so concerned about selecting the insurer without a safe harbor.

So if you think about what employers are doing today for their employees to create a place to invest safely, with all of the benefits of the fiduciary regime around it, and we are losing dollars rapidly, and we are losing it to, what I consider to be, very predatory practices on the American public.

We see it every day. We see retail products being sold; how many of you have been invited to a steak dinner lately (laughter). How many -- I'm 60 this year -- so I cannot tell you how many; hello, to my husband and to me, please come and meet with us, we would love to talk to you about your financial security. I bet you would (laughter).

So, I just want to put this out there as we go a little bit further, and I want to say that I'm a huge advocate of standards. We have practiced standards from 1987. I'll tell you that the standards we put in place definitely begin with investment grade. That's the way we cut our teeth in this business. That's how we understand the fiduciary responsibilities, and we put together a practice of examining, both the insurance company in its current form, but in terms of ongoing efforts, to follow, to review and to continuously update our understanding of the insurers we were dealing with.

And so we have a very tried and true, time tested approach to this. We spend a tremendous amount of time in resources. We look at this and we believe that insurance company selection is a critical component of what a fiduciary needs to do, but it is not the only piece, and it can be done in a variety of ways.

So we think about it a little bit more in the context of the whole picture, and driving ultimately, not just the selection process, but if I'm a fiduciary -- and I said to Phyllis this morning -- you know, whether or not the fiduciary rules were finally and formally enacted, that regulation, and that determination has changed the view of many in the industry, to the benefit. And whether that was enacted or not, Hueler was never going to change the way we did things because we had standards in place already.

We believed in the no conflicts of interest, no pay to play. We believed that features must be fee-leveled and feature-leveled, and I remember having the first conversation at the Department, I said, yes we do that. We do that because in order to have comparability, you have to have standardization. So while issuer selection is a key piece of what we believe fiduciaries do in this area, we look at all these other factors and competition transparency low cost.

So, when I showed you the previous slide and wanted you to think about what's leaving the retirement system, remember that the retirement system is one where costs are kept low. They are transparent, they are driven lower by competition; and that's not occurring on the individual level. When we look at what people compare the income levels they can earn through our program or a program like that, there are many different alternatives available. But when you reduce costs, you create competition at the point of purchase and you are working with a high-quality stable of carriers, you can produce far better outcomes for employees, and for participants and retirees.

When we look at it, we try to say, what is the average that we see in our data? And that's around five percent on the SPIA that someone actually increases their monthly payment, or decreases the amount of money they would have to take from their savings to achieve the same level of income. And that can go well into the double digits if you're talking about deferred products.

So when you think about the practical realities of this, getting employers to the point where they feel free to offer programs that are institutionally structured, and can be married with their investment programs; to us that's the future of where we need to go. And we believe that the private market, as Mark suggested, possibly some of these things will occur in the private market.

There are a couple of things I would say. I think the greatest benefit comes to the participant in the public when the private market collaborates with the regulators and the legislators to say, what can we get done in the most practical way, without ever forsaking the reason that we're here, which is the participant. And at the end of the day, what we're doing is to benefit the retirees.

But I have to tell you, I'm a believer in perfect not being the enemy of good, and we all have to recognize the practical realities. We are a small firm. We are not a household name, but the firms that we work for, the fiduciaries we work for are household names that you would know every day. And the reason they come to us for those services and capabilities, is because we recognize that the fiduciary wants to do the right thing and needs resources to be able to do that. And we've created a system, wherein you might say it's not actuarial fair, I would say it's actuarially very fair. And if we study our pricing variability studies, which we do all the time, using a framework that helps drive costs and unnecessary bells/whistles nonsense, out of the process will always produce a better result for individuals.

And the one thing I would say is our bias is towards not a single issue or solution, because you can't get comparability. When you have a single issuer, you're really never able to create that comparability that both the consumer and the fiduciary should be thinking about.

So I think I'm really getting close to time. I also wanted to say that the independent fiduciary concept that Mark -- the paper -- I value that, because I think independence, you can't be a good fiduciary if you're not independent. If you are not willing to rid yourself, or your system, of the conflicts, you can't be a good fiduciary.

But, I think that model -- and you proposed one model -- we look at ourselves as another example of that model, and I think that you mentioned putting credit ratings and other things, and keeping the transparency; we believe you can do that if there's no pay to play. And you can do a better job of it if there's, you know, truly a distance from the product providers, but don't forget, the product providers are an essential part of the process; they are stakeholders at the table and we have to figure out a way to collaborate and bring the best possible results of our thinking, of our innovation, and ultimately of our capabilities to deliver it with an employer into the plan for the benefit of the employees. I'm done (applause). Those would be my comments (laughter).

MR. GALE: All right, great, thank you. Thank you all. We want to turn to audience questions, but before we do, let me just ask you briefly Mark, is there anything that Kelli or Phyllis mentioned that you wanted to respond to, or clarify?

MR. IWRY: Bill, I'm very appreciative of those really thoughtful and very independent comments from both Phyllis and Kelli. I would say that we are approaching this from two standpoints, and this is not unlike our normal approach at Brookings. We are independent. We're trying to look to what is the best policy, and we're also practical and looking at what the impact of our views and our writings would be. And so from one standpoint, the research and the analysis that we've been doing asked the question if we were designing a safe harbor, first of all, do we think one is necessary: yes. Number two, how would be design it?

And that's what much of this paper -- and by the way, if you're wondering about the two papers you've heard about, they are forthcoming; they're not available out on the table today. We decided we would do them in draft and then revise them based on the discussion and comments today, so they'll be coming out soon. Look on the Brookings website for that.

The second approach is given where Congress is today, where the process is today, what is practical and realistic. And I'm not suggesting that it's necessarily impossible to make changes in legislation that's been proposed, but I defer to Congress to a great extent on what is possible, what is practical.

And I do identify with the point of view that the legislation, of which the safe harbor is just one part; we've got MEPS, multiple employer plans encouraged, we've got disclosure for annuities, we've got a portability provision, we've got another couple of dozen, mostly very good provisions, good policy, and good for the workers and retirees. So, I'd like to see that pass and there's a difficult balancing act between -- as Kelli alluded to -- between what one thinks would be best if one were writing this on a clean slate, and what Congress is going to be able to do.

So I would suggest, if Congress is not in a position to change the safe harbor the way it is now moving through Congress -- and God bless Chairman Neal for his role in getting things, helping things move through Congress on a bipartisan basis, and setting such a tone of civility and bipartisan cooperation, and getting things done -- then maybe after the legislation, maybe regulations can help shore up the safe harbor.

The market also may be able to work. ERISA counsel for the plan sponsors will be concerned about preventing litigation. They'll want certain standards to be recognized whether or not they're in the safe harbor. Potentially, the consulting firms will still be in the act because the safe harbor, I would guess, would not be such that you won't have employers going to a consulting firm and saying, so how do I narrow down the field of all these insurers that qualify under this very liberal safe harbor.

So Bill, that's my sort of comment, that I think we have to look at it both ways. And when you look at it in terms of what's possible, if you don't think the legislation is going to change, if you think Congress has already set its course on this safe harbor, then our paper has addressed what can we do, what can the market do, what about disclosure and financial strength ratings, should it be required to the individual who are getting the annuities, should it be required in a conspicuous way to the plan sponsor that's choosing?

MR. GALE: All right, thank you. Let's turn to questions from the audience. The gentleman right there, with the scarf.

SPEAKER: I want to ask a question of Professor Thaler to your comment about issuing a security that's tied to Social Security benefits. Interestingly enough, Professor Martin and I have recommended the creation of a Bond we call Selfies, which I've discussed with Mark and Bill as well, where the U.S. Treasury issues a Bond which pays five dollars real starting when people turn 65, for, let's say, a period equal to the average life expectancy. And what that's meant to do is to basically make the calculation of retirement income extremely trivial to your other paper on financial illiteracy, because most people can't do the basic math that they need to do.

So the idea would be U.S. Government issued, starts paying five dollars real per year, for let's say 20 years, so it's priced by the market, but rather than just index to inflation, which we've heard about here, Professor Martin's point is that it should be indexed to standard of living because that's the true risk of retirement; it's not just inflation. So I'd be very interested in your thoughts on that.

MR. GALE: This is actually closely related to what will be my first question for you in the next session, so let's hold off until the other questions (laughter). Okay, other questions; ah, yes.

SPEAKER: Hao Sun at Brookings, GS, so since the panelist have already touched upon the records perspective of annuities, I'm just wondering should the investment, the management of annuities should be like the public pensions, have solid investment restrictions regarding how to design portfolios, and also related to that, how closely do you feel the portfolio should follow the modern portfolio theory, or the efficient frontier, thank you.

SPEAKER: It's a question for Kelli; Kelli, how do you solve for the problem of using unisex mortality tables within a plan as opposed to using sex-based mortality tables in an IRA. I mean, that really, doesn’t that cost someone adverse selection, like why would I ever annuitize out of a plan when I'm in a larger, more inexpensive benefit by annuitizing out of an IRA?

MS. HUELER: I don’t think there's one way to annuitize. I think Michael said that -- I don’t know where you went, I don’t know where you went, but we were here -- said that earlier, but there's not one way to annuitize and I think Michael was referring to the disparate needs that people have at retirement, and I don’t think -- oh, there you are, I was just saying you were referencing something and I couldn’t find you in the audience; but, we don’t see it as an either/or.

We work with employers that have both and there are elements of an in-plan annuity that can be -- and we actually have a client that allows there to be a rollover into the DB plan so that someone can actually us the DB plan -- and our role isn't to say this is better, or this is worse; it is to say, what are your needs and which solution is going to fit you best.

So I think maybe that either/or mentality, one is better, one is worse, if a plan sponsor has something in the plan, then they're never going to offer something outside of the plan and I think to Michael's point about there being a whole variety of needs, remember, too, we see people who have spouses that don't have any pension coverage at all and they can't get a hold of that in-plan option. So they use the other platform.

So yes there is sex distinct pricing that occurs in the after-market and there is gender neutral pricing that is occurring in the plan, but I don't see it as an either/or and I think we have open up our minds to the reality that people's lives are very different, and if we give them more to choose form, they may be able to reflect their household in these decisions even better than with just one.

MR. GALE: I moved a little too quickly before, I think Phyllis wants to respond to the previous question.

MS. BORZI: I'm sorry, yeah, I was feeling badly that we hesitated too long. I think I was having a hard time hearing you, and so I think -- was your question about relevance of modern portfolio theory, was that it.

SPEAKER: Yes, actually there are two related questions. The first one is regarding the investment management of the annuities; so whether there should be attached investment restrictions, like in public pensions, which is part of my working dissertation.

MS. BORZI: Ah.

SPEAKER: And also regarding, since related to there are going to be some investment restrictions, so that's why I'm wondering how we would do that, or how the portfolios of annuities will closely follow the efficient frontiers, or also known as the modern portfolio theory. I hope this clarifies my question, thank you.

MS. BORZI: So this question about whether there ought or be restrictions on investments or not is, well, let's see, I've been in the business for 40 plus years; I think we've discussed it every single year.

The position that ERISA -- that was taken in the statute, is that the duty of prudence -- you know, obviously you have to have prudent investments, the statute doesn't put any restrictions on what is -- it defines prudence. It doesn't put any restrictions on this type of investment or that type of investment, and it does so because that's the job of the fiduciary, to look at the facts and circumstances, if you will, about the plan, it's funding status, it's investment objectives, the needs of the participant, the demographic criteria, and it's up to the fiduciaries -- you know, this goes back to Mark's "clean and crisp", there's no "clean and crisp" set of rules for fiduciaries, and over the years there have been a variety of legislative and regulatory proposals that have tried to constrain fiduciary discretion. And I think that probably the modern portfolio theory -- I happen to think it's still relevant, and I think it does provide a decent enough framework. It isn't as detailed as some would like.

I mean, for instance, I see Josh Gotbaum here who's very familiar with the problems that PBGC is facing and there have been solutions, proposed solutions over the years that would try to limit the risk to PBGC. At least this is the purported goals of the solutions, by saying to pension fund fiduciaries: you can't invest in quote/unquote risky investment. Of course, risk, like beauty, is in the eye of the beholder, and so it's really hard to -- the statute doesn’t encourage specific restrictions on investments. It's left to the duty of prudence and loyalty that all the fiduciaries have. But the question you ask is a question that comes up many, many times in policy discussions, both at the Federal and State policy level, and as someone who's represented individual trustees and been plan counsel, it comes up at virtually every trustee meeting that I was at when the investment manager gives his report, or the investment consultant's do. But that’s an excellent question.

MR. GALE: Let me just add without disagreeing with anything that Phyllis just said, my own personal view is there should be much more maturity matching, and much more restrictions on the investment to correspond to the liabilities, to the structured liabilities, because every time there isn't, the government gets left holding the bag.

MS. BORZI: I agree with you as far as a strategy, I think where we disagree is whether it should be mandated by law or not. And, by the way, that’s the point of a safe harbor, as I tried to say, maybe not very articulately, that the point of the safe harbor is to put some restrictions on, because, to the extent that you get relieved from some liability by using the structure of a safe harbor, the quid-pro-quo is the restrictions on the safe harbor.

MR. GALE: Right, right. David.

SPEAKER: David Wentworth, tax policy consultant, but I also used to work for the insurance industry and I know that a major problem the industry faces has been hinted at by a lot of the conversations but nobody has addressed directly, which is, everybody agrees that nobody really likes annuities, despite not being clear on what annuities are, and the primary reason is adverse selection. The people that buy annuities tend to be the ones that have reasons to think they will live long lives, and they also want their money back in the case that they get "hit by the bus". I haven't yet heard anything that really addresses that problem. We've got safe harbors, maybe, various things, but how do you address the fundamental issue that if it's voluntary, you don't have a diverse population buying annuities, and therefore, the annuities get very expensive.

MR. BORZI: There are only two ways to do it: mandates, that hated word (laughter), or create incentives. You know, it's a carrot and stick -- we have a carrot and stick system, and so to encourage -- and see, I agree, that the word annuities, we ought to strike it from our vocabulary because it mushes up a million different concepts.

What I think is an annuity is actually an investment vehicle sometimes. So I think the marketing has confused both plan sponsors and individual participants. I prefer to call it a guaranteed lifetime income product. And the way to encourage it is to make, to the extent that the paper and other research indicates that plan sponsors are reluctant to add a guaranteed lifetime income option as a distribution option, then we need to figure out how to make it more attractive for plan sponsors to offer it.

I mean, the irony is the work that we did at the Labor Department -- that it's one of these things where to the extent it's offered, nobody takes it and nobody takes it, I think it's what you're alluding to, because of all the reasons that Mark in his paper and then on his slide said.

So I think we need to change the notion that, I think that by changing the marketing slogan, or the name, we can maybe get across what the point of what we're trying to do is, which is to encourage more lifetime guaranteed income.

MS. HUELER: I think I'm going to add to Phyllis' comments and say, really, we haven't done a fair job of giving people the alternative to accept lifetime income as part of their overall payout strategy.

You know, the traditional method was all or nothing: here's your offering, you take it, all of it, or you take all your money. Remember what I said earlier, knock, knock, knock on the doors, everybody, your brother down the road is a broker, do you really think that people are going to give all their money back to one thing? It's not going to happen in today's world anymore. It's not happening, so it's been a failure.

But I think if you start to see -- and we are starting to see -- when there is engagement about the issues that people are concerned about: longevity, I don't know how long I'm going to live, my mother lived until she's 95, my father died early but I have no idea; I like certainty. Moshe, I think you said that earlier, some people prefer that more than others.

But there's another piece to this, partial. We have not given people the alternative to take a small percentage of their resources, without having to go through these tremendously complex, you know, decision making matrix, and just offer it to them as part of the natural flow. We call it creating a default like path because you aren't going to default people into irrevocable things easily, even if we have a safe harbor. There's a lot of issues around that, but if you create a default like path, and we change the way -- you say change the name -- change the way we message, change the way we frame it, I think it 10, 15 years, we may have a very different experience.

MR. GALE: All right, let me thank all the panelists, it's an excellent discussion (applause), and if you would all step down and Richard Thaler to join me. All right Sir, so you are the Alpha, the Omega. Let's start with Social security. Aroon asked about a bond that would provide basically standard of living insurance rather than just real price insurance. I was going to ask that if we let people buy into Social Security, don't we have to worry about adverse selection along the lines that David just asked, that Social Security works because it's mandatory, it's a pooling equilibrium; if we let people buy in only a select few will, or a select group will, and so let me just throw all that out there and ask you to discuss Social Security.

MR. THALER: Okay, so regarding Aroon's point, I think that the distinction between a CPI adjusted annuity and some other, is too minute to worry about in this conversation. Regarding adverse selection, let me repeat something I mentioned earlier, which is, it's true that you know when you're sick, you don’t really have a lot of information that you're going to live a long time. So, I'm not as worried about the adverse selection problem at this stage, and remember, my proposal is that people be able to contribute a relatively small amount of money into Social Security, for most people, since most people start claiming at 62, it would be equivalent to them having waited until they're 70, which they are already illegally allowed to do.

So there are lots of these proposals. Guaranteed Lifetime Income Product, GLIP, there's your (laughter), Phyllis, there you go, take that, GLIP, if we're offering GLIPS and we're worried about how, who's going to provide the A portion of the GLIP, I say , for small amounts, let the Social Security Administration do it.

We don’t need any new bureaucracy, people are already getting a Social Security check, it would just be a little bit bigger, and especially if this is -- look, we know most account balances are under 100 thousand dollars, and I don't know what portion of it you would want in the A, but even if it was all, my 100 thousand dollar limit would cover most people.

So, I would much rather do this, than have the fly by night insurance company in Mississippi offering some private version of the same thing. And the government should be the natural person to bear the risk of a calamitous risk increase in life expectancy. I don't know who else is going to do it.

You know, the assets that people have are highly skewed and we're not worried about the people with seven figure retirement nest eggs. They will go to financial advisors. You know, maybe there'll be a fiduciary standard that they will have to apply to, but I'm not as worried about them. I'm worried about -- and I'm not so worried about the people that are just living on Social Security, it is what it is. That’s not what this is about. We're worried about the people that are making 50 to 100 thousand dollars a year so there not at the bottom, but they haven’t accumulated a big nest egg, and how can we help them solve that problem easily, and I think the simplest plan would be some simple default required minimum withdrawal that you don’t have to do every year, and you don't have to go to four different places to do it, and if you're absent minded like me, you forget at least one of them each year. So simplify that and if a company is setting up a default, maybe they take 20 percent of your accumulated assets and redeposit it into Social Security. That’s my play.

MR. GALE: Thank you, that leads into the next question, which is, it's very easy to set up defaults and choices in the accumulation stage, and we have seen great success with automatic enrollment, save more tomorrow, you know, automatic rollovers, stuff like that. As a number of people have mentioned, it's harder in the decumulation stage because there's such a variety of circumstances. You don’t want to stick someone in an annuity and they wake up six months later and they say, hey this is just not right for me. So, other than the default you just mentioned, do you see -- how much potential do you see for choice architecture in the decumulation stage relative to its dominant role in the accumulation stage?

MR. THALER: Well, look, I mean, there's just as much heterogeneity in the accumulation stage.

MR. GALE: But it's easy to fix. If somebody is automatically rolled at 9 percent and they only want to be a 6 percent, they just cut back. If somebody gets annuitized, automatically in the wrong annuity, they are kind of stuck with it.

MR. THALER: Well, if it's the whole thing. If it's a small portion, and everybody has Social Security as part of their portfolio, so the question is, how much bigger should that share be? And I don't have an opinion about that, but, you know, there are defaults -- there's this notion of smart defaults, which is that you customize the defaults a bit. So you can think of target date funds as an example of that. It's not one default; it's a default that depends on your age. So, you could have similar concepts depending on your wealth, and depending on how easy it would be to get information from the employee.

You know, there are similar issues in the healthcare space, which is not what we are talking about here today but people are doing a really bad job of choosing healthcare plans, something else I've written about. People are choosing dominated alternatives including at a well-known university on the south side of Chicago (laughter). And so we can clearly do better than that, than choosing a plan where your guaranteed to pay 500 dollars a year more no matter how much healthcare you consume. So (laughter), look whatever you do with the default, it's not going to be perfect, but you can, on average, make people better off and I agree with you; defaulting everybody into a 100 percent annuity of whatever form, is inappropriate.

MR. GALE: All right, tontine's version of annuities, I very confidently raised my hand for the 14 percent annuity when Moshe presented it, and then I was chastened by all of the list of considerations that he mentioned, that I had not thought of as I raised my hand. How do you feel about Tontines entering the retirement landscape?

MR. GALE: Is it an apple tontine, or (laughter). I only have one joke (laughter). I don't know that I have a well -- I do know that I don't have a well-informed view on the trade-offs between the two. I find them interesting and worthy of more study, but I've made a resolution to read the Professor's book.

MR. GALE: Excellent, okay, anybody have any questions? Yes.

SPEAKER: Professor Thaler, I agree with all of your comments before about how it's a bad idea for people to conserve their assets towards the eventual bequest, but how do we use behavioral economics to force that choice? QDIAs, deferred annuities seem like another area where there could be a partial default of 15/20 percent, whatever, of an account balance; what are your comments?

MR. THALER: I think that a deferred annuity is a very sensible product for some people. And again, in this spirit of smart defaults, I would like to see people studying whether we could identify the class of people for whom that would be sensible. And, I'd like to bring up again, this notion of maybe figuring out a way to tie it with assisted living.

The other thing we haven't talked about today, which deserves to be in the mix, is reverse mortgages. Reverse mortgages suffer from a lot of the same problems. One of the problems is they have a terrible name. People hate mortgages, adding the word reverse in front of it (laughter) is not a great marketing ploy, but there are certainly millions of people in places like California, that are cash poor and house rich. And there's no reason why taking some of the money out of their house should be in the form of an annuity.

Now, how to structure that product, I don't know? these wise people are here, I suggest, could think about that as well, and maybe you and Bob could think about that, but there ought -- you know, suppose somebody is sitting in a million dollar house, which is like a cottage in the Bay Area (laughter), or maybe a big garage, and it's paid off, and they'd like to take $300,000 out, we ought to be able to figure out a way for them to do that.

And going back to the previous conversation, I think some of what the default should be, should be an emergency fund, and I don't know how to do that, a default savings account? We know lots of people that can't put their hands on $5,000. Now, this is all just mental accounting. But we know mental accounting matters, the title of a paper I once wrote, so having an emergency account, I would think, should be part of the default plan.

Yeah, that's just cash, but if it had the name, Emergency Account, and maybe it was housed with T. Rowe Price or Vanguard, or whatever is managing these assets, and it's called Emergency Account, maybe that would help, because buying a big screen TV is not an emergency even the day before the Super Bowl (laughter).

MR. GALE: So one of the theme's this morning has been to try to push toward more automatic default choice architecture types of solutions. The other theme has been, it's complicated, and people face very diverse situations and once size fits all may not work and the mention of these Emergency Accounts is one of my favorite examples of being complicated because you would think the obvious thing to do would be to create an automatic enrollment plan, where you get like a payroll tax contribution that goes into your bank account.

Well, you can't do that, because bank have -- there are things called, know your customer laws, to deal with terrorism and money laundering and stuff like that, and you can't just open -- Wells Fargo aside (laughter) -- you can't just open accounts for people without the bank knowing about it (laughter). There's interaction of finance, insurance, pension, labor, security law that is, you know, it's out there; it's a frustrating constraint, but it's a real constraint. So, let me see, is there one more question we can take? Yes Sir.

SPEAKER: Have you seen anyone study, borrowing the notion from defined benefits, the notion of laddering deferred income annuities over time, 75, 80, 85, and then integrating that into a risk architecture that allows you to take more risk in advance of those (inaudible) landing?

MR. THALER: Moshe would know more about that than me?

MR. GALE: I think if somebody wants to buy it, somebody is willing to sell it, probably (laughter). Let me thank you, Richard, again for this, it's tremendous and thank you all for staying (applause).

MR. THALER: Thank you.

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