## Episode 70: Income Annuities: Your New Standard Pension Plans

## 00:00

Bob French
The purpose of Retire with Style is to help you discover the retirement income plan that is right for you.
The first step is to discover your retirement income personality. Start by going to Risaprofile.com/Style and sign up to take the industry's first financial personality tool for retirement planning. I'll leave it up to Wade and Alex to decide on whether a deferred immediate annuity is actually immediate or deferred.

00:49
Alex Murguia
Hey, everyone. Welcome to retire with style. I'm here with Wade, and today we're discussing part dude of our annuity series.

01:02
Wade Pfau
All right, since this is a serious topic for serious people, you want to get going on the income annuities?

## 01:12

Alex Murguia
Although I think, yes, my son. All right, since this is a serious topic for serious people, you want to get going on the income annuities?

01:26
Wade Pfau
Yeah.

01:27
Alex Murguia
What are we doing today?

01:27

## Wade Pfau

We're continuing this annuity arc. The previous episode, we defined key terms which are really important to making sense of this vast landscape that we're working our way through now. But this episode we're now getting into specifics in terms of this is the episode devoted to what's colloquially known as income annuities, what would more technically be known as immediate annuities. These include single premium, immediate annuities and deferred. And this is where what do I use for the dia? Colloquially a deferred income annuity, but technically a deferred immediate annuity. And we've talked a lot in the previous episode about what deferred and immediate means. It means two different things. Immediate in the context of do I annuitize the contract? And that's what we are talking about today, immediate annuities, because these are annuities where we do annuitize the underlying assets and then immediate versus deferred. About when do the payments start?

## 02:28

Wade Pfau
An immediate payment would be you annuitize the contract. Payments begin within the first twelve months of the contract signing deferred immediate annuity. You annuitize the contract today, but you're deferring the start of the payments and those payments would begin at least 13 months in the future. And that's where the QLAC, the Qualified Longevity Annuity contract as a deferred income annuity used inside of a qualified retirement account. That gives you additional required minimum distribution benefits specifically to make them more appealing inside of retirement plans. And then deferred income annuities also can be called longevity insurance because you're kind of locking in advance, but you're starting payments into the future, which leverages more of the mortality benefits there to give you a higher future payment because you're going to skip a bunch of payments in between today and whenever those payments do begin. Now, it could be the most common way people use annuitized contracts would be they sort of prepay retirement, so they might buy a deferred income annuity in their late fifty s to turn on, have the income begin in their mid 60s.

## 03:45

Wade Pfau
But then also the other scenario is they might buy a deferred income annuity in their sixty s and not have the income start until their 80s. In that scenario you might call it longevity insurance. Or if you do it inside of an IRA and it meets the specifications, it could be the QLAC, the Qualified Longevity Annuity contract. But both are types of deferred income annuities.

## 04:09

Alex Murguia
Got you. Wade, we did last episode. We had definitions. Maybe this one. We can start off with just some basic questions, answering some basic questions with regards to annuities. Like softball sort of question I got to get us rolling would be who is covered by annuity?

## Wade Pfau

Yes. So the annuity will have an owner, annuitant and the beneficiary, if there is any sort of residual death benefit on it, usually the owner and the annuitant are the same person and that makes it easier to talk about. They don't have to be the same person though. The owner is really the one initiating the contract and who will receive any payments provided through the contract? The annuitant is just who are if it's a life contingent payment, if the payment is only received if somebody's still alive, well, the annuitant is the person whose life is being used to generate the eligibility for payments. So it's easy. If the owner and the annuitant is the same person, I buy annuity for myself, it will continue to provide me payments for my lifetime. I'm the owner and the annuitant, it's just technically they don't have to be the same person.

## 05:21

Wade Pfau
And then the beneficiary would be when the annuitant dies, if it's not a life only immediate annuity, if there's some sort of potential residual death benefit available that would go to the beneficiary. And so if you are the owner and the annuitant, you might pick someone else as your beneficiary. If you had a cash refund, we'll talk about all the ways there might be a residual death benefit.

## 05:50

Alex Murguia
Is it fair to say, like a spouse, if you did this with a spouse, you just leave the other spouse as a beneficiary? But if you wanted to maybe provide this for a sister or something like that, maybe that's annuitant instead. I'm just trying to give somebody a financial planning scenario when the annuitant would be different than an owner.

## 06:15

Wade Pfau
Yeah.

## 06:19

Alex Murguia
That'S a good answer. Yes, fine.

## 06:20

Wade Pfau
But there can be joint annuities where the annuitant can be two different individuals. That's more the scenario for the couple. In other scenarios. Yeah, it's probably harder to find practical scenarios because when you're talking about those kinds of scenarios, it may be more life insurance is what you'd be looking for. Yeah, that's true. And off the top of my head, we're going to probably have a few people who could say, hey, why didn't you say this? But I can't off the top of my head, think of a good case study on having the owner and annuitant be two completely separate individuals.

## 06:57

Alex Murguia
Are you telling me we're 60 something episodes in? And finally a question was asked. All right. And just as a quick sort of scenario, like when do the income payments start? Right there's the immediate or deferred? I think we've discussed that and then you kind of said it. But does an income annuity cover one or two?

## 07:19

Wade Pfau
You can have joint annuities. The most common scenario, there would be two individuals who are in a relationship, whether they're married or just life partners. The annuitant could provide payments contingent upon both of them being alive or just one of them being alive. And then at the death of the first individual in a joint relationship, then there's some sort of is it 100\% survivor's benefit? It would continue the same amount. Maybe it's a $67 \%$ survivor's benefit. So once the first annuitant passes away, benefits could be reduced by some portion, which would allow for a higher initial starting benefit. And they don't have to be spouses. It could be a grandparent and a grandchild. Now, that would dramatically reduce the payment with a young person because the younger you are, the longer you're projected to live and therefore the lower the payment would be. But yes, you can do that with a joint scenario where you have multiple annuitants on the contract.

## 08:23

Alex Murguia
Now, you said a couple of these terms and we've talked about the immediate and deferred in terms of timing, but what are the different flavors of payouts?

## 08:34

Wade Pfau
So there could just be simply period certain, which it's not linked to. In a period certain scenario, you don't really need annuitant because no one has to remain alive for the payments to be received. If you have a ten year period certain annuity, it would provide payments for the next ten years not linked to anyone's mortality, but then everything else is linked to mortality. So life only, that will give you the highest payment because it's contingent entirely upon the survival of the annuitant. Once the annuitant passes away, those payments would stop and there's no residual death benefit. So you're offering the most mortality risk into the risk pool and therefore you're going to get the highest payout from the risk pool. But those are rare because people are generally not comfortable. That's the hit by the bus scenario. That's what if I sign a life only annuity and then as I leave the office, I'm run over by a bus and I didn't get any payments out of the contract?

## 09:40

Wade Pfau
Well, you wouldn't get anything with a life only. So you're contributing the most risk to the pool and in
exchange you're getting the highest payout from the pool. Everything else, there's some sort of residual death benefit to reduce that sort of exposure that we just talked about. So you could have life with period certain, could be life with ten years certain. That just means the payments for life. But if the annuitant didn't make it through the first ten years, payments would continue so that at least ten years of payments are made. You've got the life with cash refund. Oh, go ahead.

## 10:18

Alex Murguia
No, I was just going to say, as you're saying these, I'd love for the consumer to start thinking, okay, the more wrinkles you put for your own protection, the less payout there is, because the insurance company needs to kind of accommodate for that. And so just think in terms of the Risa, how were talking about commitment orientation versus optionality. The life only is like at the very bottom of that commitment orientation, where you're like, I get it, and I'm committed to this and so be it. But as you want more and more optionality, that's kind of what Wade is introducing right now. You're going to get less payout simply because it's a risk transfer question at that point. That's theme that Wade is doing by giving all of these permutations.

## 11:06

Wade Pfau
Yeah, Moshe Molevsky had a great line about that. Like, if you're adding too many protections in because you're too worried about that, quote unquote, getting hit by the bus risk, eventually you're just going to have an expensive bond ladder because the payments aren't really contingent on life anymore if they're going to just continue whether you're alive or not. So that's where the academics really like the life only option because it's the way to leverage the most mortality risk pooling from the annuity. But in practice, it's pretty rare to see people do that because they're just fundamentally not comfortable. So they'll have to look at a lower payout because they want some sort of refund provision if they don't live a long time. And the next one is a life with cash refund, which is generally going to be the most popular version. And the way that works is I receive a payment for life for the annuitant's lifetime.

## 12:02

Wade Pfau
If the annuitant dies before the entire premium has been returned, there'll be a refund of the difference so that at least your initial premium would be fully refunded. So maybe just a simple example. If I put $\$ 100,000$ into an immediate annuity with a cash refund, it pays $\$ 5,000$ a year. I'd have to live 20 years. Just these are made up numbers, but I'd have to live 20 years to get the entire premium paid back as income payments. If I made it 15 years, I've gotten 75,000 out of it. There's 25,000 I haven't received yet. That would be the cash refund. If I lived 25 years, I've now gotten more than my premium out, and there's no cash refund at that point. The cash refund just simply returns the rest of the premium if you die, or if the annuity dies before the owner had received the full premium back as payments from the annuity.

## 13:00

## Wade Pfau

And it's a pretty popular option in real practice, then you've got life with installment refunds, which is very similar to life with the cash refund. It's just the cash refund provides the whole refund immediately upon the death of the annuitant. The installment refund would continue to make sure the whole premium is returned, but over a period of time. And then yeah, okay.

## 13:30

Alex Murguia
The timing of the payments or the cadence of the payments in terms of growth potential, are they fixed, do they grow over time? Because a question you get all the time. And we just came off of Social Security arc and Social Security is the only one linked from an inflation standpoint. But this question comes up all the time for annuities and what are the kind of payouts, what are the payout types?

## 13:58

Wade Pfau
So we're really now talking about or.

## 14:01

Alex Murguia
Not payout, I'm using the wrong word. Yeah, not payout.

## 14:04

Wade Pfau
Are they fixed or do they grow over time? So you could have like fixed payments or level payments and maybe it's better to use level because fixed would then get us into we're using it in a different manner than when we talk about what a fixed annuity means. But a level payment would just be it doesn't change you continue to receive the same payment amount. It's not going to grow over time, but because it doesn't grow over time, it will have a higher initial amount. You might also choose to have a cost of living adjustment. Could be $1 \%$, could be $2 \%$, could be $3 \%$. It will start the payments lower, but then every year the payments will increase by a fixed. And here I'm using fixed in yet another context, but a set predetermined cost of living adjustment not linked to the actual inflation, but mechanically increasing the payments over time by whether it's $2 \%$ or $3 \%$.

## 14:58

Wade Pfau
Those would be the two most common options. And then these have existed in the past. But since January 2020, there isn't any an actual income annuity that has an inflation indexed payment where the payment would grow by the cost of the CPI Consumer Price Index, much like Social Security does, much like what Treasury Inflation Protected securities do in the bond world. You could have an income annuity that had payments linked to the Consumer Price Index. It's just we're now in a period of time where there's no
annuities on the market offering commercial annuities, Social Security does it. No commercial annuities offering a CPI indexed payment. Okay, so Wade, we've talked about it in the last episode as well a little bit in terms of these being spread products and the like. Is it a level payment, a payment with a fixed cost of living adjustment, or a payment with a variable link to actually providing what the Consumer Price Index does?

## 16:00

Alex Murguia
Okay, so Wade, we've talked about it in the last episode as well a little bit in terms of these being spread products and the like. And we've introduced now concepts such as period, certain interest rates, things along those lines about, and to get people thinking about there's a risk transfer going on, et cetera. I think this leads now to a better understanding of starting start. This leads to the starting of a better understanding on pricing of an income annuity, do you want to talk about kind of the three things that begin to world the underlying world with regards to the pricing of an income annuity?

## 16:47

Wade Pfau
Yeah. Yes. So the pricing really will relate to three factors. You've got mortality rates, and that's why the income annuity, the payout rates will vary by age and gender, because age, the younger you are, the lower the payment because those payments will be provided for longer. If you're younger, your remaining life expectancy is longer, and therefore the insurance company would expect to have to make more payments, and so each payment would be less and also gender. And this is where women live longer than men. And so in the commercial market, the payout rates on annuities from women are lower. Not in this case due to any sort of inherent bias, but due to the fundamental actuarial nature of women live longer than men. And this is where inside of retirement plans, like employer retirement plans, if there's annuity option there, it's required to offer unisex pricing.

## 17:45

Wade Pfau
So there can't be a difference between men and women that can, on a relative basis, benefit women because they get to take advantage of the shorter life expectancies of men inside the retirement plan. But in the outside commercial market, you do have gender based pricing and women live longer than men. So therefore it's the same issue. Since the insurance company expects to have to make payments for longer, each payment would be less. But the mortality is the key factor about when you go to a website and you want to see pricing on an immediate annuity, they're going to ask you for your age and your gender. Because the pricing is specific to the answers to those questions, then you've got interest rates. And that's not something in this immediate annuity world. I'm annuitizing the contract. There's no contract value. I don't see an underlying contract value that's being credited with interest.

## 18:44

Wade Pfau
But internally at the insurance company, they're thinking about the bonds they need to buy to provide the
payments that they're promising to you. And those bonds have interest rates. And so if interest rates are higher, the insurance company is able to offer a higher payout on the income annuity because it knows it can purchase bonds that are going to yield more, which reduces the cost of providing any particular payment. So income annuity prices will fluctuate with interest rates. When interest rates are lower, the payout rates offered at that time will be lower. When interest rates increase, the payout rates offered at that time will increase.

## 19:27

Bob French
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## 19:50

Alex Murguia
But I don't want folks listening in thinking, oh, when interest rates are low, don't buy annuity, wait till they go up. Is that sound thinking or is there relative faulty thinking in that timing?

## 20:07

Wade Pfau
And I feel like I just had this conversation, although maybe it was on a different podcast. I think I was talking with Bob about this. Did we do an episode on this? But generally, I guess not. Going with this aside, interest rates are incredibly hard to forecast. So trying to time your purchase based on, oh, I think interest rates are going to go up and therefore I'll wait to purchase the annuity, it's tough for that to work out. Plus you get the issue if you're sure that interest rates were going to go up. Well, you're going to experience losses on your bonds when interest rates go up. So if you're holding money to purchase the annuity, you can't hold it in like long duration bonds or anything. You'd have to pretty much hold it in cash and otherwise the losses you experience when interest rates go up though you get a higher payout rate on the annuity in the future.

## 21:00

Wade Pfau
You would now be starting from a lower balance on your fund account, your funds to purchase the annuity. You're not necessarily going to be able to get yourself more income that way. No, it's generally think about the annuity in terms of when you want those protected, the reliable income. Don't try to get into the game of timing the purchase based on your forecast for future inflation rates or interest rates.

## 21:27

Alex Murguia
Yeah, I was also going on a side note here where on a relative basis, though, insurance payouts, they're
always a little more because of the mortality credits. So on a relative basis, even when interest rates are low, they're more attractive than if you were to go the payouts are more attractive than if you were to go in the open market bond. You know what I mean?

## 21:48

Wade Pfau
On a relative basis, I was going.

## 21:50

Alex Murguia
For that angle, yeah, that's the angle.

## 21:52

Wade Pfau
I was the mortality credit that the annuity provides is not linked directly to interest rates. So when interest rates are lower on a relative basis, if you're trying to fund your retirement with bonds, the cost of funding retirement through bonds grows faster as interest rates decrease than the cost of funding retirement through an income annuity. Because the mortality credit piece is just becoming relatively more important and it's not like a one to one trade off. If interest rates drop by $1 \%$, the payout rate on the annuity is not dropping by $1 \%$, it's more somewhere, probably closer to a half a percent. And it's just because those mortality credits play a more important role in a lower interest rate environment.

## 22:39

Alex Murguia
That's where I was going with that. Are there any other overhead?

## 22:43

Wade Pfau
That's the third factor. Immediate annuities or income annuities. They're fixed annuities and in the previous episode this idea came up that generally there's no external fee associated with a fixed annuity. It's just they operate as a spread product and that's just like with a bank checking account. You may have a no fee checking account. It's not that the bank is a charity. They're able to take your deposits and earn a higher rate of interest on them than what they're paying you. And maybe with most checking accounts still you may be paying $.001 \%$ interest, whereas they're able to use those funds to generate whatever, three, four, five, $6 \%$ interest. So it's a spread. They're not charging you a fee explicitly. It's just they're earning more on the investments they're making in their general account than they're paying through the payment they're promising on the annuity. Now, income annuities, when the consumer media speaks negatively of annuities, they often create a Frankenstein annuity that doesn't exist in the real world.

## 23:56

Wade Pfau
So they'll say annuities are irreversible decisions and they're really expensive. Well, you don't usually see those two characteristics together. We're talking about income annuities. Now, they are irreversible decisions, but they generally have quite low built in fees. These overhead charges tend to be quite low in terms of just, yes, there is a charge, but it's not going to be all that much. And that's where we're talking about how annuities are priced. You have to reverse engineer what's the fair price of the annuity based on mortality statistics, based on where interest rates are. And then you just look at what's the difference between the fair price of the annuity and what the company is actually offering and generally speaking, the difference is quite small. And even if you further personalize that and you think about because the insurance company is able to build a higher yielding fixed income portfolio than I could as a household.

## 24:58

Wade Pfau
And then on the mortality side, if I think I may have a better shot at a longer life than the average annuity purchaser. You might get into a scenario where there's really no overhead charge that you actually could benefit from if you tried to do this on your well, you can't build your own annuity because you need many customers to pull the risk. But if you could technically, somehow create your own annuity based on your own personal characteristics, you might not be able to do anything better than the insurance company net of these overhead charges that are part of the insurance. Company's pricing because they have access to better fixed income opportunities than you and because your personalized mortality may be more optimistic than the overall risk pool. Now, that being said, there's adverse selection. The people who purchase annuities are generally people who get a sense that they're going to live longer than the average person.

## 25:57

Wade Pfau
People who get a sense that they may not live so long are generally not going to want to purchase the income annuity. So already the annuity purchasers live longer than the average person. But even in that context, people have more insight about their own mortality than the actuary could guess based on a few data points they get about that person. And therefore, you have this opportunity to really think about, am I someone who could have much better potential at benefiting from being part of this risk pool? If that's the case, the average overhead charge to the average annuity purchaser could be somewhere in the ballpark of, say, $2 \%$. But for me, as an individual, I maybe not really even be facing any sort of overhead charge. I might even have the annuity. Might be worth more than what the pricing is to me, as an individual with a particularly long projected life potential and with the inability to use the same sort of fixed income assets, that the insurance company has access to, whether it's logging or all these other types of things, too, that have very long time horizons that households have a hard time benefiting from.

## Alex Murguia

All right, so just some pricing involves at least three factors the mortality rates, the interest rates, normal overhead costs, which you're saying you're an outlier. You'll get it for free because you're going to live forever.

## 27:24

Wade Pfau
Yeah. Then you'd really be an outlier. That's right. You'd obviously get great money if you were going to live forever.

## 27:33

Alex Murguia
It's almost free. Right, okay. Exactly. You get money back. All right. And so you price that in with the other dynamics that you mentioned earlier when I was asking you the questions with regards to the payouts. Do you get a cash refund? Is a period certain? Is it a joint policy? Because then you're talking about now mutual mortality, life expectancies, not just one person. Or do you get Colas or not? Do you get cost of living adjustments or not? Those also play into it, and you could just intuitively see why they would play into the pricing right way.

## 28:10

Wade Pfau
Yeah. And really, you can think of it as you're building a bond ladder. The annuity is providing payments now, they're life contingent, and we'll return to that point in a moment. But if they weren't life contingent, you're just building a bond ladder and based on the payments so if you're younger, the payments, you're going to get more payments. If the payments have a cost of living adjustment, the payments are going to increase over time. If you're buying a deferred income annuity, you're paying for it today, but the payments, you're going to have some zeros, and then the payments will eventually start further off into the distant future. Now, you could build a bond ladder to provide those same payments, and then you're looking at, well, what's the discounted cost of those payments in terms of I'm going to earn interest on my bonds? How much would I have to set aside today such that with the interest earned on that premium or that amount, that lump sum of assets, it would then translate into the payments offered through the annuity, and that would be a bond ladder.

## 29:09

Wade Pfau
But then what the insurance company is able to do is provide risk pooling, which is as an individual, if I want payments to last for age 100, I have to set aside the full present value of that age 100 payment, even if there's only a $10 \%$ chance I live to 100 . The insurance company, because they have many customers and their actuaries are working very hard on this point, they may assess that only ten, in this case, only $10 \%$ of the customers. If you have a $10 \%$ chance of living to $110 \%$ of the people purchasing this annuity with the same age and gender as you, they're only going to have to make payments to $10 \%$ of those individuals
because only $10 \%$ of them are alive at that point. And so they get to set aside much less for those age 100 payments. And that's where if you're adding in cash refunds or if you're adding in period certain, it's impacting the probabilities for payments to be made at different ages, increasing the payments made.

## 30:11

Wade Pfau
So that's going to lower the it's going to raise the cost of making those payments which would then lower the payout on those payments. But what you get with the annuity is what's the survival weighted present value of all the annuity payments being received that would become the premium for those payments. And then when you look at well, what's the payment divided by the premium? You get the payout rate. And that would be this is how well, it's how annuity pricing is income annuities, they might say the dollars per month from a particular premium which you would then have to multiply by twelve to get the per year value. That's obvious. But then the payout rate is the yearly payout divided by the premium. And so it's not the monthly payment divided by the premium and it's not the monthly payment times ten. Wade, this is an interesting point and this is where folks, maybe I don't want them to conflate analogues on the total return side.

## 31:08

Wade Pfau
It's the monthly payment times twelve divided by the premium to get the payout rate.

## 31:14

Alex Murguia
Wade, this is an interesting point and this is where folks, maybe I don't want them to conflate analogues on the total return side. Can you speak a little bit about payout rate? Does it equal to is a payout rate a rate of return yes or no or is it more like a sustainable withdrawal rate? What's your stance on that? Well, I know what it is, but I'm just sort of asking you to expand upon that payout rate. And how should somebody interpret that when they're looking for yes, the payout rate.

## 31:50

Wade Pfau
Would be the equivalent of a safe withdrawal rate concept. Now, most income annuities have level payments whereas the $4 \%$ rule assumes inflation adjustments. So you have to make an adjustment for that detail. But because the annuity is you're spending down principal as well as interest and mortality credits, it would be equivalent to like a $4 \%$ rule that also. Has you spending down principal as well. The annuity payout rate is not a rate of return because you're not giving it's not like you can't say, I buy a treasury bond that would yield $3 \%$, say, and the annuity has a payout rate of $6 \%$, therefore the annuity is doubling the return. That's not correct because the treasury bond would pay you the face value back at the end and the annuity would not refund your premium or pay back the full face value at the end. So they're not equivalent things.

## 32:52

Wade Pfau
And annuity critics often point to this as this is how the insurance company is diluting the customer. I've never seen anyone actually be confused by this detail. I've only seen people saying that people are confused by this detail. But it's right. The payout rate is not the same as a rate of return. It is simply a payment that will continue for life. That includes the return of your principal, the return of your premium alongside the interest and the mortality credits built into the contract that the actuaries had figured out and therefore provided that particular payout rate. You can calculate a return on annual, but it's life contingent. It's the longer I live, the more payments I received, and then I calculate the internal rate of return on the premium today, translated into the payments received, there's an implied rate of return on that. It's just not the payout rate.

## 33:51

Bob French
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## 34:16

Alex Murguia
But I would even say this way, if you're going through the process of that, then you kind of miss the point of the previous podcast that we said at the beginning that this is an insurance product, it's not an investment product. It's one thing to just assess a payout rate because retirement income is the outcome kind of vibe. And we're talking about retirement income, retire with style, retirement income, style awareness. We're talking about how annuity fits within all of that. But that's an insurance play, not an investment play. So I wouldn't even get into the whole investment returns. To me, who cares? Because we're looking at it within a.

## 35:00

Wade Pfau
Different, just income protection.

## 35:01

Alex Murguia
We're looking at it from an income standpoint.

## Wade Pfau

If you're income protection, you have more focused on you tend to have that distribution mindset. You're focused on predictable income over maximizing returns. And therefore the insurance provided through the immediate annuity is providing that longevity protection. I don't want you to think about it as an investment, but it does have this interesting characteristic that the return really is linked to what you need. It's hedged to your longevity that if you end up living a long time. You get a lot of payments through the annuity, you might end up having a return competitive with anything the stock market can do. When you do that calculation of, well, could my stock investments have generated the same set of payments as the annuity at some point? As you're living into your ninety $s$ and beyond, it's increasingly difficult for any sort of stock investment to keep up with.

## 36:00

Wade Pfau
That not so much saying that the annuity is the investment, but that's where we go back to a starting point for the retirement income style awareness is these are all viable strategies. It's just what are you most comfortable with? Are you more comfortable relying on the risk premium from the stock market or are you more comfortable relying on risk pooling from the annuity and using the risk pulling through the annuity is not necessarily sacrificing anything. It's just approaching it from the idea of predictable income. And if you're someone who's worried about outliving your money, you know you'll have these payments continuing no matter how long you live. And in the scenarios where you do live a long time, you might be getting a great, quote unquote, return out of the annuity. That's very difficult for investments to keep up with. So you're not necessarily sacrificing anything when you use an income annuity, you're just approaching it through insurance rather than approaching it through a pure investment type of frame.

## 36:57

Wade Pfau
You're approaching it through risk pooling rather than approaching it through the pure risk premium. And that's an important distinction. Okay.

## 37:10

Alex Murguia
And what's involved in the payout part of it? What are the underlying return assumptions linked to the general account, if you will?

## 37:22

Wade Pfau
What does a general account yes, the.

## 37:25

Alex Murguia

Insurance and general account, what do they have?

## 37:28

Wade Pfau
When you buy an immediate annuity, you pay a premium and the insurance company invests that in their general account, which we talked about briefly in the previous episode too, we did. It may not be $100 \%$ bonds, but it's primarily a fixed income investment account and each insurance company can approach it a little bit differently. There may be a few stock investments, there may be a lot of alternative investments, whether it is logging or real estate or different things. But it's generally a fixed income account that's focused on asset liability matching because they can use that risk pooling to know for anyone particular customer, they don't know exactly what payments need to be made, but for their entire set of customers, they have a sense of the obligations they've made. A lot of income annuity providers also sell life insurance. And so they can hedge this on both side, where they have a sense of all the life insurance death benefits they're going to have to pay, they have a sense of all the annuity payments they're going to have to pay.

## 38:30

Wade Pfau
Wade, I got to say, I was listening to you when you were talking about the investment options. They have a pretty good sense of how much money they're going to be spending each year into the future, and therefore they can develop an investment portfolio that's lattering to provide those payments.

## 38:44

Alex Murguia
Wade, I got to say, I was listening to you when you were talking about the investment options. What in the heck made you think of logging?

## 38:52

Wade Pfau
That's like a thing or timber. Timber, right. You have to grow no, I know. 50 year time horizon.

## 38:58

Alex Murguia
It's the sustainable yeah, it's one of the most, like, sustainable alternative assets because.

## 39:04

Wade Pfau
It makes a year to pay off, which the household doesn't have time to wait for.

## 39:10

Alex Murguia
I was just fascinated by using, like, logging. It seemed to come out of nowhere from my perspective. No, as one of the alternatives, it's seen as the only one. Gold doesn't produce other gold, whereas timber produces timber, if you will. All right. The deferred income annuities, do you want to go into that a little bit?

## 39:31

Wade Pfau
It's the same idea. It's just with deferred income annuities, you're not going to start the payments right away. So when you're doing this calculation of if I buy this at 65 with an immediate annuity at age 66, I'll receive a payment that I would then discount for any interest I could earn in the meantime, discount for the probability of surviving to 66, which is going to be pretty high if I'm 65 already. The deferred income annuity doesn't have to set aside any money for that. That would be like if I'm going to get a $\$ 10,000$ payment at 66 one year from now, I might have to set aside $\$ 9,800$. I'm making a number up, but I have to set aside quite a bit of that payment today to fund the payment of one year. A deferred income annuity is not going to pay you anything in one year.

## 40:23

Wade Pfau
So they don't have to set aside that big chunk of money. If I'm buying it at 65 and it's going to start at 85, well, by the time I get to 85 , if I'm 65 today, there may only be around that's generally still below life expectancies, but say a $55 \%$ chance of a 65 year old living to 85 , especially for women, more than a $50 \%$ chance already. I'm sorry I was doing that wrong in my mind. The reason I'm bringing that up Wade, is just to give people, especially the deferred just to give people at this point, they should start getting the intuitive sense that if you're taking on Moris because you're doing a deferred one, you're not getting an immediate the insurance company is able to pay you more because of that. There may even be a $70 \%$ chance that a 65 year old woman lives to 85 and therefore go ahead.

## 41:08

Alex Murguia
The reason I'm bringing that up Wade, is just to give people, especially the deferred just to give people at this point, they should start getting the intuitive sense that if you're taking on Moris because you're doing a deferred one, you're not getting an immediate the insurance company is able to pay you more because of that. They have more cash available that they can put in their other investments and then have more to pay you out later. That's all that sort of quick math. But you do bring up a point that we could sort of end this podcast with, which is that game, right? Do I get an immediate annuity now or do I buy a deferred income annuity? And then at what age should I consider it? Because we get this question a lot. At what age do we purchase these? Like, what's the right age to purchase this?

## Alex Murguia

You may want to talk about your thoughts around this a little bit.

## 42:02

Wade Pfau
Yeah, so there's two ways to think about it. I do come more from the side of if I want reliable income, might as well and I'm retired, I'm ready for it, might as well start it now. That being said, I don't have any complaint against using deferred income annuities either. Then when you get into the conversation around that, you just get into, was there an optimal age to buy the annuity? And a tool that was developed to look at that is Moshe Molevsky's implied longevity yield, where you can do these calculations, where you're thinking about should I buy the annuity today or an immediate annuity? No, we're not talking about deferred income annuities now. So it's should I buy an immediate annuity today or should I wait five years to buy the annuity? And then if I wait five years, I'll take the distribution from my portfolio for five years and then I would need to have enough left to buy annuity in five years with the same payments on an ongoing basis.

## 43:05

Wade Pfau
Now, to do that calculation in any meaningful sense, you generally have to assume that interest rates don't change or that longevity doesn't change in any surprising manner so that you can guess what the annuity price would be five years from now. But when you do those sorts of calculations, what you find is that as you get older, the mortality credits don't increase, but they get compacted into a shorter period of time. It becomes harder and harder to beat the mortality credits of the annuity. The return you would need to get on your investments to sustain that it's a good idea to wait another five years, becomes harder and harder to overcome. The mortality credits are compacted into become increasingly important. And that's where with those types of calculations, you might hear this idea of once you get to around age 75 , it's tough to beat the mortality credits of the annuity with an investment strategy.

## 44:05

Wade Pfau
At younger ages, it can be easier to beat the mortality credits because they're extended out over a longer period of time. But nonetheless, it still requires some risk.

## 44:15

Alex Murguia
Remember, you're the one that's living, but remember, for the living, you're living. So you're benefiting from the others that are passing, right?

## 44:23

Wade Pfau

And it's just fewer people pass away at younger ages, which is kind of the driver of this. Once you get to advanced ages, the other people entering that risk pool at that time, at that more advanced age, are going to be dying more quickly, and therefore you get more of a yield or more of a boost out of the annuity. The payout rate on the annuity starts to increase quite rapidly as you're getting, say, into your mid seventy s and beyond. And that's the idea there.

## 44:51

Alex Murguia
So is it fair to say that there's no ideal age because it's all priced in? It's all priced in.

## 45:01

Wade Pfau
Right. There's no ideal age, and the younger you purchase it, the more mortality credits you'll receive over your lifetime. It's just there's not a whole lot of mortality credits at younger ages because there's not many people dying from the risk pool at younger ages.

## 45:18

Alex Murguia
Yeah, so if you're looking at the payout, if you're looking at a payout when you're 65, it's obviously lower. The implied longevity yield is lower when you're 65 versus the implied longevity yield when you're 75. Right. But the reality is, if you factor in that you're more likely to die when you're 75 as opposed to 65 , even though you can be looking at a higher yield. Doesn't really matter. Obviously, you could be on the lucky end of the spectrum and survive. But most likely right. It's a probability based chance getting the.

## 45:57

Wade Pfau
Idea of the optionality. So this sort of conversation is more optionality oriented. Once you buy the annuity, you've committed to it, and if you're holding off on the decision to purchase it, you're maintaining your optionality for longer. So that sort of conversation on what's the optimal age to buy the annuity might resonate more with somebody who's weakly commitment oriented rather than strongly commitment oriented.

## 46:27

Alex Murguia
There you go.

## 46:28

Wade Pfau
Yeah, that's the story of income annuities. They're the simplest of the annuity family. You annuitize the
contract immediately. You'll get payments beginning either within a year or deferred beyond a year. You may have a death benefit option in terms of a cash refund or period, certain payments and so forth. But that's really the general story of how income annuities work. It exchanges a premium for a set of payments, life contingent. Usually it doesn't have to be life contingent, but usually life contingent on the survivorship of the annuitant in the contract. And when you're looking for these, you do want to pay attention to the insurance company credit ratings because you are making potentially a long term relationship with an insurance company. And that's the story of income annuities. I hope you learned something today, Alex.

## 47:27

Alex Murguia
Every day. I'm a lifelong learner with learning adventure. No, this is great. It was fantastic. I think it was a much needed arc that we're into and upward and onward. Right? Thank you, everyone, for listening, and we'll be back with more info. There we go. Wade and Alex are both principals of McLean Asset Management and retirement researcher. Thank you very much.

## 47:59

Bob French
Wade and Alex are both principals of McLean Asset Management and retirement researcher. Both are SEC registered investment advisors located in Tysons, Virginia. The opinions expressed in this program are for general informational and educational purposes only and are not intended to provide specific advice or recommendations for any individual or on any specific securities. To determine which investments may be appropriate for you, consult your financial advisor. All investing comes with a risk, including risk of loss. Past performance does not guarantee future results.

