# Episode 76: Fixed Index Annuities: Do they present a best of “annuity” types for retirement income?

**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.

**00:40**
Bob French
What are fixed income annuities made of? A dash of income, a sprinkle of principal protection, a dollop of upside potential and a contract.

**00:49**
Alex Murguia
Hey, everyone. Welcome to retire with style. I'm Alex, and a house with a house full of, I don't know, ten kids under the age of ten. And my colleague Wade is from where are you calling from, Wade? Exactly?

**01:08**
Wade Pfau
I'm in Tokyo, Japan, right next to a train line. Although I guess my microphone does not pick up the very loud trains going by.

**01:15**
Alex Murguia
It's probably your microphone. It's probably the frequencies where high distinct chatter is cut off on mine. But that's how we roll in this podcast. It's one take or nothing, as everyone knows. Now Wade, I must say though, your kids got in the mix of Retire With Style with that wonderful intro to one of the previous episodes. How did you corral them to do that?

**01:41**

Wade Pfau
Yeah, no, my daughter, her job dream is to become a marketer, so she's getting in practice making those videos for the LinkedIn to introduce some of the podcasts, maybe reduce your workload a little bit at some point. She hasn't made another one. That was a couple of episodes ago.

**01:58**
Alex Murguia
Now I'm sure there'll be more. You up the ante. I showed them to my kids and they were like, we got to come back, we got to do another one.

**02:06**
Wade Pfau
Yeah, she likes doing that. It's all about the video editing.

**02:09**
Alex Murguia
You got Jake on it, but you got Jake on that one as well. But what happened to your older kid, Joe? You couldn't get him on it?

**02:16**
Wade Pfau
Yeah, my oldest is about the same age as your boys, but he's not as interested in appearing on screen like the younger ones.

**02:23**
Alex Murguia
I just force mine. They got to know the choice. If they want to eat, they got to contribute, right.

**02:29**
Wade Pfau
They got to make videos.

**02:31**
Alex Murguia
Actually, I'm going to send them over to Intentionally for the summer for an internship where they're going to be an internship? Yeah, they're going to try their hand on the marketing hand. We got some ideas what it is. I don't know if I told you, but we get tons of reviews, right. And so I recorded my mom's reactions on a bunch of these reviews and so I'm going to have the kids put some of those together and we'll see what happens. Right. Be interesting.

**02:58**
Wade Pfau
Yeah. Kids these days are good at editing.

**03:01**
Alex Murguia
Oh, no, they're amazing. So what's on tab for today, other than it's the world of fixed, indexed annuities, right?

**03:11**
Wade Pfau
That's right, yeah. We're moving the conversation into fixed, indexed annuities. And if you downloaded last week's episode quickly. You might have seen a description for not last week's episode, but the one we're actually recording now. We had recorded the last few all at one time before I went to Japan. We realized we miscounted. By the time this episode plays, I'll be back home. We are recording.

**03:36**
Alex Murguia
Yeah, that was my fault. That was the fog of retiree with style. We tried to batch a bunch of these simply because Wade's going away and I was going away. So we try to get a bunch of them in it. And I forgot that the variable annuities, we split it into two. So yeah, I had actually Nori on LinkedIn. Nori is my niece, who's like four. She did a video, but I had to cut it off on LinkedIn. And we'll do another entry. You'll see her next week. It's pretty cool.

**04:02**
Wade Pfau
Her name means yeah, right.

**04:04**
Alex Murguia
Well, she's salty at times. What can I say? Yeah, it's awesome. It's good. So, fixed indexed annuity since what did you say? I'll be doing most of the talking in this episode.

**04:20**
Wade Pfau
That's right. You're starting off the show because you're going to give us a dissertation on the inner workings of fixed yes.

**04:27**
Alex Murguia
The mechanics along for the right. Yes. The amino acids of the protected income world.

**04:36**
Wade Pfau
So, Alex, what do you know about fixed index?

**04:39**
Alex Murguia
I know that you're going to talk about them for the next episode. That's what I know. No, but why don't we start us off? Wade, why don't you kick it off?

**04:50**
Wade Pfau
Okay. Sure. Yeah. While we're going through these classes to review just what we've been doing the past few episodes, we talked about a type of fixed annuity before the income annuity, single premium, immediate annuity, or a deferred income annuity, the characteristic of which was you annuitize those contracts, and that's what makes them irreversible. Then we moved into the world of deferred annuities, where you're not annuitizing the contract, but you might still get lifetime income with a living benefit. The first example we talked about was the variable annuity. And so the last two episodes were about deferred variable annuities, mostly with living benefits, so that you have a lifetime income. Now we're moving into back into fixed annuities again. But these are deferred fixed annuities. They're not annuitizing the contract or we're not annuitizing the contract. Here we can get the lifetime income with a living benefit.

**05:45**
Wade Pfau
But a fixed index annuity is a type of deferred fixed annuity where the index is you're going to be credited. The term used for the return on these, like, what is my return on a fixed indexed annuity? It's technically called crediting interest. The interest that you are credited would be linked to the performance of an external market index, such as the S and P 500. But there's many other options we can talk more about. There's a lot of low volatility type indices which generally will give you more upside exposure. We'll dig into the whole that's even.

**06:22**
Alex Murguia
Becoming a cottage industry, the sort of the indices and no joke, it really is. But even before we get to this, just because when you were talking, you reminded me of a couple of questions we've been getting. This has been a series that I'm sure somebody's done this and given its proper treatment, but we've got it great

reviews in terms of just going through this slowly and the like, but we still get questions. We realize there's a lot of, like, English and nonconformity words that are kind of used in this. And so we realize it can and will get confusing. And so what we're going to be doing as well in this trajectory is just also having some simple use cases. It's one of these that we're just really trying to lay down the foundation right now. And it just takes a while. I mean, we don't want to do it in two minutes.

**07:10**
Alex Murguia
We don't want to do it in two episodes. It just takes a while because then you could use this as a resource for yourself. But we will be really breaking it down in use case terms so you can answer the questions, okay, I have this amount of money. What exactly do If I go in this direction or that direction? So bear with us. We will get to that. But again, how do you dig a ten foot hole? You dig right? And so we got to just do this process right now.

**07:37**
Wade Pfau
Yeah, we're first talking about how these annuities work, but then we'll continue this arc and we'll get into how to choose annuity or how to apply annuity into a financial pland so forth. And we'll continue with the series because since recording that last batch of episodes we talked about, weren't sure what the next episode was going to be about. That's where we now have the side series going, if you want to mention that, Alex, in terms of we're talking to financial advisors and rather than breaking up the annuity arc to do that, there's bonus episodes at the end of each week. Now, that's where we can now continue with the annuity arc in its entirety.

**08:17**
Alex Murguia
That's great. And so, Wade, what are some general features that you have for the fixed indexed annuities as we begin this process?

**08:25**
Wade Pfau
Yeah, so to just get our juices going here with the annuity world, these are deferred annuities. So they have a lot of the same features as deferred variable annuities. And that's like I said, you're not annuitizing the contract. So you do have a contract value that's liquid. If you want to get it all back in the early years of the contract, there may be a surrender charge that would take away some of that. There may be some other market value adjustments that are just if interest rates go up, you might want to get your money out. So you could buy a new contract with better terms. But just like with bonds, the underlying contract value would be worth less in a fixed income world. So there could be adjustments, but generally you have access to the underlying funds. The big difference from the variable annuity is a fixed index annuity and this is because it has principal protection.

**09:17**

Wade Pfau

You can't lose money on the contract value. If the external index is the SP 500 and the SP 500 is down 40%, you would not lose anything. You cannot have less than a 0% credited interest. There may even be an underlying positive real rate of return that you're entitled to over time. But you have that principal protection and we'll explain why that is when we talk about how these work. And just like with the variable annuity as well, if you're using these for lifetime income, you simply can add an optional guaranteed lifetime withdrawal benefit that would provide that sort of lifetime income protection. But you might be more likely to use these as well as an alternative to just having bonds, because they have this principal protection. They have tax deferral, they have that liquidity we talked about, and they may be, on an after tax basis, especially competitive with the types of returns you could expect from other bond holdings in your portfolio.

**10:15**

Wade Pfau

Even though these are linked to a stock index. Usually you wouldn't really treat these as an alternative to holding stocks or as a sometimes in a very simple marketing language, the fixed index annuity is claimed to give you the upside of the stock market without the risk of the stock market. And that's not the case. What we're really talking about is these might perform well compared to other bond holdings and that's how they should.

**10:39**

Alex Murguia

And again, this goes back to even the first words out of our mouth when we started this arc, which is still view this within the concept of a construct of an insurance sort of solution. But there is some upside here simply because they are pegged to indices but it's not an apples to apples index comparison either. But to Wade's point, they could be seen as potentially fixed income options, if you will. I would say waited, sorry, gone.

**11:10**

Wade Pfau

No, go ahead. I was introducing that.

**11:13**

Alex Murguia

Okay. Now, in addition to these things, I would say simply because these have been popular for the better part of a long time, let me say it, what do you think they do from a behavioral standpoint that kind of also makes them intriguing as opposed to just the straight up financial planning piece.

**11:36**
Wade Pfau
Well, a big part of the conversation around annuities is to talk about how they can increase your risk capacity so that if you have this protected income, you don't have to be worried as worried about stock market downturns and for your other assets that might make you more comfortable investing more aggressively. Now, with the fixed index annuity, it has a principal protection. So 2022 is a good reminder. Stocks and bonds both experienced double digit losses. Well, a fixed index annuity would accredited you with a 0%. If your anniversary date was like the January 1, 2022 through the end of 2022, you would have had a 0% credited interest. You are not exposed to the double digit losses of stocks or bonds if you had linked to a stock market index like the SP 500. And because of that, bonds have interest rate risk. You can lose on bonds.

**12:32**
Wade Pfau
If you had the fixed index annuity, behaviorally, you might have felt more comfortable investing other assets and stocks because you did have that principal protection in place. And so that would be one of the big behavioral potential benefits you'd see with replacing bonds with a fixed indexed annuity and then being able to feel more comfortable investing other assets more aggressively. Is that what you were hoping I was going to say there?

**12:58**
Alex Murguia
Yes. One can only dream. No, I would add to this the seeing this on the balance sheet as well. Able to see the assets on the balance sheet.

**13:09**
Wade Pfau
It's a nice little I see what slide you're on. Okay.

**13:14**
Alex Murguia
I think that's a good one as well.

**13:15**
Wade Pfau
I glossed over that.

**13:16**

Alex Murguia
No, let's bring it back. Bring it back. Bring them back, big guy. No, I think that's actually pretty good.

**13:24**
Wade Pfau
Yeah. The other behavioral benefit is and that's compared to an immediate annuity, like a single premium immediate annuity or deferred income annuity, sometimes people aren't comfortable with those because the asset disappears. You pay the premium, you get a monthly income for the rest of your life. But you might feel poorer because when you look at your portfolio statements, the present value of your income annuity doesn't show up. That's not the case with a fixed index annuity. You're not, quote, unquote, sacrificing the asset. And I do see that was the answer you were fishing for when you.

**13:55**
Alex Murguia
Asked, and by the way, what do you mean by slides? I don't know what you're talking about. This is off from the top of my head. This is off from the top of my head. I have no idea. So moving on, though, there are some you know what I thought of? Remember Wayne's World? Wayne's World? Wayne's World, that kind of thing. We should move it to some vocabulary. And I thought, man, it'd be awesome if we had a little jingle that it was like Wade's words. Wade's words. As we go into what are some vocab items for people to know, because we're going to be using this throughout that they can kind of, like, love us or hate us.

**14:36**
Wade Pfau
Yeah. So time for the word of the day.

**14:39**
Alex Murguia
Words of the day?

**14:40**
Wade Pfau
Interest crediting method. Yes, the interest crediting method I mentioned briefly, but we'll dig into that. It's the term used to identify the returns you're getting from a fixed index annuity. These are insurance, they're not investments, but they do credit interest. And that's where that interest can be competitive with other fixed income assets. Most of the other vocabulary relates to the lifetime income benefits, which Alex has called an audible. We may save that conversation to the next episode to split these up a little more, but we'll talk about guaranteed lifetime withdrawal benefits and then how those work. So there could be instead of having the benefit base and roll up rate that we talked about with the variable annuity, we'll talk about in the context of a deferral credits where just simply your payout rate increases for each year that you defer the start of income.

**15:34**
Wade Pfau
These do have the contract value, just like a deferred variable annuity. Because they're deferred annuities, you may have step up opportunities, although generally with the principal protection, you don't have the issue where the benefit base would be a lot higher than the contract value. But that could exist. And then also the guaranteed withdrawal rates on a living benefit that would support a level of lifetime income. But that living benefit conversation will probably push more to the next episode. This episode will focus more on really a whole episode about interest crediting methods. How do these things credit interest? How does it fundamentally work?

**16:11**
Alex Murguia
I think that's important because I think that's when people pitch these or when they're presented these, you want to make sure that's understood on many angles.

**16:23**
Wade Pfau
Right? And so again, the returns from a fixed index annuity, the technical term is interest crediting and they could offer a fixed interest rate and then it's really just a deferred fixed annuity or even a MYGA. If you're picking a fixed index annuity but choose the fixed rate option could be 2%, 3%, whatever the case may be, you would get a fixed interest credited for that term. The term may be a year, could be two or three years, could be six years. But for that term you're going to be receiving a fixed credited interest rate. Or the whole reason you probably are looking at a fixed index annuity instead of a deferred fixed annuity that just does offer a fixed interest rate, you're going to link these to an external index. We said the SMP 500 is the most common. There could be other international indices, and then there's a whole cottage industry of creating indices, which, when we talk about complexity and lack of transparency and so forth, if you're looking at a fixed index, Annuity, with a Bespoke type index created only by that company, you're not going to be able to compare us and shop that against other options.

**17:38**
Wade Pfau
And so that may be where there's some lack of transparency. But if you really want to get a sense of is this fixed indexed annuity competitive with others? The SP 500 would be the most common index used and there's a lot of competition. You can compare different companies, fixed indexed annuity offerings and so forth, just focusing on something like the SP 500 because we'll talk about how these work and the volatility of the index has a big impact. So the more volatile the index, the more expensive it is to provide protection against downturns with that index and the less upside potential you'd be able to have. So that's why a low volatility index may be used because it gives you higher caps or higher potential credited interest. That's why they're doing it, so that people focus on, oh, this one has a higher cap. Okay, great, but that's because it's linked to a less volatile index.

**18:36**
Wade Pfau
Yeah, with the SB 500 you can compare this stuff with other bespoke type indices. You can't really make easy something I.

**18:44**
Alex Murguia
Would add to this just because I think you said it at the beginning, but it's based on an index, but it's not investing in the index and the whole dividends. And maybe this gets into the pricing, maybe this opens up the whole conversation into the pricing because they're based on the options budget and then options have their own set of parameters of how those are priced. Which incidentally, we did a LinkedIn live two weeks ago with Michael Finkett, me and him, and he brought up the shoals sort of equation and all of that. Yeah, and it made me think of where this could go, but I'll leave it at that if you can just maybe open it up in that way. It's an index, but it's not indexed in the way that you think, even though it's the SMP 500.

**19:33**
Wade Pfau
Well, you generally can't invest in a market index, but some of the index funds come very close to offering the same return that the market index provides. But in this case, the insurance company is not buying the underlying index or they're not buying like an index fund tracking that index. It's based on financial derivatives. And we'll talk about that. They're going to buy call options that give exposure to growth of that index. But because it's all based on financial derivatives rather than purchasing the underlying index, financial derivatives generally don't pay dividends. It's looking only at the price returns, not the total return, which is the price return would be like any capital gains. So the total return is your price return plus cash flows like dividends. You're not getting the total return of the index, you're getting the price return of the index. And that's simply because the insurance company is not buying the underlying index fund, they are purchasing financial derivatives that make a payoff based on the index performance, which is only based on the price returns, not the dividends.

**20:44**
Wade Pfau
And that's so commonly people who are the gotcha, there's a lot of quote unquote gotchas about fixed index annuities. One of them is oh, but they don't pay you the dividends. Yes, that's true. And hopefully any marketing literature that you're reading is not implying that you would be receiving.

**21:03**
Alex Murguia
Yeah, but again, they don't pay you the dividends, not because they're usri or whatever and they don't want to be. It's more that the only way they could offer the price dynamics or the income dynamics that you're getting at is for them to use options to do so and options that it just doesn't happen with options. But that's

why also you can cap the downside and things along those lines because of how they're creating those returns.

**21:32**
Wade Pfau
Yeah. And right now the dividend yield on the S and P 500 is in the ballpark of 2%. So maybe getting back to provide simple examples, say in a given year the total return on the S and P 500 was 10%. 2% of that was dividends, 8% was the price return or the capital gains. We would be looking at that 8% number, not the 10% number. When we're determining your accredited interest with the fixed index annuity.

**22:00**
Bob French
Are you a financial professional looking to learn more about the Risa and retirement income best practices? Well, if you are, you should join our retirement income masterclass on Monday, August 28 and Tuesday, August 29. You can sign up at risapprofile.com/advisors. That's risapprofile.com/advisors.

**22:23**
Wade Pfau
Okay. The other aspect of these is fixed indexed annuities. Again to emphasize because the term fixed is in the name they have principal protection and this is all about we're really going to now explain why they have principal protection and you're not exposed to losses. If it's linked to the SP 500 and the S and P 500 is down 40%, you're not experiencing a 40% loss. You would get a 0% credited interest for that term. And that's an important aspect of not having to be worried about those losses. Now of course in exchange for that you're not going to get the full upside of the market either. But that's what we're really going to be explaining now.

**23:07**
Alex Murguia
Okay. Shall I go first?

**23:12**
Wade Pfau
Yeah.

**23:14**
Alex Murguia
You'Re on a roll. Wade, I don't want to be continue.

**23:18**

Wade Pfau
Well, let's also talk about how fees work first and then we'll explore the dynamics of the interest crediting. So another quote unquote gotcha about the fixed indexed annuity would be this idea that often they're marketed as no fees and then of course nothing is free. So of course the idea of quote unquote, no fees is a bit of a marketing gimmick. But these are spread products. It's like a checking account. The insurance company, when they invest the underlying funds from your premium, they will earn more than they pay you. And so there's an internal spread just like a checking account. The bank, they're going to be earning more interest than what they're paying on the checking account rate and so forth. That's the idea behind how fixed indexed annuities work. But when we say they don't have fees, that's in comparison to variable annuities, there's no underlying funds because they're not buying the stock market index.

**24:18**
Wade Pfau
So there's no underlying fund that they're buying. So no fund expenses and also no mortality and expense charges. Unlike variable annuities, these are similar, that's where the idea is.

**24:28**
Alex Murguia
So these are similar then to from a spread product pricing standpoint, this is like a SPEA and a dia in that sense they're not like variable annuities because variable annuities remember, they have underlying investment pools and so you're paying for the quote unquote investment management, those in addition to other fees. But you can kind of see it line item for that here to Wade's point, it's an underlying index, but it's not even an index like the SMP 500. It's an option based on the index. So it's really how much can they price and buy the option for relative to the return they can provide. And part of the return that they're not providing is what they use to fund themselves.

**25:15**
Wade Pfau
Yeah. And so that's where the fees come in terms of an internal spread there where just they're going to keep part of the interest they're earning and they're going to use the rest to buy those financial derivatives. Now, that being said, there could be some fees, there could be surrender charges in the early years of the contract, though in many cases, if you're going to be a long term holder of a fixed indexed annuity, you might prefer a contract with higher surrender charges. Because really what that's doing is getting at the idea of they want to buy long term bonds and if people can just get out of the contracts early on, that damages all the other holders of these contracts. So by having a higher surrender charge schedule, that may allow them to buy less liquid, longer maturity type assets that can provide a higher yield.

**26:08**
Wade Pfau
And so you might find better terms on contracts that have higher surrender charges. Now that being said, if you do need to get your money out sooner and you exceed, usually there'd be like a 10% free withdrawal

amount before the surrender charges are applied. So if you need more liquidity than that, you'd be hit by a surrender charge. And I guess to give a concrete example, let's just make one up where the first ten years after you purchase it could be a sliding scale. If you take out too much in year 110 percent surrender charge and year two 9%, and year three 8%, and so on and so on until once you get to year ten, there's no more surrender charges. But by having those, you may be able to get better terms because it allows the insurance company to invest with a longer term, less liquid type of perspective to get those premiums from those types of assets, and therefore provide a higher yield to the wait.

**27:03**
Alex Murguia
What if somebody would say that also includes the commission paid out to the person, hence that's part of the surrender charge. Or is that not relevant?

**27:12**
Wade Pfau
Right. And also, yes, there's large upfront expenses the insurance company faces when they issue the contract. One of those would be a commission to the agent who sold the contract. And yes, the surrender charges were meant to also recover what they paid out as a commission because they're not otherwise able to earn it from that spread if you're getting out of the contract too early. So the other point about that, the other type of charge is if you do want an optional benefit, living benefit for lifetime income, that would be a charge as well. But that's optional. And that would provide that's not a profit center for the insurance company. That's going to be used to provide the ability to ensure that you will receive that lifetime income. Then if you are looking at a fee only annuity, that's where because they don't pay commissions, it reduces some of those internal expenses for the insurance company.

**28:12**
Wade Pfau
And that can translate into less or no surrender charges as well as less of an internal spread being taken out, which may give you more upside. A simple example of that is I was recently looking at a type of annuity fixed, an indexed annuity, that if you bought the commission version, the current cap was an eight and a half percent. If you bought the fee only version that did not pay the commission to the agent, the cap was nine and a half percent instead of eight and a half percent. So that would be an example of by stripping out the commissions, you can potentially get better terms on the contract to the owner.

**28:52**
Alex Murguia
Yeah, that was over 10%.

**28:57**
Wade Pfau

Yeah, you're right. Eight and a half percent up to nine and a half percent. Well, so that's just where then if the market had been up 20% for the year, you'd get to be credited with nine and a half percent instead of eight and a half percent. Okay.

**29:10**
Alex Murguia
And so since you mentioned the market up, maybe it's a good time to get into that crediting method.

**29:19**
Wade Pfau
Yes. And there's dozens or probably dozens, not even the right there's scores or even.

**29:25**
Alex Murguia
Hundreds of myriads ago.

**29:32**
Wade Pfau
But we'll just mainly focus on the most common and most simple type of crediting method. And that would be we'll describe it as with one year terms, but you can change easily three year terms, six year terms, but we'll say one year term, point to point crediting method with annual reset. It's a more common method, so there is more competition on the pricing. The point to point is you look at over the one year term, the start and end of the term, how did the price return for that index change over that term? So if I bought the index on a particular date and say the index value was 1000 on that date, now one year later, what's the index value? Not including the dividend. So just the. Index value. If 1000 on day one, was it 1050 at the end of the year? Was it 950 at the end of the year?

**30:27**
Wade Pfau
You're going to be looking at the change in the index value on that point to point basis. So from the start to the end of the term, and we're using a year as an example for the term. And then the annual reset is you get to start fresh every new term. If the market was down 40%, you're not stuck with having to gain that back before you get more interest. You would have been credited with 0% for that year. And then you'll get to start fresh for the following year. And again, there's not dividends, I guess I already mentioned that. But it's just based on the price returns, annual reset every year, start fresh looking at the change in the index.

**31:08**
Alex Murguia
And so from that, just remember you'll be looking at the number the SP was at, whatever. And that's what it

ended up disabuse yourself from looking at headlines that say the SP return 10%, because it's going to be a little less than that. It's always going to be less than that because of the dividend issue.

**31:27**
Wade Pfau
Yeah, usually you'd see numbers quoted with the total returns that include dividends. But if you're just looking at like Yahoo Finance or something, those would probably be price returns. They just show the index coming out as a cash. I mean, the dividend coming out as a cash.

**31:43**
Alex Murguia
Now Wade for folks that were listening. How do you they're thinking because we did this in the last I don't know the last one, but we did it when were talking about the spears and the like, doing it yourself. I mean, what are they making? Not by saying they should do it themselves. This is even more complicated than the SPEA, but what's the basic mechanics around this? How does the insurance company kind of do this, if you will?

**32:10**
Wade Pfau
Right. And to be clear about the SPEA, you can't create mortality credits by yourself. So you can't really recreate a SPEA by yourself with a fixed index annuity. You can't create the living benefit by yourself because it's about the longevity risk and the risk pooling. But you could create a do it yourself fixed index annuity, not for lifetime income, just for the underlying return structure and the processes. So this is where the principal protection comes into play. You're going to buy enough bonds so that with the interest those bonds pay at the end of the term, they'll grow to be the value of the principal. So let's try to create examples around this. If, say, interest rates are 5% and I'm going to put $100 into the contract, so what I would need to do is buy approximately $95 worth of bonds. It won't be exact, but the 5% interest applied to what I put into the bonds would then grow to be $100 at the end of the term.

**33:14**
Wade Pfau
And if simple math there, if it was about $5 left over after buying enough bonds to protect principal, that $5 is going to be used for two things. Part of that will be to go to the insurance company for that. That's the spread aspect. They're going to take some internal fees from the remainder. And this is where the idea of, well, if I do this myself, I don't have to pay the insurance company that part. But then the remainder is the options budget that's going to then be used to purchase financial derivatives to provide the upside exposure to the linked market index. So call options would be giving you the right, but not the obligation to purchase the index at a particular price. And so what a call option does is if I'm going to buy a call option on day one, the index value was 1000.

**34:10**
Wade Pfau
So if I buy a call option with a strike price of 1000 for one year term, one year later, if the index lost value, I would just let the option expire and not do anything. And that's where the bonds protected my principal. I don't get a payout from the call option that I purchased. I have principal protection. But if I bought that call option and the index goes up to 1050, well, I have the right to purchase the index at 1000. And how that then works is I'll get that $50 payout or I'm now switching to 1000, it's okay, but I'll get the payout, the additional gain of the index over the strike price from the option, that's my payout and that's where I get the upside exposure from. I hope that sounds no, I think so.

**35:06**
Alex Murguia
I'm trying to listen with those ears, but I have familiarity with option pricing. So it sounds clear we'll wait questions. But also keep in mind we'll have a lot of use. We'll have an episode or two where we really start just talking about case studies and things like that just to make it clearer, at least go on with.

**35:36**
Wade Pfau
Yeah. And then so there's many different ways this crediting method could also work beyond what we're seeing thus far. But the more common ones would be either you have some participation rate in the market gains or you have a cap on the market gains, and the participation rate is generally not going to be 100% just because it would be kind of a coincidence if the price of the option precisely matched the amount of the options budget to give you 100% upside exposure. In this example, I was saying earlier, okay, so we put $100 into the contract. Interest rates are about 5%, so we're putting about $95 approximately. It have to be a bit more than $95 into bonds that grows to provide the principal protection. But from the remaining $5, say dollar 50 goes to the insurance company, 350 is left. So we're going to use $3.50 to buy a call option on the market index.

**36:41**
Wade Pfau
Now, suppose the call option costs $5, or I should, maybe it's a different number since I already use $4 is the price of the index option. So the participation rate, what percentage of the market gain would I get? It would be that three and a half dollars divided by the $4.

**36:59**
Alex Murguia
Yeah.

**36:59**

Wade Pfau
And that would be the particular call.

**37:01**
Alex Murguia
Options are very fluid. Again, why bonds? Why put the $95 in bonds? Because you kind of have to get it so that when the term ends, you're going to get all the money back. And so it just depends on whatever interest rates are. We just using an example, it's $95. That way when you're done, you get back to $400. But again, the options pricing is very fluid based on the volatility of the underlying index. For this case, usually it could be stocks, but based on the volatility. So based on the up or down price on that, based on what the strike price is, that you're in the money for the current risk free rate and the maturity terms. And you can get into a whole Greek alphabet of figuring out the right pricing for this. But it changes. It's not something that's steady. It just changes over time.

**37:52**
Alex Murguia
And so it's a little trickier, it's a little tricky to kind of lock something down if you're thinking I'm going to buy it three months from now, but let me see what the price is right now that'll most likely change.

**38:07**
Wade Pfau
Right? And you're just talking about the black options pricing formula.

**38:11**
Alex Murguia
That's from the Finkey live. LinkedIn live that we had. I was like, oh yeah, look at that. Let's bring it all, bringing it back home.

**38:20**
Bob French
Let's take a moment to let the audience know that this show is sponsored by Retirement Researcher. You can learn more community retirementresearcher.com retirementresearcher.com and subscribe to our newsletter where you'll receive weekly actionable information for your retirement planning benefit. Retirement Researcher is an online community devoted to helping you create the retirement income plan geared towards your goals.

**38:46**
Wade Pfau
Right? And that's where at each term we need to unpack that a little more about the terms can change each

term because of this issue that options pricing changes. But before getting to that, just to continue, I think participation rates are less common these days. What you would see more generally is the cap. So like I was saying, in this example, you're not getting 100% participation, but you'd get that participation no matter how high the price index was. What you'll generally see is 100% participation up to a cap rate. And what that is we need to raise more money. So we're going to sell a call option with a higher strike price, which would then mean if the market grows even more than that, we have to give up any of those additional gains. But in this example, I was giving, where we had an options budget of $3.50, the call option was $4.

**39:45**
Wade Pfau
We need to raise another $0.50. So we'd figure out how high can the cap go where we can sell a call option to earn the give us 100% participation up to that cap. And that's how a fixed index annuity with a 0% floor and a cap. And at the time of this recording, for a one year fixed index annuity linked to the S and P 500, you're probably going to find caps in the ballpark of like 1011 12% in that range. And that's just based on where interest rates are today, as well as the Black Scholes option pricing formula that Alex was talking about. There the cost of now wait, just.

**40:27**
Alex Murguia
To show how dynamic these things could be, I'm not expecting you to know this off the top of your head, but this is something that a year ago, or even two years ago, you're talking about 1011 12% was you weren't in that ballpark at all.

**40:44**
Wade Pfau
Right? Oh, yeah. In 2021, you may be looking and this is so getting back to those options. It was really interest rates.

**40:52**
Alex Murguia
Oh, yeah. No, I know why.

**40:53**
Wade Pfau
Extremely low. Yeah, you can see it. It's like, okay, if the interest rates are under 1% on a ten year treasury, now I have to put like $99 into the bonds to provide the principal protection. There's very little left to provide upside. The options budget will be tiny. And so you may have been looking in 2021 at caps of two or 3% versus that 10% to 12% today. And that's actually for an upcoming episode. We're going to talk about registered index linked annuities. So this can just be a little bit of teaser, but that's why they became so popular a couple of years ago. It's because they gave you some downside risk in order to offer more

upside exposure, since fixed index annuities were not able to offer much in the way, effectively, due to the various there was.

**41:45**
Alex Murguia
No spread after buying there was no fuel after buying bars. So instead of pushing against a ceiling that was unmovable, effectively they dug deeper. Like they allowed losses, you know what I mean, if you will, to give themselves more ammo.

**42:04**
Wade Pfau
Right? Interest rates are going to be the main driver of all this because they're going to tell you how much is left over to purchase upside after you protected principal. But then the factors that go into pricing the financial derivatives is also important. And you listed those, and the most important of those is that implied volatility of the underlying index, the more volatile the index, the more expensive the call option to buy exposure to the upside of that index. And that's why, well, if I can create a low volatility index, maybe I can offer a cap of 18% on that instead of 12% on the SP 500. And so then when people are looking at the rate sheet of the different options they see oh, SP, 501 year term, 12% cap. Oh, but this low volatility index, one year term, 18% cap, I want that.

**43:00**
Alex Murguia
Yeah, but you got it. Yeah, I know, but you got to be tricky, right? I mean all this stuff is still, in my view, efficiently priced to some extent. Someone's taking a bet on the volatility, that's still a bet. And so this is where Brandislav may be a good potential guest or something like that to bring in who knows this inside and up. But the reality is why maybe you'll do a better job at elucidating this. And I will, but again, if it's high volatility, the option is going to be higher simply because volatility just means a lot of volatility. But it could be on the upside, it could be on the downside, right, but it's harder to price it. Hence the folks that are selling you the options are going to try to cover themselves, hence it's just going to be more expensive. It's going to be more expensive to the degree that they think it's fairly priced.

**43:55**
Wade Pfau
Right, and this is all based on underlying financial derivatives. So if everything else being the same in terms of the insurance company taking the same internal spread, at the end of the day it shouldn't really make too much difference what index you choose, what crediting method you choose and so forth, because it's all based on the same underlying pool of financial derivatives. It's just back to that point from earlier with the S and P 500. Pretty much all the fixed index annuity providers offer that one. And so you can compare well, company A the cap is 10%. Company B, the cap is 11%. Company C the cap is 12%. You can more easily make those comparisons where if you have that bespoke proprietary low volatility index provided by

insurance company A, you may not really have any way to compare if that's a good deal because no other company is offering that same index.

**44:55**
Alex Murguia
Got you. And Wade, we're 43 minutes in. How do you feel about, is there another topic to continue in this episode or do you want to take a little respite and continue next week?

**45:08**
Wade Pfau
What do you think? There's probably just a couple more. Well, it's an idea that you brought up but to emphasize it again, like.

**45:19**
Alex Murguia
Two more, that's why I'm asking.

**45:23**
Wade Pfau
Yeah, and the first of those, you did mention this, but to emphasize it again, and this is another one of the quote unquote gotchas used sometime at each renewal of each new term this process repeats. So I buy the FIA with the one year term, the point to point with annual reset, the insurance company is telling me the cap right now is 12% because they know that when they buy the financial derivatives that's what they can do. One year later this process restarts, they have to purchase enough one year bonds to protect the principal and then they have to figure out what's the remaining options budget. Then they have to use that to purchase the new financial derivatives to provide the upside exposure. Because we have no idea what interest rates will be a year from now and we have no idea what the cost of financial derivatives will be a year from now.

**46:15**
Wade Pfau
They can't tell me what the cap will be for the next term one year later. They have to wait and see. And that's why the insurance company needs to have the ability to adjust those parameters every term. If interest rates go down and markets become more volatile, that cap could go back down to 3% for the next term. It's hard to say in advance what's going to happen. Terms could get better if interest rates go up and if the markets become less volatile, that 10% cap might become 20%. You can't know in advance. And that's the whole idea behind every term. The insurance company needs the right and ability to change the terms based on where markets are and then that gets into the whole issue of well, do I want a one year term, do I want a three year term, do I want a six year term?

**47:06**
Wade Pfau
If I pick a six year term, I'll know for the next six years what those parameters are. It will reset after six years, but at least know what I'm looking at for six years. Sometimes people like having that certainty in place for longer as well. The longer the term, the more expensive.

**47:24**
Alex Murguia
Yeah, it's not free, you're going to pay for that privilege. But yeah, based on how it works.

**47:31**
Wade Pfau
It'S not really right, not linear. And so then you can get more upside potential and you can even find today in today's environment over 100% participation rates on longer term. And that's just with the way the pricing works where the options budget is greater than the cost of the financial derivatives. So I might find a six year term with 110% participation on the SP 500. That means if the cumulative and that's now based on cumulative returns over the six years, or actually I'm kind of explaining this a little bit wrong, let's backtrack there, that would be the total cumulative gain. So if it was 110% quoted as a cumulative gain for that six year term, I would get the first 110% of the returns from the market over that six year period, but it would be capped at that level. So if the market was up 200% over the six years cumulative, I would get 110%.

**48:33**
Wade Pfau
That's the explanation I should pivot to explain how that works, if it's any solace.

**48:40**
Alex Murguia
That's what I was thinking. Yeah, I don't know it no, I wasn't okay.

**48:54**
Wade Pfau
It is just we brought it back to what that six year term cap means. It is possible to find participation rates greater than 100%. So what I was saying was correct, just I was applying it to the wrong scenario. But if the pricing is right, if the financial derivatives are cheaper than the options budget, it's not impossible to see that sort of situation. It would generally require a higher interest rate world. But it is something possible. You could get more than the market return because you have a higher participation rate and then you'd probably choose that over the cap. You can't really cap it if the.

**49:32**

Alex Murguia

Participation rate I'll say this and you can tell me if this is for this episode or the next, but you're talking about gotchas and before the Gotchas to me weren't really gotchas. They're just internal budget things sure as people can squeeze here and there. But I think this sort of the yearly reset, I think to some extent that could be used by insurance companies sometimes just out and out for their benefit other than just the pricing, other than just an optional pricing issues. And I think that could signal to consumers who are thinking about purchasing one of these. Is this a company you want to purchase one from? Right. And if this extends beyond this episode, that's fine too. But I didn't know I just wanted to throw that out there.

**50:21**

Wade Pfau

Yeah, I think that's a good point we can finish on. And that's getting back to the issue that these can be complicated. So to the extent that there's a lack of transparency, it's kind of the teaser rate idea. Like the insurance company could market these as having a really high the first year cap in year one with the intention of we know the terms have to reset, but we don't necessarily know what the fair reset level would be. So in year two, they might take a much larger internal spread and leave much less available for the options budget. And that's where the way the insurance company could take advantage of the customer would come into play. And so it's hard to find the historical renewal terms on different contracts. You could certainly ask for that. And it may be a little bit of a red flag or at least something to have more concern about.

**51:21**

Wade Pfau

If the company is not willing to provide any sort of ability to look at what were renewal terms on past contracts so that you could then compare.

**51:31**

Alex Murguia

This is something I would say an advisor should kind of know, at least anecdotally I wouldn't imagine a consumer is going to be expert at this. I mean, they're just figuring out the language on what point to point interest crediting means, much less the other stuff. Right, I would think about that.

**51:52**

Wade Pfau

That's fair. I know we've got plenty of listeners who are developing spreadsheets to price their own fixed index annuities, and that's where this comment would be most relevant to. But yes, you're right.

**52:03**

Alex Murguia
All right, Wade.

**52:05**
Wade Pfau
Anything else?

**52:08**
Alex Murguia
We'll get ready for part D.

**52:12**
Wade Pfau
Yeah, we'll do another episode on fixed indexed annuities to talk about living benefits in particular, but also that'll give us a chance to review some of these key concepts again as well. So I think a good time to wrap for today. Alex.

**52:26**
Alex Murguia
I dealt stop Button. Thank you everyone, for we never lose sight that you're taking time out of your day to listen to us, so we really appreciate it. Thank you.

**52:37**
Wade Pfau
Thanks everyone. Catch you next week.

**52:41**
Bob French
Wade and Alex are both principals of McLean Asset Management and retirement researcher. Both are SEC registered investment advisors located in Tyson's, 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.