# Episode 28: Understanding The Mechanics of Any Retirement Spending Strategy 

## Bob French 00:00

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. Will Alex and Wade have a cute little intro before diving into the topic today? Well, I guess it depends on your definition of cute. Who knows.

Wade Pfau 00:51
Hi , everyone, welcome to Retire with Style. I'm Wade.

## Alex Murguia 00:55

And I'm Alex.

## Wade Pfau 00:57

And we're ready to begin a story arc today on the topic of safe withdrawal rates in retirement. Before we get to that, though, Alex, we usually like to do a little bit of chit chat. And we do get some feedback from listeners who don't always appreciate that and feel that maybe there is too much chitchat, more so on your side than mine? I don't know you'd like to ask about the weather and so far?

## Alex Murguia 01:23

Yeah, I don't think it's I think the We get tons of great comments, we really do. So that's the issue. But every once in a while we get these that are, you know, they're like a dagger in my soul. Largely, it's

## Wade Pfau 01:41

Sorry feel that way. Yeah. lose any listeners here. Let's let's really dig into the matter today. And so really, I saw enough chitchat here. So the, we're going to talk about a topic that is important, although maybe not necessarily that important. In the grand scheme of things. We have been talking about the funded ratio, which l've increasingly come to view, as a better way to approach thinking about retirement planning. And a simple reason for that is because people have expense needs that change over time, not just overall expenses. But how much do they have to take out of the portfolio. So if you're delaying Social Security, you need to spend more from the portfolio before Social Security begins. And there's tons of issues like that. And that really limits the usefulness of the quote, unquote, safe withdrawal rate discussion. Nonetheless, this is an important topic. And it's something people care about a lot and will debate extensively, and have many disagreements about and it is an area where I kind of made my name as well in terms of talking about some of these issues. And so we're beginning a
sequence of podcasts on the question of safe withdrawal rates, or more generally on how much can you sustainably spend from an investment portfolio in retirement? So we're not very good at planning. We don't know how many episodes that will be at the start. But will it'll be

## Alex Murguia 03:07

its an $80 \%$ chance that it's going to be a bunch. So Wade, are you saying that this was an area of research interest initially, but we've kind of gone away from it, but we're going to cover it anyways.

## Wade Pfau 03:21

More or less, I mean, the kind of the the golden age of retirement income research was really 10 years ago. And that's when this was a really hot topic about what we've had building is $4 \%$ rule. And we'll be talking quite a bit about that, because that really is the starting point for any sort of discussion. But, you know, the questions are, is that number too high? Is that number too low? We'll talk about reasons to consider for each of those points. But again, ultimately, it's not necessarily a useful way to think about overall retirement spending. It's, it's something probably that fits better for more discretionary types of spending of just how much can I spend from my investment portfolio to really enjoy the overall lifestyle. But understanding that no one's going to use a constant distribution from their investment portfolio, they're one of the things that is assumed they're

## Alex Murguia 04:15

almost like biomarkers. I will say this from a practical standpoint, as you know, Wade and I are principals at McLean asset management. And you know, they're we're actually applying research into practical application. And no one really uses all these kind of rules and everything like that, that we're going to talk about in practical application to the tee. I mean, we're gonna we'll bring in a few advisors from McLean and just ask them that how does this actually work? And I seriously doubt that I know more than five advisors don't even attempt to do anything like this on a year in year out basis with all other clients. It's just not practical, but it serves as you know, the sort of the $4 \%$ rule the whatever I mean, I think is good. It's good for general journalists to have articles to write about. But I don't know, you know, the practical use when it's beyond just guard rails, or mile markers,

## Wade Pfau 05:10

if you will. It's good for calibrating expectations, it's just not something you can really use in the day to day management of retirement. But

## Alex Murguia 05:20

that being the case, you know, and this is we're starting this arc, because you know, we're effectively doing it, it happens to be chapter four, Wade's book, and we're kind of going through the Retirement Planning Guide, we'll see why he doesn't miss a beat to get it in there. But this is largely if you're really thinking about this. And the whole overall reason for the podcast as retirement style, is that this is going to be a very relevant strategy for those and the total return approach for those whose recent style is the total return approach. And as Wade said, you know, he was talking about discretionary spending, I mean, they would throw in a lot of essential expending where the portfolio is going to be doing a lot of the heavy lifting. And so there, you have to think about what are strategies to take sustainable withdrawal rates from? We have no issues with it, we just, were just pointing out that the way the
research is done, you know, I think it does, like some practical applicability, but it there are good estimations that, you know, put you in the zip code of what's feasible, what's not.

## Wade Pfau 06:25

And it is the heart and soul of the total returns approach. And it's especially important for total returns, because this question of how much can I spend from investments, since I am trying to fund all my retirement expenses from investments, I really need to have a good handle on that. With some other styles, you're not as dependent on the investment portfolio, the investment portfolio is more for discretionary types of goals. And then you don't have to be as nervous about well, what is the safe spending rate from the investment portfolio. So it's, it is something it has applicability to all retirement styles, because all retirement styles do include distributions from an investment portfolio, but it has special applicability to the total returns investor in retirement. And that's probably enough of an intro to start getting into it. And with this first episode, we're not going to get all the way up to the $4 \%$ rule, because there's really a more important foundational starting point. And it may get flashbacks to people, if you ever had a business calculator, kind of you can remember back to what we're talking about today. Business calculators have a well, one of the things they can do, there's a row of five buttons where they ask you, you have to there's five buttons, you have to decide your inputs are for them. And it solves the other one. How long are we talking about payments? Last thing? What is the rate of return? How much money do you have at the start? How much money do you want to have at the end? And then what is the spending this amount that can manage those parameters of making sure the money lasts for as long as necessary to leave the the goal balance at the end. And to make sure you you know you have with that rate of return and so forth.

## Alex Murguia 08:12

And so I think people do this when they're on spreadsheets when they get a big old Excel spreadsheet. And they just put 60,61, 62, 63, 64,65, one column of age one column of returns one column of expenses. It's effective, what it's doing. But you know, a calculator can do all of that in one shot. You know, one of the

## Wade Pfau 08:32

HBS can track out over time. And then also you could use in particular, if you're an Excel fan, what we're really talking about today is the PMT function in Excel, which is going to calculate what's the sustainable payment, given a return, given a time horizon, given your account balance at the start, given your intended account balance at the end? And you do have to put a negative sign in Excel, which I think is extra confusing. We didn't want to have money left at the end. Why did you just do that sound? Did you hear that? No. Was it people stopping?

## Alex Murguia 09:09

Jumping off, let's just started referencing Excel sheets. No, but this is but this is the Genesis ultimately of the $4 \%$. Rose was just somebody took a spreadsheet, put it all down. And then let me see how this works and started having fun with numbers if you will. But the basic building block of that is this it's it's what Wade said, what's the return? What's expected return? What's the time horizon? What's the money coming out, etc.

## Wade Pfau 09:40

In right, and it's so someone might have heard what Alex said and say wait a second. Now the $4 \%$ rule didn't have a fixed rate of return it accounted for historical market volatility. But it's the same idea of he, as we get into that he was responding to really a more simple way that people were thinking about spreadsheets was plugging the heat historical average stock market return, assume that's the average return, you're gonna get calibrate your spending off that. And that can give dramatically high spending numbers that have a very low probability of working out, because there is volatility around the average. But we're not yet ready to really dig into that volatility. We are just talking about the basics here. So I mean, again, it's, suppose I have a million dollars at the start of retirement. Suppose I'm willing to spend that down to zero. Suppose I want that to last for 30 years. And then if you're jumping right into things, suppose I want to spend $\$ 40,000$ a year. Now that's the PMT number that we'd solve for, but we need to know the rate of return. That would be a $1.31 \%$. Real return. So point 0131. We plug that into that PMT formula? Oh, yeah. No, I know, it goes into the forefront. But a $1.31 \%$. And that would be a real return. And this is a detail to that if the payments gonna grow with inflation, you're talking about real returns, if you just want the payment to stay level not growing with inflation, then you can talk about the the nominal return that adds the inflation component in as well. So a $1.31 \%$ real return maybe with a two and a half percent inflation rate. That's getting you up to over 7\% in that case.

## Alex Murguia 11:36

So Wade, if you have the basic inputs, and I'm gonna speak to the most common denominator sort of audience just to make sure everyone catches this because I think it's very important in terms of what goes into this, because sometimes people just hear the end result, and they think it's all Greek to them, right. But effectively, the inputs is, what's the portfolio return for that year? You know, that kind of thing? How many years? Are we talking about? The current portfolio value, the desired portfolio and when to take distributions, these these are things that you can take into account when creating this. But I have a question intuitively, so people can kind of get a sense of this. So they don't have to kind of do the math. And this goes back to how do these variables individual variables affect a spending rate? The first one would be obvious, right? If you have a higher return, year after year, that means you're going to be able to support a higher spending rate. Right?

## Wade Pfau 12:34

Actually, yeah, Alex, that this kind of discussion is why it's important to start here. Because this is really the heart and soul of a sustainable spending strategy. And then it's just time to debate what's a reasonable rate of return? What's a reasonable longevity? And then, then you got your answers. But right, that if we look through these foundational pieces, the higher return assumption, I think, should be pretty clear supports a higher spending rate. Longevity would be the other one, how long do you want the money to last? It's maybe a little bit less obvious, but probably pretty clear as well, that the longer you want the money to last, the less you can spend, because you have to stretch that asset base out for longer. So a longer retirement planning horizon would then lead to a lower spending rate to now well squandered.

## Alex Murguia 13:25

I'll say something here and tie it back to the recent This is why the RISA, that's why total return is in the probability based kind of world simply because you're comfortable with the probabilities, that, you know,
the market will be able to maintain this longer time horizon, because you know, the market will continue to go up over time.

## Wade Pfau 13:48

And then the third factor is, do I want money left at the end, the $4 \%$ rule allows you to spend the portfolio down to zero. So if you're trying to create the $4 \%$ rule, you could put in a zero, if you do want money at the end, I mentioned this very briefly, if anyone is listening and starts messing with Excel, this is a very confusing detail. If you want money left at the end, you have to put a negative sign, it's like you're you want to be able to take that out of the portfolio. If you put if you don't put a negative sign, it means you're willing to kind of go in the hole, which is not intuitive at all. So you want money left at the end. And then naturally, the more money I want to have leftover at the end, the less I'm going to be able to spend because I have to preserve investments for the purposes of funding that endpoint goal. Okay, and the final factor in Excel, which isn't necessarily super important, but you wouldn't need it as an input is do you want the money to come out at the beginning or end of each time period? And you put in a one to take the money out at the start? Zero to take the money out at the

## Alex Murguia 14:56

why is that important? Wade? What effects do you think that has? It would take money at the beginning versus taking money out, but take money out in January, the beginning of January every year versus December. But why would that

## Wade Pfau 15:09

It would lead to a minor, Yeah, at least a minor difference in the outcomes. Because if you have a positive rate of return, which, you know, hopefully we'll have, the longer you leave the money invested, the more you can rely on growth. And so taking out the money at the end of each time period, instead of at the beginning of each time period with support a little bit higher spending rate. Okay, you let the money grow for a whole extra year before you.

## Alex Murguia 15:34

So district so I'm listening in on this. I have another question. How, how much to leave behind, let's say I don't necessarily need any to leave anything behind for way Jr. But I do want to leave myself a cushion just in case I don't feel comfortable taking this to zero or putting zero as my end. What should I do?

## Wade Pfau 15:58

Well, and that's where there's also some interactions between these variables in terms of if I put the planning horizon out long enough, maybe 110 years old or something, then I probably could put in a zero there. But maybe I'll think about that a little differently. Where, okay, what if I instead say, Let's plan through age 90, but I don't want it to be down to zero at 90, then I could say, Okay, I'll have a shorter planning horizon. But then I still want to have $\$ 500,000$, left at age 90 , for instance, you've you're making the decision jointly based on both of those factors? How long should the money last? And how much should there be at the end? And it's ultimately I think that's the way to think about it. Okay, if I only planned at 90, there's still a pretty good chance I might live beyond 90 . But if I plan it so
that I have enough safety cushion still available? If that's what makes me comfortable, then that might be the kind of approach I would take. Okay, it really there is flexibility for that.

Alex Murguia 17:03
So these are the main variables that go into all these studies that that deal with sustainable withdrawal rates.

## Wade Pfau 17:13

Yeah, yeah, that's okay. The heart and soul of it, it's just, we're gonna add in volatility eventually, because you don't get a fixed market return every year. But ultimately, once you add volatility, you start talking about a probability of success. Any probability of success can be mapped into a fixed rate of return assumption that corresponds with that probability.

## Alex Murguia 17:34

What does that mean? So I just what does that mean? And I know we've mentioned it a couple times, yeah, what because we talked about it with funded ratio, and all of that. But what does that mean here?

## Wade Pfau 17:43

What it would mean here is, so let's hold the time horizon study, the more worried I am about outliving my money, the higher the probability of success I might target, the higher the probability of success that I want, implicitly, then the lower the rate of return assumption I would use, because I, I need to have return low enough that I feel confident I will outperform that return number.

## Alex Murguia 18:10

So will your conservative return assumption, you're assuming the markets not gonna return eight $9 \%$ ? You're gonna assume, if you assume if your plan makes it assuming the market returns three or $4 \%$ a year or whatever low number you want to come up with? That's more conservative. So that helps you that increases the probability of success? Is that a correct statement?

## Wade Pfau 18:29

Yeah, yeah. Because the lower the return, the easier it is to beat that return, and therefore, the higher the probability of success.

Bob French 18:38
Let's take a moment to let the audience know that this show is sponsored by Retirement Researcher. You can learn more about Retirement Researcher at 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.

## Alex Murguia 19:03

Okay, so effectively, if we if you have some sort of calculator that takes into account, a portfolio return, the number of years or the investment, the current portfolio value, the desired future portfolio value and when to take distributions at the beginning or the end of the year. I you can even do a monthly weekly
but l'm not gonna that's that's a tougher calculation. You're pretty much in you're pretty much in good shape. Is that in terms of knowing what you need to know? Okay, so that's effectively five variables. So those five variables are in line, you're good. Should somebody break this out on an Excel sheet? Use the calculator or I don't know, for folks listening in. I would imagine this is a kind of something they could get off of many consumer oriented websites are

## Wade Pfau 19:52

Oh, yeah, I mean, this kind of five function, five inputs, you know, for a selfie the other one, I'm sure there's a lot of free calculators that do that. That's I usually just I think most people have Excel. It's it's the PMT function in Excel,

## Alex Murguia 20:07

PMT function in Excel. Just wanted to put that out there. For people listening, they can kind of pick it up. But this is this served as the main building block for, you know, these these sorts of studies.

## Wade Pfau 20:22

I mean, yeah, we're done talking about safe withdrawal rates. Because there's two two of those variables, we don't know the answers to if we knew what the rate of return would be for the retirement and we knew exactly how long the retirement would last. And it is a very easy calculation that we know exactly how much we could spend every year. The the additional nuance that leads us to have to have a whole series of podcasts about this topic is, we don't know what the rate of return will be on our investment assets. And we don't know how long we will live, and therefore we don't know how long the money needs to last. We need to think about both of those

## Alex Murguia 21:02

Just a quick question, why? Because I see portfolio return there. And it's going to come up? It's not relevant here. I know the answer, but l'd rather you kind of see it. Hey, wait, what's the difference between annualized and annual? It's almost like I want to get rid of all these definitional potential questions that people may be having as they're listening? Do they put in an annualized rate of return? Or do they put in an annual rate of return? And what does that even mean?

## Wade Pfau 21:29

Well, when there's no volatility of A are the same number, but yeah, I guess we could talk about that point that that becomes relevant with volatility, the kind of the simple average return, you take up. If I want to know what was the average kind of stock return, I add up all the past stock returns per year, divided by the total number of years, and then I have an average, I believe that's what you meant by annual return to this, an arithmetic mean, would be another name for it. Now, if I want to know a different that would be so that would answer the question of over one year, in any likely stock return experience

## Alex Murguia 22:10

in any given year. So it's important, I want to make sure that people get so your annual arithmetic mean will give you in any given year, what is what is, what is a likely return as a measure of central tendency from the average, you know, what, what is it? It's not talking about an investment experience over three
years or five years, which has volatility baked in, it's just in any given year? What's what's the best expectation that I can come up with? Annual is a good number for that. Sorry.

## Wade Pfau 22:41

And then annualized, or a compounded return or a geometric mean, that has a bunch of different names? That would be answering a different question, which is over multiple years, at what rate would my investment account grow. And it does not grow at that arithmetic mean, because of when when there is volatility, if there is no volatility there, there the same number. But if there's volatility, you deal with this issue that there is not symmetry, a downturn followed by the same upturn does not get you back to where you started. And it might help to just give a really simple example of that. Suppose I have $\$ 100$. And there's a $50 \%$ drop in the market. So I'm now down to $\$ 50$. Now from $\$ 50$, suppose the market gains of $50 \%$ Am I back to where I started? No, the $50 \%$ of $\$ 50$ is 25 . So I'm up to $\$ 75$. A $50 \%$ Drop in the market would have to be followed by $100 \%$ return in the market to get back to where I started. That lack of symmetry causes the growth rate for money to be less than that simple average return. And the more volatile the asset, the smaller that compounded return would be relative to the simple average return. This is important. There is a very popular radio host who this is.

## Alex Murguia 24:12

This was my master plan about ten minutes ago. I got you Wade.

## Wade Pfau 24:21

yeah. I'm not gonna mention him by name, but anyone who's worried about what we're talking about, this is just an egghead. But he talks about the stock market having a 12\% return. That, no that's not a real return. That's an arithmetic mean, and a simple average return, including inflation. But that's not meaningful what for what he was talking about, which is the growth of money over time. You don't even if you believe the stock market has a simple average return of $12 \%$. It doesn't mean your money is going to grow at $12 \%$ a year. Because of the volatility the number will be less it would be historically something more along the line. And so but $9 \%$ type of compounded return. And if you're focused on the question of how will my money grow over time, you got to look at those compounded returns that account for that volatility, and the lack of symmetry between downturns and upturns?

## Alex Murguia 25:16

Yes, simply put it you're looking at retirement Horizon, it's going to include many years annualized return, it's kind of what you're looking at. But for this calculation that we've been talking about, you know, this doesn't include volatility. So maybe you would say it doesn't matter. But I want I want to hear from you. What, what would you put in portfolio return? Would you put the annualized or the annual?

## Wade Pfau 25:40

Oh, for, if you're just using the payments graduated? Yeah. Whatever time out right. Now, you definitely want to think about that as what's the compounded the annualized return? Because when I made the statement, with volatility and a probability of success, you can reverse engineer a fixed rate of return that would correspond to that, because that is based on a long term calculation. It would be the the annualized or compounded return that we're talking about as that fixed rate assumption.

## Alex Murguia 26:12

Good. Just that's another thing I wanted to get. People ask that all the time. In terms of annualized random, you know it. That's it, you know, if anyone's going to ask you in any given year, what's the expected market? Annual? What's the,

## Wade Pfau 26:27

like, this spreadsheet is removed, there's no volatility in this simple calculation we're talking about, but to therefore be equivalent, you've got to remove the volatility out, and then that's what's leading you to that annualized or compounded return.

## Alex Murguia 26:42

Okay. And Wade, I know, it took us off a little bit. But I just wanted to bring that up. Because it's just a question we get a lot. And frankly, even some advisors, you know, every once in a while, we'll throw that out. It's like, what's the difference between annualized and an arithmetic and, you know, other than doing a double take? Like, really, you're really asking that? It merits talking about, okay.

## Wade Pfau 27:09

If you're actually doing some sort of Monte Carlo plan, usually the inputs are set up where you do put a simple average return plus the volatility, and then that will give you the foundation so that their simulated returns are annualized.

## Alex Murguia 27:24

Okay. Okay, Wade, I see where 26 minutes? And do we have enough to talk about the other piece? Or do you want to maybe have it as a two parter? What do you think?

## Wade Pfau 27:39

Yeah, I think we can at least talk about longevity, because we're not going to spend as much time in this series on that issue. Our focus is much more going to be on the volatility of returns. Okay, so with longevity? It's what do you want to assume as a planning age? It's kind of the question to deal with.

## Alex Murguia 27:58

Let's unpack that then. Okay. So we talked a bit about the portfolio. Remember, in the variables, there's portfolio return number of years, which is longevity, number of years are gonna live, current portfolio value desired future value when to take distributions. So number of years, how do we come to that assessment? In some sort of scholarly way?

Wade Pfau 28:21
Right, it's the big question. It's, so this is where as we, in this conversation, get to the $4 \%$ rule. The advice that was that was based on was suppose you had a 65 year old couple. The idea was, it would be unlikely that either of them would the past age 95 . So let's build a plan through age 95, for 30 years. And if the money will last for at least 30 years, we could feel reasonably comfortable, we're not going to outlive that. And so that plan would be fine. That is an out of date number at this point, because that study the created the $4 \%$ rule was from 1994. And people continue to live longer. With each passing decade. On average, it's about a year per decade where so if your parents were 30 when you were
born, you just as a simple approach, you don't base your longevity on your parents precisely but add three years to that to reflect sort of these continually improving types of longevity situations that we experience. But then, okay, so what do you do? I like to explain it pretty simply that there's a calculator that retirement research, or Risa or any of us, we don't have any affiliation. It's to the Society of Actuaries. And its longevity illustrator that oh RG and it's a really simple calculator. You can spend 10 minutes and get your sort of projected planning age

## Alex Murguia 29:50

and we'll have it in the show notes. Remember, let's remember

## Wade Pfau 29:54

Yeah, longevity illustrator dot o RG, but you can do it for one or two people you just had and age, gender smoking status, which which really matters a lot. And then an assessment of health as a poor average or good. And then based on that, it will give a distribution of longevity numbers for that person or for that couple. And so it will show for different percentiles. Now it with the Risa we talked about the front loading versus back loading preference is one of the secondary characteristics.

## Alex Murguia 30:28

Voters okay, sorry, yeah.

## Wade Pfau 30:31

Yeah, if you're, if a front loading preference, it's that idea of I really want to enjoy the early years of retirement as much as possible while I'm alive and healthy. If I have to make cuts later, fine. If I have a backloading preference, it's not I'm much more worried about outliving my money. And so I do want to potentially spend less now to better protect my future self. And I think a fairly reasonable way to simply interpret that is, if you do have more of that frontloading preference, look at the 25th percentile of results for the longevity illustrator. If you have a backloading preference, look at the 10th percentile. And to give a sense of what those numbers might be a ran for 65 year old man, a 65 year old woman, and that was their birth date, July 1 1957. What were these kinds of numbers looking like so if we think about an nonsmoker in average health, for men, the front loading preference would be age 91 . That's the 25th percentile. And then 96 for the 10th percentile. So 91, somewhere between 91 and 96, for instance, might be what you'd want to target. For a woman, same situation, nonsmoker in average health, those ages would be 94 to 99 . Women do live longer than men. And then if you had a couple where they both are non smokers and average health, and you wanted to make sure the plan would last as long as at least one of those individuals was still alive, you'd be looking at an age range between 96 and 100. To get that sort of planning age in place, so that you can feel comfortable if again, if I have a plan that works at long, then I should be okay. And that that's the really the basic idea to think about longevity, you want to have a number there. And if you want to make that even simpler 95 to 100 might be a reasonable as a planning age for a lot of the people listening to this podcast.

Alex Murguia 32:42
What are some of the mistakes you think people make with with regards to this? Do they go too young or they go too old? Not that it's a mistake. But what are some like? Yeah,

## Wade Pfau 32:54

I think this is improving. I think the mistakes that could happen in the past is people just think about life expectancy, and maybe even life expectancy at birth, which then gets them into if around age 80, or mid lower to mid 80s, something like that. If you've lived to adulthood, the odds of continuing to survive, you've you didn't die when you're young, so that your life expectancy at birth is no longer relevant. Plus, it's not necessarily relevant anyway. Because there's still like a $50 \%$ chance that you'll live beyond the average life expectancy. So you probably really do want to look at something longer than that. And so anyone who's saying no, I'm never gonna make it past a JD, you're past age 85. Those people unless they do have some valid, medically a medical professional, green reason that they do have a health issue that will make it hard to live that long. I think a lot of people might be really under estimating their potential longevity. If they're thinking that something in their early to mid 80 s is all they really need to plan for.

## Alex Murguia 34:01

I agree with you Wade, I mean, one of the reasons I'm asked was asking you that I think they do underestimate simply because l've kicked around that site, and a caveat that it may be apparent to some but I want to make sure it's apparent to as many people listening is and you said it, but if you live to it's one thing to be born and say, Okay, it's life expectancy is whatever 85 Just to say a number, right? But if that person gets to be 50 years old, that means that you've taken, you know, very insidious kind of illnesses off the table, you know, that may have happened to children and early deaths and things like that you take taking that off the table. And so if you live to, like a certain age, let's say you live to 50 and then look at your life expectancy as opposed to when you were just first first born. I mean, it it does kind of the news is good, you know, on many levels in terms of being able to continue to live. And so it's very different the life expectancy of someone who's 53 versus someone who's already 80 versus someone who's already 90 . And, and those those things make a make a difference on this lunge, longevity illustrator. And the other piece is it, you know, we alluded to percentiles, looking at the 10th percentile, if you want to be conservative looking at the 25th percentile, and that means that you will live your live 25th percentile you all live $75 \%$ of the people, you know, that kind of thing. And so, you know, we get caught up in this Monte Carlo realm of oh, I need an a $95 \%$ probability of success, I need a, you know, whatever, high number where I'm gonna outperform $95 \%$ of all potential outcomes. Well, that's like using the fifth percentile, right? If you if you kind of, you know, shifted it to age, right. And so I think it makes a lot of sense to pay attention to the percentile of aging that you feel comfortable to live to, you know, from a from, you know, from your point of view of being conservative or being a little more aggressive. And I think that's where Wade's point about backloading and frontloading could play into that. I think you could run longevity, illustrated Oregon, you know, your eyes will kind of open in terms of Oh, wow. Because that's one thing to say, okay, average is living to 90, but again, $50 \%$ of you well live that. So that's a that's a big number. And the last piece, I would say is, you know, wrap that into as well, what we discussed in previous episodes about spending in retirement, you know, your spending in 90 will not be the same as your spending and 80 will not be the same as your spending in seven days, simply because, you know, you can only do so much.

Wade Pfau 36:40
You're jumping ahead there. So, part of this series of podcasts,

## Alex Murguia 36:48

so erase what you just heard.

## Wade Pfau 36:51

No, that's a great preview. It's a little teaser for not the next episode. But as part of this series, that is one of the issues we'll we'll look at. But yeah, that's pretty much the discussion around longevity. Now, for the next series of, you know, episodes here, we're mostly going to focus on this, how this question of returns, starts to impact things, and also all the different assumptions about retirement spending, and what happens when you change those assumptions, how you can then adjust what you might view as a reasonable spending number. And it's gonna go well beyond that, to be clear about that PMP calculator we've been talking about today. Not only is that a fixed rate of return, as well as a known longevity, but it's, you're going to spend the same amount every year, or the same amount plus inflation every year. And that's not necessarily realistic either, especially if we're talking about the spending from the portfolio. And you have other income sources as well, that change over time. So that's kind of how we need to make this conversation more sophisticated. And that's what we'll do in subsequent episodes. All right, probably got enough for the episode number one here.

## Alex Murguia 38:05

I think so. Alrighty, everyone. Thank you for joining us on this journey through sustainable withdrawal rates and we got one in the can wait.

## Wade Pfau 38:16

All right. I'll see you again next week.

## Alex Murguia 38:18

Okay, bye.

Bob French 38:21
Wade and Alex are both principals in 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 the risk including risk of loss. Past performance does not guarantee future results.

