

Episode 169: The Importance of Your Financial Planning Assumptions1: Part 1

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SPEAKERS

Brian Bass, Alex Murguia, Bob French, Wade Pfau, Briana Corbin

Bob French 00:00

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Briana Corbin 00:40

So you think your financial plan is rock solid, well, what if the assumptions behind it aren't this week, Brian bass from McLean Asset Management joins us to break down Monte Carlo simulations, capital market assumptions and why. Understanding the math behind your plan is just as important as the plan itself. Let's dive in.

Alex Murguia 01:01

Hello everyone. Welcome to retire with style. I'm Alex, and I'm here with Wade Bau, my trusted co host, and Brian bass, a reoccurring guest for us, an advisor at McLean, asset management. How is everyone doing great? Awesome? Little more energy. Wade, doing great. How is everyone? Wade? Awesome. Brian, was that better? I

Brian Bass 01:28

feel the energy coming from Wade trying to get him

Alex Murguia 01:31

to emote. There you go. All right. And everyone today, it's a very interesting episode. It kind of came up ad hoc. We had our investment committee meeting last week, and as part of the agenda, we were talking about financial planning assumption. And during that part of the meeting, you know, it was a healthy discussion about what the assumption should be within our planning for McLean asset management, simply so we can just it's part of normal due diligence, making sure that we live in the world of reality and the like. And what came up was it were was very interesting or very interesting conversations that Wade and I looked at each other and thought this would make a very interesting podcast episode, because I'm not so sure

consumers are aware of with the back end of financial planning projections and what goes on behind them. Other than give me a best case scenario, worst case scenario there, there's a lot that goes on behind that. So we wanted to open that curtain a little bit for everyone. Why? Two reasons, just so they they get a sense of where there are dragons, if you will. But also, we realize that many folks, when they're seeing advisors or they want to get join an advisor, they're presented with a plan, and at the end of the day in God, we trust everyone else, bring data, if you will, or garbage in, garbage out, whatever statistical whatnot you wanna, you wanna bring in. And I think that's important, because I'm not sure a lot of consumers are aware that results vary in a major way, and the one that presents the best plan isn't necessarily the one that should be winning the Bake Off. And so I think taking a step back is an interesting thing to do for everyone, for at the very least, just making one, making everyone an informed consumer. Wait,

Wade Pfau 03:19

yeah, yeah, I guess just to kind of explain the problem no succinctly that we'll be discussing today with Brian. Suppose you go to advisor A, and they run a financial plan for you, and their software reports a 95% chance for success, and you're still exploring your options. You go to advisor B, they take your same spending goals, run a Monte Carlo plan for you, and they report your probability of success is 65% I think the natural thing people have in mind is, oh, advisor, a much must be much better. They're going to give me a 95% chance for success, when the reality is we know nothing about which advisor or which plan may ultimately be more accurate there. And the tendency is advisors who have more realistic or conservative types of assumptions are going to present lower success rates and sometimes may lose out business to whoever has the most rosy assumptions. And that's really what we want to dig into today with Brian, yeah. And

Alex Murguia 04:20

so to begin that again, in the spirit of just level setting, what? What would you say? You know, if some because I I feel Monte Carlos have become a default financial plan simply because their ease of use, implementation and the like. And I always also say this again, by no means are we throwing out the baby with a Bath, bath water. We think Monte Carlos are an essential tool within any financial planning toolbox. Wade and I created a financial planning software many years ago, and so we're big fans, but by no means is it a panacea. And so I like to get Brian steak, since you're speaking with. Uh, individuals on a day by day basis, as opposed to Wade. And I that we were in the theoretical, if you will, or in the academic. How would you explain Monte Carlo to folks, and what do you find the biggest hurdles that you're doing when you're explaining

Brian Bass 05:16

it? Sure, and I think it's a really relevant point. I mean, what we see as new people come to us and kind of kick the tires at, you know, in McLean on our financial planning process is what I call plan shopping. I mean, to your point, exactly what happens is, they go to one firm and they get one plan, and then they go to one firm yet another plan, they go to a different firm, get a third plan, and then they try to play those against each other to figure out which one has the highest probability of success. And, you know, we've run into the scenario where they bring us a plan from another company and say, Hey, Why is yours so different from this? And it's impossible to tell. It's impossible because you can't see the assumptions that went into the Monte Carlo. And so it's important to understand kind of a, what Monte Carlo is, and then B, you know, to your

point, about the dragons. Where are the pitfall is that this could be a overly rosy picture or an underly rosy picture, depending how the advisor builds it out. And ultimately, what is a Monte Carlo. It's just a big math problem. You start with a laundry list of assumptions to go in. What are my goals? What am I spending? What am I doing? What do I want to see in this plan? And then you need the engine to drive that forward is going to be that, that Monte Carlo engine, where we're going to put in our internal capital market assumptions of what each individual asset class is going to do. How are we building out the model portfolio that's going to be kind of represented through that plan? And then all, how does all that play together, ultimately in the output of what you see on the other side of it, and all those inputs are highly, highly sensitive. So you know, again, is, is just looking at it from a from a reporting standpoint, it's almost impossible to know and to really ask good questions to the advisory firm of what, how did you do this? What did you put into it, and why does this look the way it does? Okay.

Alex Murguia 06:59

And before we get into that. The other piece that I think is interesting, that I that I feel folks not fully they don't fully capture, and this is from anecdotal experience, as opposed to, I did some big research study to find out what the biggest miscommunications are. But the success rate number 88% success rate means what?

Brian Bass 07:21

Yeah, so typically it's, you know, we were gonna run this you're gonna run this scenario 1000 different times. So if you run into a plan that has an 80% or an 8560 let's just use 80% success rate at the end of the day that plan says it's kind of a binomial yes or no. It's if there's at least \$1 left at the end of that plan, that's a win. That's a successful plan. So that goes into the one of one of one success. So you run out 1000 plans, you have 800 plans that have at least \$1 left at the end, and the plan says, Yeah, that's a successful plan. In the real world, running in leaving \$1 on your deathbed is really, really unrealistic, and most people would lose their minds if they had two or \$300 left three days before they were supposed to die. That's not very comfortable, right? So,

Alex Murguia 08:08

but that's a great budget,

Brian Bass 08:14

right? It's probably accurate with all the long term care expenses, no, but it, you know, it's important to understand what a successful plan. What is a success? What is success rate? What does all that mean to me in the real world? You know, mathematically, the mathematical framework you put around that is, is there \$1 left? Great. Do you feel confident or comfortable in the fact that \$1 left at the end of the day is a successful way to look at things? You know, most people would argue, yeah, probably not. No,

Alex Murguia 08:43

I agree. And wait for you what I like to ask, because he's talking about something that you came up with in our in our original software, which was the magnitude of failure. I mean, Brian is posing it as the magnitude of success, which is the same thing. What do you what are your thoughts around that?

Wade Pfau 08:59

Right, right? Yeah, that's one of the limitations of a success rate. It's it's really just Yeah, related to what Brian's saying, it's, you put in your spending goal. So could you meet 100% of your spending goals? And so if you took the distributions to meet your spending goals, and there was still at least \$1 at the end, yes, you had success. And that's what Brian was saying, that you look at the number percentage of times out of the 1000 trials you may run. If 880 of those were successes, you have an 88% success rate. The other 12% of the time you could not meet all of your spending goals. Money ran out at some point. But that's the magnitude of failure, which you don't see with the success rate or a failure rate the converse of that? Well, if I did run out of money, if I couldn't meet all of my spending goals, how much did I miss out by and related to as Brian was explaining, well, if I just missed that goal by \$1 in the final year of retirement, I've got a failure. So if I ran out of money 10 years before the end of the plan, I've got a failure. And the success rate, failure rate doesn't pick up that sort of nuance either. The magnitude of failure is really looking at what was my shortfall like in cases where I run out of money by how much did on average, by, how much did I miss meeting that goal by? And that would reflect more upon just exactly what could go wrong when things go wrong that you don't pick up with the success rate or failure rate either.

Brian Bass 10:32

Yeah, and that's a really, really powerful conversation to have, because it's the magnitude of the dollar value of that failure is important. But also when you show someone, hey, you run out of money four years before we planned on you dying, that's a lot, that's a lot of years where you're essentially relying on now whatever your guaranteed income sources were, so security, pensions, annuities, you know, whatever you had in place, that's all you have in those scenarios for a very long Time.

Alex Murguia 10:59

Okay? And so with that, I think it's good to point out, what are all the assumptions? Where are the dragons, if you will, the levers that advisors can use to maybe present rosy projections, realistic projections, or nuclear scenario projections. Wait. What would you say those capital markets assumptions are, because this is where we spent the bulk of our investment committee meeting, discussing. And the other thing I would say is that in addition when Victor returns, I think it would be beneficial if you just described average return versus annualized return, because I don't want anyone to be making that mistake either.

Wade Pfau 11:39

Okay, yeah, so with the Monte Carlo planning, a lot of it, and our focus today will be driven on the capital market assumptions. But I just also wanted to mention, before we dig into that, Brian's point earlier as well, about different advisors competing for who's offering the most rosy plan. There could be other differences in assumptions too, like another way you get a higher success rate? Maybe the software one advisor, uses whatever you put in as your spending goal, they automatically cut your spending by 20% when you turn 85 versus the other firm software keeps your full spending goal throughout your lifetime. Well, the firm that cut your spending after age 85 is going to give you a higher success rate, but that speaks to Brian's point about you can't figure out, just by seeing these plans, what the differences can be ascribed to, because you don't know what kind of weird assumptions may be going on behind the scenes. So I just do want to point out, as we start down this path, there are other assumptions that could be different too, but a big driver is the randomness in the Monte Carlo comes from what you're assuming about financial market returns, and so most Monte Carlo based software will either

just a simpler program would do it at the portfolio level, but a more sophisticated program would do it at the asset class level, and then you decide your asset allocation, and it puts that together to then get your portfolio results. But at the asset class level, what we're generally talking about, what's your assumption for the average return? And that's, as you're saying, Alex, like the arithmetic average return in one year. What's the average return you could expect to receive on that asset? The second input is the volatility for the asset class, usually measured by a standard deviation, like how much dispersion is there around that average return over time. And that's important too, because then that speaks to the annualized return. If there's volatility, the annualized return, or the return that your asset will grow over time will be lower than its simple average return, because there's a lack of symmetry. Just to make it real simple, suppose your portfolio dropped 50% and then the next year, it gains 50% you're not back to where you started. You're only back to 75% of where you started. If your portfolio was down 50% you would then need to have 100% gain to get back to where you started. And so that sort of nuance is picked up by the annualized return, which is a combination of average returns and volatility. So we're entering the average returns, the volatility, the correlations between the asset classes, how much kind of movement is there in the if one asset class is up if it's highly correlated with the other asset class, that asset class is more likely to be up if they're negatively correlated. Tend to see as one asset class goes up, the other one goes down. But what are you assuming about the relationships between those and then you're putting that together, because you also need assumptions about what do those distributions of returns look like, usually, it's somehow related to, like a bell curve distribution, where you've got the average return and the volatility around that, the correlations between the asset classes. And then you're entering What is your asset allocation, and it's going to use those inputs to measure what is the portfolio. Average return and volatility, and then it draws random numbers based on those that distributions characteristics, and puts those together into simulations of if the plan runs for 30 years, each simulation has 30 years worth of these randomized returns. And then that's where we get to that earlier discussion of well, then we see what percentage of the time were you able to meet your spending goals with these different stimulated path of returns that you could potentially experience based on your capital market assumptions.

Briana Corbin 15:33

The retirement income challenge is already in full swing, and yesterday, we had a great first day. Our participants are diving deep into what it really takes to build a solid retirement plan. So if you missed out on this one, don't worry. You can get on the wait list for the next session. It's your chance to stress test your plan, understand key financial assumptions and make sure that you're on track for the retirement that you want. So don't wait. Sign up for the wait list now at recentprofile.com/podcast, so that you're ready for the next session. That's r i s a [profile.com/podcast](https://recentprofile.com/podcast) I'll be at the next one. Will you

Alex Murguia 16:13

now? Brian, what I would say to that is, I don't envision you talking speaking with with individuals about normal distributions or electrophoretic distributions and things like that. When you're discussing Monte Carlo, how do you what's what have you found to be the best way to discuss the returns, the volatilities, the correlations, because a portfolio's return, average return and standard deviation is not the weighted average of all of those put together, you need to take the correlations into account. How do you describe that, if at all, to individuals, and there's that, and that comes with the assumption that individuals want to even hear that. So you may, I don't

really discuss it unless it's asked, I want to kind of pick your brain around that kind of dynamic Sure.

Brian Bass 17:02

Short answer is they don't ask most of the time. What we try to do is give a range of outcomes for any given year. So we look at the standard deviation around the portfolio as a whole, and just say, ultimately, this is what we think this particular mix of stocks and bonds, different asset classes that we blended together and are putting in front of you. This is a typical return. This is a range of those returns in any given year, you know, in a just a normal one standard deviation type year. This is kind of the downside. This is kind of the upside. This is kind of the average return you should expect. Obviously, markets are not normal. They don't operate in a straight line. They're not in a vacuum. So it could be, you know, extremely higher than this. It could be a lot lower than this. But ultimately, this is what you can kind of expect going forward, and this is the way we start to benchmark our performance. You know, we're looking at X percent of return over a long enough time horizon, you know, you'll kind of start to see that kind of gravitate toward that mean. But ultimately, you know, getting into the different asset classes and the correlations and all those things is not something we really talk about on a day to day basis with the consumer level people, but it is really, really important. And one thing to understand too about the math on this, I have seen plans come on onto my desk that use straight line returns.

Alex Murguia 18:14

Does that mean, let's,

Brian Bass 18:17

let's say, oh, you know, my approach to asset allocation is this, it should be 8% a year for this particular mix. I'm going to take your starting dollar value, I'm going to extrapolate 8% a year going forward, this is going to be your ending account value. Effectively,

Alex Murguia 18:30

the standard deviation is zero. There is no variant. It's an 8% return with zero every

Brian Bass 18:36

single year going to use right? And so what that does is it provides a massive ending value, which is completely inappropriate and is in the real world never going to happen, because there are individual years where you're spending some you're spending more, you're spending, you know, on that baseline. And that's kind of the way some people like to present things to win the business is, hey, look, if you do this using our program, we're going to get you this at the end of the day. That's, you know, X number of million dollars more than than this other firm is saying they're going to get you when in reality, had you done it the right way, and use the actual math, you would have gotten a very different outcome. Well, but

Alex Murguia 19:11

that's the problem, the right way. There is no right way. And so I want to bring that there. There's best practices, let me say like that, right? I mean, there's never going to be the correct way. You're only going to know the correct way after the fact,

Wade Pfau 19:22

correct to know what those future returns are before Exactly.

Brian Bass 19:27

But the one thing I can guarantee you is it's not going to be 8% a year every single year going forward. That's using the G word in this business is really scary, but I can guarantee that that will never happen in the real world. You're not going to get the same return year after year after year, 100% 100%

Alex Murguia 19:42

and 100% probability. No that to discuss. And we can, you know, feel free to talk shop with folks, and I think it's good that they get a sense of again behind the curtains. But we had a prospect come in. We presented our plan. We feel What? What? We use what we feel are somewhat conservative, not overly conservative. We can talk about that later, the pros and cons of that. But our, you know, our, our, our, what we feel are good assumptions, and then we stress test around that. But this person was planned shopping and a big custodian, one of the, you know, the Schwab's, the fidelities of the world. They did one of those plans in their offices, and the plan was like, you know, I would imagine, significantly rosier than we had. And they ended up going with that, that place over us. What was, was there any discussion around that, once that was conveyed to you? I'm just curious what their thinking was, and what you tried to say to to kind of give that person the buyer beware. Hell. You know, anyone can do a 20% average return, and you're going to look and we're going to look great. Not that they did that. I'm just saying that to exaggerate the point.

Brian Bass 20:55

Yeah, and it's, um, it's unfortunate, because had you really broken it down and looked at the cash flows, we probably could have shown them exactly what the differences between what we were showing what the other firm was showing, you know, and at the end of the day, we're very, I'm very transparent and open about the way we view our plans and the conservative nature of the inputs and the things we look at, you know, I already kind of knew what was going on in the back of that plan is when you stripped out the long term care costs on the back end of that plan, which is what ended up happening. Obviously, taking out that massive expense for two people at the end of the plan creates a very, very different set of circumstances. When you're looking at a Monte Carlo, right? And it's things like that. It's really getting into the weeds of the plan itself. And going back to that assumption discussion we had earlier, is, you know, we need to plan for certain things. We know certain things are going to happen in your world. And that's, you know, I don't want to say it's worst case, doomsday scenario type planning, but we know, if you live long enough, ultimately there's going to be a long term care expense. And if you strip things like that out, I can make the plan look, you know, ridiculously great. But in reality, if we're not planning for things that we kind of know are going to happen, you know, we're going to run into a problem later down

Alex Murguia 22:07

the road. I I concur. Wade anything to

Wade Pfau 22:10

add with that? Yeah. I mean, that's another great example. One plan has long term care expenses, the other doesn't. And another kind of way to game you're getting a higher success rate. One advisor may assume you only lived 85 the next advisor assumes you lived in 95 Well, if you do the plan out to 85 it's going to have a higher success rate. So there's all these different

ways that you can't just take a success rate at value and assume that that means an advisor offering a higher success rate is offering he's a better advisor, or she's a better advisor. You really do have to dig into those assumptions.

Alex Murguia 22:44

So if a consumer is left to their own devices, and I understand, I'm very sympathetic that, because I'm a little bit like that myself, if it was some other topic, a consumer isn't going to come in and ask you all these questions, correct, you know, I for the most part, yeah, there's always a couple, a few out there. So for the folks listening, at a bare minimum, what should there be? What should they be asking? If someone says, here's my plan, you'd have a 95% chance of success. Sign here on the dotted line, and let's get to it. What would your like caveat? Enter consumer reporting kind of advice.

Brian Bass 23:24

So I would, I would suggest that people really dive into show me the inputs of the plan. Show me what you put into this plan. Show me why it's built the way it is. Even on the assumption side, that's the easy side, because that should have been the data that was uncovered during that first initial discovery meeting where you know the advisor is asking you questions, you're asking the advisor questions. You kind of feel each other out, but ultimately, that's a really important meeting on our side of the table to figure out what we need to have in this plan. You know, it's, it's talking about longevity that you just brought that up, right? If it's 8085, 9095, at the end of the plan, how long are we going to run this plan? Because that makes a big difference in the output, right? 10 years, or even five years, makes a big difference in the output of the plan. So it's understanding what that advisor did to build this model, because ultimately that's all it is. As a model, you have a list of assumptions, you have some sort of return and risk on it, and then that spits it out, right? So it's really, really important to figure out, what did you do, what is in here, and how did you make this work? And that should really be in the back of your head as you're having that initial meeting. It's, you know, there's a certain baseline of high level questions, are you qualified to do this? You know, tell me about your history. You know, that kind of thing, really learning what the advisory firm is about, what the advisor themselves is about. But then past that is really okay. Let's dive into what I want to see from this plan, and then really making sure that they understand your needs, and then you also understand how they're going to make this work, and what the assumptions are and what the risk level of those assumptions is,

Alex Murguia 24:53

okay, and wait, you did a paper with Massimo young about this top. In general, and small changes can have a huge impact in return, even basic returns. I don't, I don't, I don't think if a consumer goes to an encounters an advisor and they talk about it, if the advisor says, Oh, this is a 7% return, and another advisor says, oh, it's an eight and a half percent return. I don't know if the consumers like spider senses are going to go off and say, I call BS on that. You know, kind of thing right there is that that I don't know if we're ever going to be able to solve that, but I do want people to recognize that small a one and a half percent change, even less than a one and a half percent change has a SIG, and we're just talking now about the return of something. It's not even how that plays into the standard deviation, which is even more of a degree of separation than trying to figure out the return right and the correlation. You know that we're not even getting to that, but just a simple 1% change, or 1.25% change has a huge magnitude effect on the probabilities. Do you want to talk a little bit about that from a matt standpoint?

Wade Pfau 26:08

Yeah, yeah. So Massimo young and I it was, I think, called the hidden dangers of or not hidden danger, hidden assumptions of Monte Carlo. And he had a really clever idea, because financial firms release their capital market assumptions. And so he was able to collect, here's a list of 20 different companies with their capital market assumptions. And yeah, there's going to be some differences among them, maybe for large cap US stocks. One firm's putting it at 8% over the next 20 years. The next firm's looking at 9% the next firm is looking at 7% and so on and so forth. They're going to have the different return assumptions, potentially different standard deviations, potentially different correlations. So usually, most of the focus is on the return assumptions themselves. And you might think it doesn't matter a lot, but the point of that article was to really quantify how much it does matter. Small changes in your average returns can have a big impact on success rates reported in the plan or on sustainable spending levels. We did look at that a couple different ways in the article. Like To your point about comparing a 7.1% return to an 8.5% return. Will that difference reduce the success rate with the lower return had a success rate of 78% the higher return had a success rate of 87% and another way you can see that is like across the different companies, assumptions to calibrate the same success rate with a particular spending plan, we could look we're looking at spending levels ranged anywhere from \$33,000 a year to \$51,000 a year. So that variance in spending was just linked to the rosier the capital market assumptions, the higher, the more you can spend for a given probability of success. And so it really is quite sensitive to the assumptions. And now then, of course, that leads to the question of, well, then what assumptions you use? And that's we've already kind of covered, how you don't really know. So you might lean in the direction of being a bit more conservative with things, but it that's simply the problem. Is this question matters. You'll see big differences in the results of the financial plan as you get to looking at differences in capital market assumptions that you're using, the lower your return assumptions, the lower the success rate. And it's really a meaningful kind of it's not just a couple percentage points. It can be a big deal.

Alex Murguia 28:44

Hey, Wade, Brian, I think we intended this to be one episode, but we've had a lot of good stuff here, and I we're gonna do a little bit of a audible and turn this into two episodes and continue the conversation. But before signing up. What I'd like to do is in the show notes for this episode, if any one of you have any questions about your own financial plan, what we're doing is we're going to have a link that if you want to have a conversation with Jason riscola, who's been on the podcast on various occasions, and He guides the financial planning department for McLean asset management, feel free to set up free 15 minute chat just to discuss the basics of your plan or the assumptions and how you feel about them, we're happy to point you in the right direction, right Wait, what do you think about

Wade Pfau 29:29

that? Please, everyone, stay tuned for part two next week.

Alex Murguia 29:34

Thank you, Brian, you're not going anywhere. Don't get up. Don't get we're gonna press play as soon as this one is done. All right, everyone. Thank you so much. On retire with style,

Bob French 29:45

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. Is 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 risk, including Risk of Loss past performance does not guarantee future results the