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EPISODE 33:

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# Understanding Investor Behavior

*with Vanguard*



**Robert Morier:** Welcome to the Dakota Live Podcast. I'm your host Robert Morier. The goal of this podcast is to help you better know the people behind investment decisions. We introduce you to chief investment officers, research professionals, sales leaders, and other important players in the industry who will help you sell in between the lines and better understand the investment sales ecosystem. If you're not familiar with Dakota and their Dakota Live content, please check out [dakota.com](https://dakota.com) to learn more about their services. Before we get started, I need to read a brief disclosure, that this content is provided for informational purposes and should not be relied upon as recommendations or advice about investing in securities. All investments involve risk and may lose money. Dakota does not guarantee the accuracy of any of the information provided by the speaker, who is not affiliated with Dakota, not a solicitation, testimonial, or an endorsement by Dakota, or its affiliates. Nothing, herein, is intended to indicate approval, support, or recommendation of the investment advisor or its supervised persons by Dakota. Today's episode is brought to you by Dakota Marketplace. Are you tired of constantly jumping between multiple databases and channels to find the right investment opportunities? Introducing Dakota Marketplace, the comprehensive institutional and intermediary database built by fundraisers for fundraisers. With Dakota Marketplace, you'll have access to all channels and asset classes in one place, saving you time and streamlining your fundraising process. Say goodbye to the frustration of searching through multiple databases. And say hello to a seamless and efficient fundraising experience. Sign up now and see the difference Dakota Marketplace can make for you. Visit [dakotamarketplace.com](https://dakotamarketplace.com) today. Well, I am thrilled to introduce our audience to Andy Reed, Head of Investor Behavior Research and Kevin Khang, Head of Active and Alternatives Research with Vanguard. Welcome to the show, and welcome to the studio.

**Andy Reed:** Thanks for having us.

**Keving Khang:** Thanks for having me.

**Robert Morier:** Yeah, thank you for being here. And as always, my partner on the desk, Andy DiDomenico.

**Dan DiDomenico:** Robert, how are you?

**Robert Morier:** You have to get used to this today, a little right turn. It's exciting to have two people on the desk. We're usually a trio. So for us, it's really exciting to have the both of you. It's particularly thinking about what's been going on in the markets over the last few years, how Vanguard has grown, incredibly successfully, and then your respective roles. I know our audience is going to be very interested to hear more about that. But before we do get into that side of the conversation, if it's OK, I'm going to read your biographies. And then we'll get to the questions. Well,

Andy Reed is head of Investor Behavior Research in the Investment Strategy Group. He leads a global team of behavioral scientists who study how and why investors make decisions, cultivating insights and strategies to promote better choices for millions of investors. His research blends psychology and economics to explore the role of personality, and emotion, and decision making, how behavioral biases and risk tolerance shape investor preferences, and the impact of choice architecture on decisions. Before joining Vanguard, Andy was the Vice President in Behavioral Economics at Fidelity, where he established a behavioral economics practice. At Fidelity, he co-authored white papers on financial wellness and total well-being, conducted large scale experiments to improve investor outcomes, and presented research insights to investors, financial advisors, and retirement plan sponsors. Previously, he was an Associate Research scientist at Columbia University and a postdoctoral scholar at Stanford University. Andy earned a BA in history and psychology from Swarthmore College and an MA and PhD in developmental psychology from Cornell University. Kevin Khang is Head of Active and Alternatives Research in Vanguard's investment strategy group. He leads Vanguard's research efforts on active management, alternative investments, and personalized indexing. Among his areas of expertise are portfolio construction, risk management, tax aware investing, and household finance. Kevin joined Vanguard in 2017 as a Senior Risk Manager with the firm's Quantitative Equity Group. Earlier in his career, he served as a Director of BlackRock and a Senior Quantitative Researcher at State Street Global Advisors. Kevin's research is widely published in practitioner and academic journals, including The Financial Analyst Journal, The Journal of Investment Management, The Journal of portfolio Management, The Journal of Retirement, and the IMF Economic Review. He has presented his research to global regulators, portfolio managers, academics, and financial advisors. And his work is frequently featured in the news media. Kevin holds a PhD in finance from Northwestern University, an MA in economics from the University of British Columbia, and a BAH in economics from Queen's University in Kingston. Thank you both for being here, and congratulations on all of your success.

**Andy Reed:** Thanks for having us.

**Kevin Khang:** Thanks for having us.

**Robert Morier:** Well, like I said before, there are four on the desk, so it's a special day for us at Dakota Live. We're honored to have you both here in sharing your expertise in the context of your roles and responsibilities with Vanguard. If you're not familiar with Vanguard, I'll just quickly say the Vanguard Group is an American registered investment advisor based in Malvern, Pennsylvania, with approximately \$7.7 trillion in global assets under management as of April 2023. It's the largest provider of mutual funds and the second largest provider of exchange traded funds in the world. So I usually like to start with our guests beginnings. And for both of you,

obviously, academia played a very large and prominent role in your early careers. But could you share a little bit about your backgrounds as it relates to your academic paths and how it took you to your current roles, maybe starting with you, Andy.

**Andy Reed:** Sure. Yeah, so I think I sort of had good fortune as an undergrad. So I started studying psychology. And I ended up in a class with Barry Schwartz who, wrote *The Paradox Of Choice*. And this was right around the time that he was actually publishing the book. And Barry is an amazing researcher. But he's also incredibly humble. So we didn't know the book was coming out. But he was teaching about judgment and decision making. I was learning about all these different biases, and heuristics, and all the quirks of human nature, and where people kind of get it wrong. And I thought this is really fascinating. I ended up doing some research with him and thought you know I'd love to continue doing research on judgment decision making and specifically learn not just about how people make choices, but specifically, around where do they go wrong and what can we do to nudge them towards better choices. So I ended up doing a dissertation research on work that is very much inspired by Barry's research. So it was really around not so much what are the consequences of having too much choice, but how much choice do people actually want? And so this was kind of early mid-2000. And there was this proliferation of choice across all sorts of domains. This was around the time when Medicare Part D was rolling out. There were dozens of options for health insurance plans. And the question was, do people want this amount of choice? And that's what we asked people. How much choice do you really want? And we found that people want a lot less choice than what is typically offered. And as you get older, you want even fewer options. And so there's a little bit of wisdom that comes with age. And so this kind of launched me into this field of judgment and decision making, behavioral economics, and I've just been passionate about it ever since.

**Robert Morier:** I can certainly attest to that. I remember I took my father to Buy Buy Baby when my child was first born. And the amount of choices that we have as parents is overwhelming. So as investors, it's equally overwhelming. So if you think about how things have changed for us, particularly relative to our parents, it's very interesting. Kevin, I'd love to hear yours, as well.

**Keving Khang:** I thought going into undergrad college, I thought I was going to be a political science major. I always thought social science was very interesting. And then I was given the advice that, well, why don't you think about economics? You like math, which I did. But then I just didn't really have as much of a passion for it just natural sciences. So somebody told me that, well, it's a good area where you can combine your love of math. And then what you like about social sciences. So I started doing that, and this was in early 2000, everybody was talking about the stock market and how terrible it is or how people didn't really see that coming, the dotcom bubble

bursting. So that was interesting, too, interesting time to be studying economics, to begin with. And then quickly, I realized that I just really loved almost everything, every subdiscipline in economics, from industrial organization to macro, in particular macro to finance. So from that point on, I was just kind of basically trying to figure out how do I continue to do this and then get paid for it?

**Robert Morier:** The million dollar question.

**Keving Khang:** Yeah, so there's this macro economist by the name of Greg Mankiw, who actually wrote a pretty famous first year principles of economics textbook. So I think he is kind of well-known for many other things. But for me, he says that the trick of life is to do what you love to do, and then be acknowledged for it, and then be appreciated for it. So from that point on, I think that was just kind of like the way I thought about this. And then it just led me to a one year terminal master's degree out in beautiful Vancouver and then, ultimately, to the States, to go to grad school in Chicago.

**Robert Morier:** I appreciate that. Thank you for sharing that. Well, thinking a little bit, Andy, about your career path, most of our audience are asset allocators and investment sales professionals. But we also open these podcasts up to a wider audience. So I think it would be helpful for everyone maybe, as a quick refresher, as to what we're looking to achieve, when understanding the fundamentals of investor behavior. So what are the core principles that you think about maybe, going back to your own research, and then thinking about it practically today.

**Andy Reed:** Yeah, absolutely. I think at the core, behavioral economics is about the gap between what investors should do and what they actually do. And so we have experts, like Kevin, who have background in economics and finance who say the optimal decision is X, right, whatever it is. And then there's psychologists who say, well, actually, people don't do that because people have limitations. They have cognitive limitations. Emotions get in the way. We don't always have the time or energy to do the right thing. And so behavioral economics is about, I would say two things, so identifying the gap between what people ideally should do for the best possible outcomes and what they tend to or actually do. And then the second thing is how do we close that gap? And so I think, historically, the field of behavioral economics, behavioral science, judgment decision making, whatever you want to call it, for the first few decades, was very much focused on look at all the ways in which people are not rational. So Nobel Prize winning work by Daniel Kahneman, Amos Tversky showing here are all the heuristics and biases, the deviations from the optimal course of action. But I think in the last couple of decades, in particular, you've seen the rise in, I would call it the nudge movement, so this focus on, given what we know about human behavior, how do we change the environment? How do we message people? How do we incentivize them to get to close that gap, and to get

them to make sort of better choices. And so I think that's what really motivates me, and my team, and our research is we want to identify the gap, but we want to also test ways to close the gap and improve outcomes for investors.

**Robert Morier:** Kevin, could you expand a little bit on your role and responsibilities with Vanguard? What was it about the firm that felt it would be a good fit for your area of studies. And what were you looking to accomplish when you joined? You had the luxury of seeing a few other shops, which I mentioned in your biography. So you had some perspective. We'd love to hear what that path looked like for you.

**Keving Khang:** Like many other things in life, moving from my wife, moving back to the greater Philly area for Vanguard position, and then for me joining Vanguard, it was more of a holistic multidimensional decision. It was a good move for the family. But it was also a good move for me work-wise. And I guess what I was, as you mentioned, having been, or having been with a few other shops, or a few other companies, what I was looking for, I was looking for three things, roughly. So number one was kind of going back to what I said earlier about how do I continue to do research, which I'm very passionate about and make sure that I have that creative outlet. And then make sure that that is something that's useful for the organization that I'm part of. In my prior roles, I had some of those. But then it was always kind of in only part of the job requirement and maybe not the full requirement. So I was looking for more of that. And then the second piece, I think this is where I kind of align with the generations that are maybe slightly younger than me, I was looking for a lot of meaning in work. Coming to Vanguard and meeting with people, I can't say my first impression was as strong as it is now, having been there for six years. But still, it was a very palpable. It was very different. There were certainly more than just the monetary kind of drivers that was really driving people at Vanguard, many people at Vanguard, anyway. So that was another thing. And then I really appreciated the integrity of the senior management that I could see at the point. So like those three things, not to be taken for granted, and I saw the makings of those three actually working out. And then it's one of those things where with every passing year, things have gotten better. And then as you get to appreciate that, I think you just see that in this special organization. So that's what led me to join Vanguard, just to give a brief answer to your questions about my roles and responsibilities in my current role. So Andy and I are both part of this investment strategy group, which is basically an internal think tank. So we do thought leadership, which can come out in various forms. So it could be a white paper. If we want to basically make how we're thinking about a certain topic known, but it also could be just an internal consulting project if we need to inform a particular product offering within Vanguard or our particular stance on a given topic. So my role is all about basically active. So just to be a little more concrete, it's basically three questions. Very simple one is why should people do active investing? So that's a big question of why. And then the second question is, who should do it? Kind of going maybe

overlapping with Andy's field a little bit, it's not for everybody. And the third piece is kind of like how should you do it? So that you're actually effective, and then you hopefully get the desired outcomes.

**Robert Morier:** That's interesting. We look forward to diving more into that. I think it's also very interesting talking about the why Vanguard, particularly the mission, I think, we were kind of talking before. We started recording. I've done about 35 to 40 of these episodes. Dan has been on some of them before. So I've been kind of playing around with the transcripts and looking at the language that people have been sharing. And I've been amazed how often mission has come up. And it's not just endowments and foundations. It's corporate pension plans, public pension plans, how important it's become for people as to the mission of the organization. So it'll fit right into that trend data. So thank you for sharing that. We appreciate it. Well, I also read off a number of research areas for you. If I do it again, it might take up a lot of the show. How do you prioritize it all? I mean, any of those could be its own discipline. So as you think about those three questions, how do you prioritize those research responsibilities?

**Keving Khang:** So I think what might be listed on a publicly available web page, either my research page, or Vanguard profile, maybe it requires a bit of an explanation, why they are listed, to begin? So it's more they're there as a reflection of the topics I've worked on, so far. So coming out of grad school, my focus was actually on the drivers of housing market bubble and then why people made speculative or what looked like ex post speculative investment decisions with their residential homes. So it actually had a bit of a behavioral angle to it because, otherwise, you can't really explain that. But ever since then, I was always fascinated with what people do because they're very unpredictable to a degree. And then there's always an element of irrationality. And so the field of household finance has always stayed with me. Active portfolio management as well as portfolio construction, I've kind of like lived that more on the front line in the earlier part of my career. So I do have a research mindset, which I always have more questions than answers. And then just kind of being part of the process and portfolio construction process, I came away from that experience thinking, oh, only if I had a full time job where I could answer all these questions. So that kind of stayed with me. And then I still have a very long list of questions that I don't have the time to get to from that. And then the other piece is when I first moved over within Vanguard to our current group investment strategy group, the first assignment that was given to me is, hey, Kevin, can you actually think about direct indexing and tax aware investing. So that sort of agenda stayed with me for over three years now. So it's more of a reflection of what I've been doing. And then, but right now, the main focus is really on active and answering those three questions.

**Robert Morier:** So if you think about active, what are some of the top priorities then that you're currently working on with Vanguard, particularly as it relates active management, maybe in the context of portfolio construction, the advice that the team is giving to the advisors?

**Keving Khang:** So maybe I'll give two high level themes. So the first one is just actually letting people know that Vanguard does a lot of active. And I know that sounds like funny. But we're actually, in terms of assets under management, we're number two. If you go out there, and then look at equity and bonds, were a big part of that market. And that's always been the case. But because our passive and indexing franchise is so strong, and it's been so successful that people just don't recognize that, and in the same building that I work at on the third floor, there is an army of fixed income portfolio managers, who are incredibly fascinating to speak with. And they're all active managers. So part of my job is to actually make sure that people know that we have that talent, and then people know what they think to the extent that they can share their thoughts, which are, again, incredibly interesting. So one example that's coming out of that is I recently partnered with our muni desk. And then we're basically kind of opining on how the recent rate hikes, over the last 18 months, or however long it's been, following the very long lower for longer interest rate environment, is putting incredibly interesting wrinkle into the convexity management in the muni world. So that's a very interesting one because it gives you the opportunity to think about different levers and different margins of active management. And so that's coming out. But that's just an example. The other one is we have this proliferation of all these active products that are out there. And it's kind of trendy, as you know. But then the question is, and this is where I think it's a really interesting to be working on these questions from Vanguard, from a place like Vanguard because, at the end of the day, we're kind of thinking about everything from the individual investor's point of view, which I will also say there's an incredible sort of diversity around that. But nevertheless, it's an individual investor. It's not an endowment. So then, from their point of view, we don't necessarily know if all that needs to be kind of known has been discovered and studied about how to actually construct a sensible active portfolio. So you have all these wonderful product offerings. But then what do you do with them? And then is one way to assemble them more sensible and aligned to the particular investment objective than a different one? So a lot of the current research portfolio is focused on that.

**Robert Morier:** Well, Andy, you've been with Vanguard for about a year now. Congratulations on the anniversary. And we're talking about questions. There's no shortage of questions. I think one of the hardest things about research is when to stop asking questions and start going after some answers. So what are some of the questions that you're looking for answers now as you think about your own priorities within the team? And what you're particularly working on, maybe kind of parlaying off of what Kevin had said?



**Andy Reed:** Yeah, you know, I think building on Kevin's point, I think we kind of have this model of how do we evaluate and prioritize research questions. I think there's someone on my team who coined this term like the impossibility triangle of the criteria that we're trying to satisfy. And there might be trade offs. So the biggest criteria is what has the biggest potential value to our clients, to the end investor, as Kevin said. The individual investor, how can we give them the best chance of success, so really feeding into Vanguard's mission? So that's number one, first and foremost. The second is, how do we generate insights that have external value to folks like you, to folks, you know, listeners of the podcast, media, policymakers, you name it, really, thought provoking insights that influence the debate, influence how external groups think about the challenges facing investors. The third, I would say, in no particular order, business value. So what are the needs of the business. As Kevin said, sometimes, the business comes to us with a question. And we try to provide the best possible answer. And I would say the fourth thing is what are the research team passionate about? Researchers, if they're intrinsically motivated to engage with the question, the quality of the work is going to be better. The impact is going to be higher, and it's just going to be better for everybody's experience. And so trying to satisfy those four criteria is tricky. I would say, at the highest level, we try to look for research questions that can inform the design of, let's call it, billion dollar solutions. So if you think about the history of behavioral economics and going back 20-plus years ago, probably around the time that Dan was at Vanguard, there was a trillion dollar idea that was developed by behavioral economist Richard Thaler and Shlomo Benartzi, which is the Save More Tomorrow program in the 401(k) space. So automatic enrollment of 401(k) plans, automatic increase programs, so every year, ratcheting up that savings rate, and default target date fund investments, the combination of these three tools led to potentially \$1 trillion in extra retirement savings across all of the US. I mean, it's really become the norm for 401(k) plans. It's incredibly powerful. And so, ideally, we're looking for the next trillion dollar idea. I'm not sure if we'll get there. But \$1 billion would be nice. And I think Kevin actually collaborated with our team last year on some research to identify an opportunity to deliver hundreds of millions of dollars in tax advantage outcomes for Vanguard investors. And now, we're working with the business on rolling out the deployment of a solution that's informed directly by the research. So as Kevin said, we generate the insights. That's kind of first and foremost through rigorous scientifically grounded research. But then equally important is the application and dissemination of the insights. So in terms of research questions, we're interested in just about everything, just to rattle off a few topics. We're looking at what's the best way to think about to measure and to help investors understand risk? This is not something that comes naturally to human beings. We are not natural born statisticians, let's say. And so risk is, it's fundamental to making sound investment choices. But it's not something people have an intuitive grasp of. We're also looking at the role of emotions and decision making. This is something that, all over the place, you see people talking

about. And I would say vilifying emotions, and saying emotions are the enemy of investors. And what you'll notice if you look very closely at all the thought leadership in this space, there's not a whole lot of data. It's a lot of anecdotes, and conjecture, and it's kind of old wives' tales, maybe. And so what we're trying to do is really get a rigorous understanding of how emotion can be beneficial or harmful, depending on the context for investors. I would say those are two of the areas where we're focused on now. But as Kevin said, it's we're passionate about a wide range of topics. And our team keeps growing. So hopefully, we can take on a broader and broader research portfolio over time.

**Robert Morier:** Well, you mentioned the challenges facing investors. I don't think we have enough time to list all of the challenges that have faced investors over the last three or four years. It really has. And we talked a little bit about this before the podcast. But how has that individual investor, as you see it from Vanguard's perspective, handled these events, as it relates to their portfolio. So you're sitting back from a research perspective, looking at these investors, what they've faced from COVID throughout, how would you say, generally speaking, the reaction from investors has been from Vanguard's perspective?

**Dan DiDomenico:** And the lasting impact that it's going to have.

**Robert Morier:** Absolutely

**Andy Reed:** Yeah, it's a great question. So I think we think about it through a few different lenses. So you know first and foremost, what are they doing, so behaviorally? Second is more around the thinking and feeling, so what's going on inside their minds? And so we can look at administrative data to understand behavioral trends. And what we see there is a lot of inaction, believe it or not. So the basic finding is that, on almost every day, almost every Vanguard investor is staying the course. And that's what we like to see. We don't want to see them overreacting to the latest news or market volatility, things like that. Even on the most active trading days, we're only seeing 1% to 2% of households making a trade. About 3/4 of retail households didn't make any trades in 2022. So that's the upside is that we're not seeing overreactions as the market goes down. We don't see people panic sell, despite what you read in the headlines. It might be happening elsewhere. But it's not happening at Vanguard. And what we're seeing is evidence of discipline and long term perspective. And this is one of the principles that's absolutely core. We believe that when investors maintain discipline in long term perspective, they have better outcomes, and the research bears that out. Now what's interesting is if you look at through the sentimental side or the sentiment side of the equation, we have a long running survey. We've been running the survey every other month. We survey 2,000 investors from across both the retail space, so think brokerages and IRAs, as well, as the institutional workplace side, which is 401(k) space. And we ask them what do you

think is going to happen in the market? What do you think is going to happen to the economy, the GDP over the next, you know, year three, years 10 years. And what we found over the course of 2022 and into 2023, is that investors' expectations do change. So they're not completely oblivious to changes in the market. So they became more and more pessimistic in 2022 as the market went down. But as the markets rebounded in 2023, they became more and more optimistic. And right now, they're expecting 5.5% returns over the next year in the market. Now, there's a bit of a disconnect, though, because the behavior is showing a lot of inertia. The emotions, the expectations are changing. So that doesn't mean that investors are asleep at the wheel. But I would say that they are maintaining that discipline. They're not overreacting, which is what we like to see. I think the opportunity that lies within is those 3/4 of investors that made no changes, was there an opportunity to rebalance? Was there an opportunity to reassess their portfolio and make a positive move? And that's something where we feel like there's an opportunity to intervene and help because we don't necessarily want zombie investors. Stay the course doesn't mean do nothing. It means you keep an eye on your portfolio, maybe rebalance when it's appropriate. So we've got some work to do.

**Robert Morier:** It must be interesting considering how much we've seen. So it's that old saying, you know, I've seen it all before. So whatever comes next isn't going to rattle me as much. So you're thinking about emotions.

**Andy Reed:** The last few years, we've had a global pandemic. So unless you're 100 plus years old, you've never lived through something like that before. We've seen war in Europe. So unless you're what? 70 plus years old, you haven't really seen that before of the same magnitude. We've seen incredible market volatility. We've seen meme stock trading phenomenon. So it's just been major event after major event, these was once-in-a-lifetime black swan events. There have been a bunch of them in the last few years. And one of the upsides, let's call it, of human psychology is that, as we're exposed to intense, in some cases, stressful events, our reactions dampen over time. So we habituate to these types of events.

And there's sort of this notion that stress breeds resilience. And I think that's probably what we're seeing right now is that the investor is resilient. The investor is optimistic, at least, Vanguard investors. And we hope that the lessons learned of the past two, three years, persist over time. And so whatever comes down the road, doesn't really faze them. They can maintain that discipline.

**Dan DiDomenico:** That's a great point. And as you think about the participants within Vanguard, the assets that you see, the patterns that you're able to identify, trends, Kevin, I'd love to hear how you all set that priority, that agenda, how you're trying to marry now the top down and idea generation, how that's applied across traditional private markets? How does that help? And within your colleagues and your team, how does that set the agenda and priorities for you at Vanguard?

**Keving Khang:** So as Vanguard has grown, and these things have just become more systematized, maybe I can just share a couple of committees that basically own that type of solutioning, and thinking, and decision making. So one is what's called the Strategic Asset Allocation Committee that's chaired by both Andy and my ultimate manager, Joe Davis. So he's the Head of Investment Strategy Group. And it's a multi-person group. Vanguard doesn't really have a culture, where one person comes in and then calls a shot. So everything that basically comes through that committee will have gone through a fairly rigorous first thinking, for sure, and then, for the most part, research process. Then there's going to be a lot of due diligence kicking the tires. I guess maybe a simple way for me to say that is we don't do a ton of, if at all, tactical asset allocation. That's happening within the individual portfolio that's actively managed at that level, at the fund level. That's the PM's prerogative, and the part of their responsibilities. But at the asset allocation level, it's primarily strategic asset allocation. So these things are very rigorously debated there. And then it basically then sets the tone. The interesting thing about Vanguard being Vanguard is that, I mentioned this earlier, there is a huge diversity and heterogeneity of the types of investors that we need to think about. When you think about the mom-and-pop investors, who are maybe business owners who have a very different sort of lifetime income profile compared to someone who lives in W2, very predictable white collar sort of a job, and then that's also different from ultra high net worth investors, who we also serve. So it's sort of that diversity that we need to be very cognizant of. And then when we set the tone, and then basically provide some sort of asset allocation solutions, we need to be very, very just aware who this is going to help. And that's where the other committee comes in, which is it's called the advice policy committee. So it's chaired by one of my coauthors, Joel Dixon, who is basically head of that group. And then, again, it is a multi person group that basically committee that comes together. And then, basically, comes up with the solutions.

**Robert Morier:** Back in 2014, Vanguard released a white paper on liquid alternatives called, "buyer beware." So at the time, I think they were asking a lot of the same questions, almost a decade ago now. And it was funny I noted you quoted Carl Sagan saying, "extraordinary claims require extraordinary evidence." So I think claims have been tampered. Regulators have done a very good job of tampering claims over the last 10 years. But I'm curious from both of you about the evidence. Has the evidence changed? I know you do introduce it, but as you think about it on an individual basis, if you think about the behavior of an investor, as they're thinking about an alternative product, arguably, it may have the same liquidity profile. But we're not really sure maybe what makes up the constituents of the zoo, as you said.

**Andy Reed:** Investors are often a lot less knowledgeable about complex or unusual investment vehicles than the designers of those vehicles might assume. And so this is

a little bit of like as an industry, financial services, you know, it's almost like we design these products and these experiences by experts for experts. And so there's a little bit of an empathy gap in terms of the fact that 2/3 of Americans don't understand they can't convert 1 in 1,000 to 0.1%. They're not financially literate. So the basic level of knowledge about basic money matters, investing, let alone these complex topics, is actually relatively limited. And so, you know, I think as Kevin said, as a firm, we're both trying to understand what's the optimal way to integrate some of these things into a portfolio that drives better long term outcomes. I think that sort of half the challenge. The other half is sort of educating, informing, guiding people down the right path so that they make the right choices. And they feel good about the choices that they've made. And that's, I would say, maybe even more challenging because of the heterogeneity that Kevin said. Not every person, the same terms may not resonate or may not be well-understood by everyone. Some of our investors, some of the active super-engaged investors maybe on the older side, they're savvy. They like being talked to as though they're experts because they consider themselves to be experts. Whether that's true or not, we can put aside. But you know, typical investors, they're kind of not necessarily searching for every little bit of alpha. They may just be wanting to keep up with the market. And so coming to Vanguard for what our traditional sort of bread and butter is in terms of low cost diversified index funds, I will say one thing, though, which I think is quite fascinating. The stereotype of Vanguard investors is that there are all these passive, let's say, zombie investors. They come here for the index fund. They buy, and they hold forever. And there's quite a few of those. Don't get me wrong. But a few years ago, we actually analyzed the portfolios of investors at Vanguard. Now we specifically looked at affluent investors. So keep that caveat in mind. What we found is that they were nearly as likely to hold active funds as they were to hold index funds. So it was something like 80% to 85% of them held active, and about 90% held index funds. So it's not just entirely all index all day. So there is a little bit of that, well, just as much appetite almost for active products. But I'll defer to Kevin on the solution side.

**Keving Khang:** And I guess just about the claims softening or being revised, I want to maybe revisit why that liquid alts even became a thing to begin with. My reading of that is, people were very burned during the 2008 through 9 crisis, and they resolved never again will they actually suffer this type of drawdown. And how do I ensure that I have some sort of an insurance policy? We always have a tendency to fight the last battle, so then some of the liquid alts, some of the strategies certainly work well through episodes like early 2018 volatility spikes, COVID. So you go through it, and then these look like they might be similar to 2008 through 9, but they're actually not. And this is what I mean by the heterogeneity in terms of product and strategy implementation. Trend following itself sounds like a pretty simple strategy, but then there is a lot that goes into it. And then depending on how you implement it, it may or may not do well, and then most didn't do well during COVID, for example. So that's number one thing to recognize in terms of what do we see in terms of the

empirical evidence so to speak that's lived out of the sample so to speak? The second piece is, we talk about this a lot, I think we have this illusion of, 10 years is long enough somehow to give us some evidence to reach a conclusion. Maybe it is for certain things. But when it comes to investing, I feel like the last 15 years has been just one big regime, which is central banks having a very active role in molding and shepherding financial markets for better or for worse. I'm not commenting on that, but that's been a fact. When you have that presence, I think we just have to take this evidence in terms for what it is given that context. And so those are my just opinions on around this issue. I'm not necessarily down or bearish on some of the liquid alt strategies per se, but then if it's an insurance policy, we also shouldn't expect the insurance policy to continue to give us the premium where it's supposed to kick in when we have an issue.

**Robert Morier:** Like any good insurance policy you should read the fine print. So it makes a lot of sense interesting insights. We talked about complexity and the complex of strategies and tools, so a couple of things. One is that we have a new complex strategy that's been introduced relatively recently, digital assets. So as you think about the research from your side as you're talking to your colleagues, potential investors about the pros and cons of digital asset investing, and then on the tool side, which we'll talk a little bit more about, is artificial intelligence. So you have all of these PhDs and all of a sudden, this big new tool has been introduced to you. So again, prioritizing your time. So I'm just curious, starting with digital assets, does it have a place in an individual investor's portfolio from a research perspective if you've done any of the work on it to date?

**Keving Khang:** So I think we've done some thinking. I think it'll probably continue to go on. I think at this point, I'm just going to limit the discussion to digital currencies, and when it comes to digital currencies, I think it feels a little more kind of a topic to understand just because we feel like we've seen something similar to that back in history. And just in the monetary history of the US and other countries where if you go back to the late 19th century and early 2000s, it was like a thing. It was just basically constant. It was a constant to be aware of, which is all these local-regional banks creating their own currencies and then it'll go through the cycle of euphoria, boom, and then bust, and then they'll do it again. So I think appreciating that history. And again, these things are never one for one, but I think there is a bit of a parallel. And deep seated in the digital currency movement and idea is that how do we know that these Fiat currencies will be there forever? What if the inflation goes out of hand? And all these thoughts, and I think they are reasonable thoughts. But at this point, I think where we are, it's not an income yielding asset, any of these digital currencies. And it's more of a hedge strategy to the extent that people felt uncomfortable about, again, the Fiat currency, the dollar here. So I think that's where we are.

**Andy Reed:** Yeah. I would add I think going back to the comment earlier about people don't understand risk, I think they especially have a hard time thinking about the risks involved in these new investment opportunities or vehicles. And so one of the things that definitely raises hackles for me at least is this notion of crypto and a 401(k) where you're trying to invest for the long run. There's this sense that, hey, this is going to be your nest egg for 20, 30, 40 years of retirement. And people might see a TikTok video about, hey, invest in Bitcoin, and they get this wild idea. And I think the challenge is not understanding the risk reward breakdown and putting your nest egg in something that we don't necessarily know enough about is real. There's a risk of temptation that investors face when they're so excited about this new product. Well, it's not quite new anymore, but this modern product. And many might see it as a get rich quick type scheme. A few years ago, the Reddit discussion forums were all about Yolo. Yolo, just make a risky move and maybe it'll pay off. It's like a lottery ticket. And if it doesn't work, who cares? You're going to be just right back to square one.

**Robert Morier:** Yeah. I missed the Journal publication on Yolo.

**Andy Reed:** And I think at Vanguard, we really encourage don't chase returns, don't chase the latest fads. It might be tempting and emotionally, it's leading you in that direction, but I think the evidence shows that when people make sound decisions and keep that long term perspective is when they do better.

**Robert Morier:** Well, something we certainly don't know enough about is artificial intelligence. So have you explored the behavioral implications of artificial intelligence?

**Andy Reed:** It's a great question. I'll say, on a personal note, a few years ago when I first heard the term robo advisor, I got very excited because I envisioned essentially a chat bot that could help you make better financial choices. And then I found out that it was just automated investment portfolio management, and I got a little less excited. But I think one of the things that's really exciting about some of these automated solutions is that it potentially fills our need for, let's call it being cognitive misers. So this notion that we're very selective about how we deploy our mental energy. And I think for a lot of people, maybe even most investors, there's probably something else that they'd rather spend their time and energy on than managing their portfolio or making complex decisions. And so to the extent that they can get quick answers without having to do research themselves. One of the things that's fascinating about ChatGPT, you can ask a very nuanced complex question and you'll get an answer right away. It may not be accurate, so that's a caveat.

**Robert Morier:** We'll put a disclosure on the podcast.

**Andy Reed:** I think if you can fix the accuracy, it could be quite compelling, and I think you could get to a point where there is something more like a what I thought was a true robo. Now, the downside to that and I think where the current state of these tools falls short is on the EQ side. ChatGPT is not a very good therapist. It does not have a good sense of humor. I asked ChatGPT a couple of weeks ago to tell me a joke, and it and it gave a bad pun. And I said, no, that's not a good joke. That's a bad pun. Tell me something that's not a pun, and it just gave me a series of bad puns. And I'm a dad, so I appreciate dad jokes, but it doesn't understand the human emotional side of the equation. And so when we think about this notion of, oh, could ChatGPT or these types of tools replace advisors, and given the fact that one of the biggest parts of the value of advice is the emotional value, behavioral coaching helping people stay calm during market volatility, it may be a long time before it closes the gap with a really good human advisor. But it's definitely something to keep our eyes on.

**Robert Morier:** How about from a risk management perspective.

**Keving Khang:** I think a very helpful framework I found to think about all these things because I think it's a fact that it's only going to get better is given by this person by the name of Avi Goldfarb. He's a professor up in University of Toronto, and he has a series of books, the latest is called the Power and Predictions. He lays this out is that when we do investing or when we make any decisions really, we do two things. One is prediction. And it may not be like, oh, x is going to happen, but I think it's an inherently a probability statement. Is there going to be a recession or not? That's a probability statement. It's just a matter of whether it's a matter of whether it's 70% or 30%? But you come up with that prediction, and then what you do is basically, there's a human or maybe nonhuman judgment that goes along with it where you actually then take an action in terms of what you do with that prediction. Investment is an inherently prediction and judgment a business. Even for something as simple as or what people might mistakenly perceive as simple as managing an index fund, there is actually the notion of prediction and judgment. Like, is this particular stock going to get delisted or not? That's not easy, but that's a probability, it's a contingency that portfolio managers have to deal with all the time. And that then figures into the trading volume. What does everybody else in the street know? All that whole sort of a bag of worms you need to deal with. So I feel like with generative AI or just really any other artificial intelligence, you can probably get a lot of help in terms of maybe making the predictions better, but I think judgment is still very much preserved. It's actually still very much the domain of humans for now. And I think it's just a matter of, how do we actually make use of this new technology and maybe get up on the learning curve?

**Robert Morier:** And there's a lot of work to do. Excellent points Thank you for sharing that. Thank you both. So a question I've been asking many of our guests,



though I think this might be the last time because we're more than halfway through the year, is a quote that I've been carrying since March with some of our conversations, which is, there are years that ask questions and years that answer. So for both of you, what do you believe 2023 is going to present for the remainder of this year? Now, I know you're professional questioners, but as you think about the answers, where do you think that balance could be struck?

**Andy Reed:** I'd like to believe that 2023 is the year of investor resiliency. So 2022, we saw that despite the market continually declining, that investors largely stayed the course 2023. They're still staying the course. Their expectations are improving. They've been through the wringer over the past three years, and I hope that it means that they're well prepared to handle whatever may come down the line. But I will say the data will tell us and time will tell.

**Keving Khang:** For me, it's been a year that led me to a lot of history books. And I don't mean to skirt the question, but I think there is the notion of, if I have to decide between questions and answers, I think it's been a year of questions. And to a degree, I feel like we have more resolution in terms of whether there's going to be a recession or is it going to be soft landing or not? But I think this goes back to some of the things that I said earlier, which is, I feel like we've just lived in one return environment since 2008 or 19, and that's a very heavy presence of central bearings. And part of risk management and thinking about very long term is that you have to think about how this is all going to conclude? And so me, it's a question. It's also fascinating to see the market really take the cube from AI, the rise of AI and all these other sentiment boosting events to really turn into not a bull market just yet, but to recover as much as it has. It's fascinating. And then I think these things, you just don't appreciate the nuances of after four or five years have passed. But then that's what brings me back to the history books because that's where you find all these little nuances.

**Robert Morier:** Can you share a book?

**Keving Khang:** So I guess the most recent book that I found interesting was, so I'm actually into re-reading some of the autobiographies I read. So I re-read Keeping At It Paul Volcker in light of the inflationary, and then in the middle of re-reading Bob Rubin's autobiography.

**Robert Morier:** Well, we're getting close to the top of the hour. And I would absolutely love another hour of your time, but I know we're all very busy. We ask this of all of our guests, just the mentors, the people who have influenced your careers along the way. Maybe, Andy, starting with you. If you think about those folks who helped you get along.

**Andy Reed:** Yeah. I think it was probably my second year in grad school. I had the opportunity to meet with a researcher who became my postdoctoral mentor, so Laura Carstansen, she's a professor at Stanford. And I was very young, and I was naive, and I was just super pumped to be a researcher. And I said something to the effect of, I'd rather do research that's counterintuitive and clever than research that's conservative and incremental. And she pauses and she thinks about it and she goes, well, it's important to have a good balance. And what she was basically telling me is, don't get too excited kid. And it's really stuck with me because I think over time, I realized, whether it's your research portfolio or your investment portfolio, balance is key. And so our team wants to do some moonshot groundbreaking research like something nobody's ever found before, something that's going to grab headlines, things like that. But at the end of the day, you can't just swing for the fences every time. It's really important to do just the basic work like understanding answers to basic questions. And so finding the right balance and not always chasing after headlines I think is the key to success for researchers, for teams, and for groups like ISG. So having that diversified research portfolio has served us tremendously well.

**Keving Khang:** So I have two people, and promise to keep them brief. Jonathan Parker so he's my thesis advisor from Northwestern. Now he's at MIT. And the two people, including Jonathan, that I'm going to mention are certainly mentors and I still very much see them and then stay in touch with them, but also, maybe they mean as much to me because of just how they lead their lives. So in that sense, more of a role model who you can just basically watch from a distance and still learn a ton from. So the thing about Jonathan is that he still is one of the most, if not the most, dynamic person to be in the same seminar with. And the reason for that is, somehow in this age of hyperspecialization, and that's true in academia too where it takes like several years to really become that skilled artisan on your field, he somehow managed to have this wide range. So he has this ability to go from behavioral economic theory to empirical behaviors of consumer behaviors to just pure macroeconomics. And he has the chops to somehow just go from one field to another and be productive at the same time. I always thought as a grad student, I always thought how does the person do that? But then I guess enough time has passed, and I just appreciate how neat that is to be able to borrow all these ideas and then somehow make it your own. So that's one person. And then another person is still at Vanguard, John Ameriks. So John's interesting because I had come across his name as a grad student. And I thought to myself, oh, an interesting person who does a lot of academic research who works at Vanguard. That's what I thought. And then when I first came in, it was basically his group that I was a risk senior risk manager. And there are many great things about John, but the one thing that I'll say is that somehow, he may be similar to Jonathan, somehow finds a way to be very relevant academically and keep that passion alive while also being a very effective investment management executive. And he has a day job. And somehow he finds synergy between the two worlds. And I

think someone else could have told me that, oh, you could actually do it and I'm sure I would have been receptive to the idea, but it's one thing to hear that and then another thing to actually see someone actually do it. And yeah. So for both reasons, they're my role models.

**Robert Morier:** That's wonderful. Thank you for sharing that. Dan, next time I'm going to ask you, so I want you to start thinking about it. But in the interest of time, we will think about it for next time. Kevin and Andy, thank you so much for spending time with us here today. Dan and I greatly enjoyed the conversation. I know our audience did as well. Congratulations on all of your accomplishments. We look forward to seeing more from you both. I'm sure we will. So thank you.

**Keving Khang:** Thanks so much.

**Andy Reed:** Thank you.

**Robert Morier:** If you want to learn more about Kevin, Andy, and Vanguard, please visit their website at [www.vanguard.com](http://www.vanguard.com). I encourage you to explore their research, as well as all of the information that's available on their site. You can find this episode and past episodes on [Spotify](#), [Apple](#), [Google](#), or your favorite podcast platform or also available on [YouTube](#) if you prefer to watch while you listen. And if you'd like to catch up on past episodes, check out our website at [dakota.com](http://dakota.com). Finally, if you like what you're seeing and hearing, please be sure to like, follow, and share. We welcome your feedback as well. Again, thank you for being here. And again, to our audience, thank you for investing your time with us