Rodrigo:	**00:01:01**	All right. All right.
Adam:	**00:01:03**	Happy Friday.
Mike:	**00:01:03**	Happy Friday.
Rodrigo:	**00:01:04**	How are you guys doing?
Mike:	**00:01:05**	Very well.
Rodrigo:	**00:01:06**	Hi, Jack. How are you?
Mike:	**00:01:08**	Cheers.
Jack:	**00:01:08**	Good. Cheers.
Rodrigo:	**00:01:09**	Cheers. What do we got? I got …
Mike:	**00:01:11**	I've got a cup of tea with cognac.
Jack:	**00:01:15**	Spicy Margarita. …
Rodrigo:	**00:01:18**	I never even had a chance to … back to back to back today.
Mike:	**00:01:22**	I don't know. The body wants what the body wants. I don't know why.
Adam:	**00:01:25**	Yeah, fair enough. Jack's got a great Martini going -- not Martini Margarita
Mike:	**00:01:30**	Spicy Margarita here.
Jack:	**00:01:32**	Yeah, I try to be an amateur drink maker in my spare time. So, I figured I'd put my best foot forward for my first ReSolve Riffs' appearance.
Mike:	**00:01:39**	I do love the Spicy Margarita. It's one of my favorites. Did you make it skinny with the agave syrup or did …
Jack:	**00:01:44**	Yes. Yeah, just lime and agave. God. I can't stand mix. So, I have to make them all fresh. It was weird. My wife was -- before I came on here, I was downstairs like juicing limes. And my life was like, "What the hell are you doing?" I'm like, "I'm going on an investing podcast like I got to juice some limes first."
Rodrigo:	**00:01:59**	Going to work.
Jack:	**00:02:00**	Right.
Adam:	**00:02:01**	Non-sequitur alert.
Mike:	**00:02:02**	Yeah. One of the pleasures of the Riffs' happy hour, getting together.
Adam:	**00:02:08**	Okay. Let's hear it. Let's hear the disclaimer. Come on.
Mike:	**00:02:12**	Yeah, right, right. So, keep in mind that this is for educational purposes only and not investment advice. So, we're going to have lots of wide-ranging conversations. Don't take investment advice from four guys on YouTube at four

o'clock on a Friday afternoon. Do your own research and homework. Having said that, welcome, Jack Forehand to the stage. Ladies and gentlemen, put your hands together.

Jack: **00:02:34** Thank you guys very much for having me. It's weird being on the other side of the mic here. I'm used to being on the side you guys are on.

Mike: **00:02:42** So, what would you ask yourself if you were on our side of the mic?

Podcasting For Dummies

Rodrigo: **00:02:44** Yeah, so in a succinct five-minute period, why don't you tell us everything you've learned in the last year of doing your podcast?

Jack: **00:02:51** Yeah. You know, I've learned a lot of things. You know, I'm not a natural questioner of people. So, a lot of it is just the setup and what has to go on behind the scenes. And there's so much to doing a podcast that's more than the interview itself, like getting the right guests and figuring out the audio equipment. We were talking before we went on, like people are just dropping out and the people can't get the setup right, and they're dropping out. And so I've learned a lot about that stuff.

But also just the, I guess the flow of an interview is something I've learned a lot about. Like how to structure these things, in terms of like, making it so it's entertaining for the person who's watching but also informative. And also maybe how much to -- we've debated a lot in terms of like what we put in front of guests before they come on. Like, we've debated with giving them basically everything we, you know, all the things we're going to ask about, or having them come on without knowing much. And so I've learned a lot about that too in terms of what maybe produces the best …

Adam: **00:03:44** Well, what did you land on? I'm curious because we haven't experimented with that.

Jack: **00:03:48** So, for us, we've done better when we give people a lot of information upfront. I mean, we don't give them necessarily exactly what we're going to ask. But when we give them a lot of information up front it's better just because it allows them to think about the topics we're going to cover. And so some people we've had on, like we've had Adam and Rod on, we've had podcast veterans on who know what they're doing, where you don't have to do that.

But then other people who aren't used to it, the more we give them in advance, where they know, sort of the topics we're going to cover, they tend to have better insights in the podcast. So, I know some people are very rigid about that and say I want this to be a free-ranging conversation where the people have no idea what's coming. But I don't think that's necessarily our talent. I think we found that it's better when people sort of do have a general idea of what we're going to cover.

Adam: **00:04:31** Apparently, we're rigid about free-balling.

Jack: **00:04:37** I kind of like it. I've been on-- This is, I think, my fourth or fifth podcast, I've done myself and I've had the whole range of it. I've had people who basically told me nothing about what was going to happen. And then I've had people who basically said, here's exactly what we're going to, you know, every question to the letter we're going to ask you. And I don't think there's a right answer.

Rodrigo: **00:04:51** I hope the title gives it away. Right? ReSolve Riffs …

Jack: **00:04:54** Yeah, I saw that yesterday.

Rodrigo: **00:04:55** … at all.

Jack: **00:04:57** I saw that yesterday. I'm like, at least we're kind of in my sweet spot. You know, it's -- I was listening to Tim Ferriss about this the other day. And he was saying like if you look at one end of the spectrum, you've got basically like James Lipton, you remember *Inside the Actor's Studio*. He essentially just reads every question to the guests like, there is no, there's no follow ups. There's no -- he does that. And at the other end, you've got like Larry King, who basically just goes in there completely blind and just ask whatever he wants. So, it can be done successfully, I guess, no matter what way you want to do it.

Mike: **00:05:24** I think the best one I saw was Larry King interviewing Seinfeld and asking him questions that were not relevant. Seinfeld's like, I was the number one TV show I went out on -- like when you were cancelled, like when you went off the air, Larry King's asking him and Seinfeld, like, just skewers King. Like, what kind of research, and he looks over, so what kind of research are you doing for this guy? Does he not know we were number one when we went -- It just --

Jack: **00:05:52** Yeah, like zero, I guess is what he did.

Backgrounder

Mike: **00:05:55** … the business. Anyway. Okay. So, as we get into it, Jack, why don't you tell everybody like Rod said, in five minutes or less, maybe three minutes? Give people a little background, who you are, … what *Validea* is, all that sort of stuff, what you're doing? And then let's dive in the investing side because I think people tuned in for some of the investing nerdiness rather than the podcast.

Jack: **00:06:19** That's really my sweet spot. Yeah, I feel like when a lot of investors go on podcasts, they have these great stories about how when they were a young kid, they always wanted to be an investor and so they got the paper route. And then they invested in their first compounder at 12 or something. And I'm like basically the complete opposite of that. I didn't care about investing at all, until my senior year of college, I saw a sign. I went to UConn, University of Connecticut, and I saw a sign on the wall that somebody was looking for an investing intern and so

I responded to that. And that company was the Reese Group, which was the precursor to Validea.

And what the Reese Group was doing was they were trying to hold the financial media accountable for their recommendations. So, for instance, they would go read *TheStreet.com* or go on CNBC and watch Cramer, or whatever it is, and say, all right, this person recommended this stock on this day, let's track the returns one week, one month, three months, six months, one year, let's see how they actually perform. And then we can roll it up and we can say like, how does this person perform, how does the columns perform, how do the periodicals perform, the sources, all of that. And so that was the idea of the Reece Group, which was this was back in the late 90s. And so that was the tech boom.

And so at that point, people were just throwing money pretty much, at anything that was internet related. And so we got some venture capital financing with the instructions, basically we don't care about revenue, we don't care about profits, just get a lot of people to this website. And so we did that using what we call the *Reese Report*, or *The Guru*, I think we called the media buzz at that time, using that as our idea. And then obviously, the end is similar to what the end was for many people at that time. March 2000 happened, capital dried up, we weren't profitable, so we returned the money to investors that was left, and then we shut it down.

And not to make the story too long, so then I had a brief stint in the interior design industry, which we don't we don't need to discuss. But then beyond that, I went back to the …

Rodrigo: **00:08:00** I'm giving you an extra five minutes.

Jack: **00:08:03** Okay. Well, I wasn't actually like determining whether the sofa matched the curtains or anything like that. My uncle was like a high-end interior designer here in Connecticut and I was helping him clean up his accounting and clean up his business. So, I was not necessarily doing what interior designers would do.

But after that, I sort of -- we had this secondary product with the Reece Group, which was this thing called *Guru Analysis*. And so the idea was, we would take things like books or papers that had a quantifiable investment strategy. So, for instance, Peter Lynch's *One Up On Wall Street.* We would take that and we would find the quantifiable fundamental strategy and we would implement it. And so you could use that in two ways. You can either use it as like a screening tool, or you could recreate it like the sentence based analysis, where you could type in a ticker, and it was sort of like using this quantitative methodology from *One Up on Wall Street*, here is how you might analyze this particular stock. And it would, in each sentence, it would fill in the fundamental variables. So, we had this thing and so I went back to the founder of the Reece Group he had had a, he, he still had this intellectual property.

		And so I went back to him and I said, why don't you, and I just start this as a new thing. And so we did. We started as a subscription website this time that we actually charged for based around this idea of *Guru Analysis*. And back then we had eight strategies we were following, now we have 22 publicly and we have a bunch more behind the scenes. But that was sort of the precursor to what we do today. So, that's the idea behind *Validea* is trying to find quantifiable investment strategies that have a long-term track record. You know, we started out back then with the big names, the Warren Buffett's, the Peter Lynch's. Now we focus more on maybe academic papers, Joseph Piotrowski, things like that. But we try to, you know, we build models based on those and we allow our subscribers to have access to them. So, that might be a little long-winded, but that's the story of Validea.
Mike:	**00:09:47**	I love it. You got to come back to that Piotrowski score one too …
Adam:	**00:09:51**	Yeah, no, I want to get into the data crunching too. You are business partners with Justin, right? So, how did you guys connect and the nature of your …
Jack:	**00:10:03**	Yeah. So, Justin was also an intern there. He was probably like the fifth person in the company, and I was probably the seventh or the eighth. At one point, we got up to 51 in the dot-com boom. And that was mostly because of that media buzz thing I was telling you about before. That was very labor intensive to summarize all those articles. But yeah, Justin and I, we met back then and we kind of went our separate ways a little bit when it shut down. But then once we got it going again, he was a logical person to bring back in. So, we've been working together since then. That was 2003 when we got it going and we've been working together since.
Rodrigo:	**00:10:37**	Right? Sorry, I'm just …
Adam:	**00:10:41**	Sounds like my audio is a little off.
Rodrigo:	**00:10:43**	Your audio is a little off.
Jack:	**00:10:45**	Mine is?
Mike:	**00:10:51**	… No, Adam's is.

Research, Content and Factor Investing

Rodrigo:	**00:10:52**	Yeah. So, the -- at which point -- So, you're basically a content marketing/quantitative/research firm. And you're pushing out that knowledge like that education through what? Like, how often are you communicating with people and in what ways?
Jack:	**00:11:11**	So, that's sort of a newer thing for us. You know, at the beginning, we were just basically, we just had this research tool. And then as we sort of progressed in the business, we realized using content was going to be important. And so I think it was back in 2017, I started writing, like a weekly article for our blog, where I

tried to share whatever it is I do know about factor investing. And then in 2019, we started *Excess Returns*, which is our podcast. So, that was sort of -- the content marketing was sort of a new thing for us. But we've never -- We're a very small firm, we've never done any paid marketing, maybe a little bit here and there, but really never any paid marketing. So, this was sort of our way to --number one, this has been a good learning process, but number two, it was sort of of our way to bring people to the property.

Rodrigo: **00:11:52** So, let's walk through when you guys first started, you said you were at first the Peter Lynch's and the Warren Buffett's, as everybody does, of course. We all start there. So, how did that evolution go? How do you go from Warren Buffett to factor investing?

Jack: **00:12:10** Yeah, so part of it was we didn't know that at the time. But really, what we're doing with Warren Buffett really is factor investing, or Peter Lynch. I don't know if you guys are familiar with the AQR *Superstar Investors* paper, but they were able to go back and basically -- I mean, they weren't really able to do it for Lynch because there's a lot of alpha left over. But the other guys like Buffett, they were able to break down the returns they had through factors that doesn't in any way take away from their returns because people didn't know about factors, or know as much as we do now back then, but they were able to do that.

So, I think pretty much everything we do is factors. We didn't know that at the time. But as we learned more about it, I think we ended up going more in the direction of academic research, and less in the direction -- when you start it, you want to market you know, in order to market, you want to have Warren Buffett and you want to have Peter Lynch, and you want to have those big names. And we did Ken Fisher's book, *Super Stock*s. We did Ben Graham, *The Intelligent Investor*, we wanted to do those big names. And then as you kind of move on, you're like, oh, there's some really interesting academic research out there that we could add that might actually be more high quality research, even though it doesn't have as good of a name.

Adam: **00:13:11** I'm hoping that my audio is okay. Is this all right or no?

Rodrigo: **00:13:14** Yes.

Mike: **00:13:15** It's not skipping and chipping in.

Adam: **00:13:18** Well, that's the point, I guess, at this point. So, I just want to dig into the data and analytics, because I mean, going back to sort of late 90s, how were you guys sourcing data that allowed you to be able to run that type of analysis that you had intended to run there?

Jack: **00:13:36** So, it was, I mean, it's been a huge evolution. I mean, at the beginning, we had this computer that could barely handle the process. And we were like getting the CDs. And we had to, like load the CDs, I think it was called, like *Stock Investor*

Pro or something. We had, like, load these CDs in, in order to be able to do it. And so it was definitely nothing, not anything related to being automated. But then as time has gone by, it's gotten as -- In 2003, we had *Market Guide*, which became Reuters, which is now Refinitiv. So, we had data from them. And we basically work with them exclusively since the beginning, they've changed names a bunch of times.

So, by 2003, there was an automated, an ability to do an automated update process. I remember at the beginning, we had like, nobody wanted to do it. But we had this job that somebody had to stay at the office till like four in the morning, because the update would complete it like four in the morning, and you had to be there like loading the CDs in and stuff. And so like, we would alternate, but you had like, once a week or something, you had to sit there until four o'clock in the morning. And if something went wrong, you were troubleshooting it at like 02:00 AM. So, … it was a process. But obviously, today, it's a much more -- Yeah, today, it's much more cloud-based. It's a smoother process than it was then.

Mike: **00:14:43** That's alpha. Can you talk a little bit about the process of quantifying the words let's say of a Peter Lynch, right. How difficult was that? It always seems to me that, you know, in the research papers, probably a little bit easier, so you move to a slightly, maybe easier domain or maybe not. My perception is it would be easier. But how did you more sort of the conceptual ideas that would come out of Warren Buffett's mouth, even in *The Intelligent Investor*, and even in some of the books that are written, there's a lot of leeway in between sort of the nuanced implication and nuance meeting versus how you're going to codify that.

Jack: **00:15:27** Right. Yeah, that's a really important…

Mike: **00:15:29** How do you guys deal with that?

Jack: **00:15:30** That's a really important point. And you know, what we're not -- What we were never trying to do is say, like, these are the stocks Warren Buffett would own or these are the stocks Peter Lynch would own. What we were trying to do is saying in this published writing, it's all done through public writings. In the case of Buffett and Lynch, it's done through books. Lynch's *One Up on Wall Street*, Buffett actually hasn't written a book about his methodology. So, we use *Buffettology*, which is by Mary Buffett, his ex-daughter-in-law. But in there, there was a quantifiable strategy.

So, obviously, the parts of their methodologies that are not quantifiable, we can't touch those. And so we're not saying, we're not *13F guys*, we're not trying to figure out -- like, we're not trying to match what we do to what they're holding. We're just trying to take the actual principles that are outlined in there and interpret them if we have to. My partner, the founder, John Reese, did those original eight books. And we're trying as best we can to match what's in there as a quantifiable strategy that sort of takes the emotion out of the investing process? Well, I'm not saying that we're not -- this is not what Warren Buffett, you know, there's times like with Apple and stuff where we do overlap with what Warren Buffett holds. But a lot of times we won't.

And also, when you look at interpreting Warren Buffett, one of the things, a strategy we run could do that Buffett can't do is obviously we can have small cap stocks in there. If there happens to be a small cap stock that meets this criteria. He can't touch that, but we can. But the goal was never to say like we're going to match Warren Buffett's returns or anything like that. It was more like, there's a strategy here that uses quality, it uses value, it's based on Buffett. And that on its own might be a decent standalone strategy, even if we're not trying to copy Buffett.

Adam: 00:16:58 I'm really, really curious about what rules you codified for Peter Lynch, because I did a little bit of work on my own and obviously, dug pretty deeply into the AQR paper. But the Peter Lynch track record is a genuine mystery in the context of like factor investing. Do you have any insights from your time spent trying to codify his process?

Jack: 00:17:23 Yeah. Well, I think what we do has very little to do with the Peter Lynch track record, I would say, because of what you said. Peter Lynch was not someone who was known as someone whose strategy could be quantified. But he did in *One Up on Wall Street*, he did have a quantifiable methodology. You know, for instance, he would classify companies at the beginning, either a stalwart or a fast grower or a slow grower. And then according to each one of those tracks, you would have a different, the PEG ratio was his primary criteria in the book, but you would have a different set of fundamental criteria that would apply.

So, we developed a system that said let's classify companies first. And then let's apply these other tracks to them. And then let's spit out to people what are the highest scoring stocks according to that. But I think you're right about that. I mean, Lynch is -- of everything we've quantified, I think Lynch is probably the most difficult to do. And we're probably the furthest from the actual person with Lynch than we are with anything else we've done.

Adam: 00:18:11 Yeah. And I mean, just simple PEG sorts are not particularly useful. Right? So, I mean, that's not a ranking methodology that has stood the test of time for sure. So, there's a genuine mystery in what Lynch was doing that I think will forever remain a mystery.

Jack: 00:18:35 Yeah, I mean, that was amazing that -- I mean, that AQR paper they sort of had, like, I think, a graph or something. And each factor, what they attributed to it was Lynch's, like the unexplained was like the biggest by far. Pretty much everybody else, the unexplained wasn't that much. But with Lynch, it was huge. So, yeah, no, we definitely could not -- we cannot automate Lynch. But we thought there was a strategy that made sense in there so we did implement it. And then we sort of put them up on our website, and we let people, you know, some of our strategies do better than others, and we sort of let people track them over time and see how they do.

The Most Popular Strategies

Adam: **00:19:04** So, what are the most popular strategies? Are you able to go to the website data and see what people are tracking most frequently?

Jack: **00:19:11** Yes, always the top performing strategy right now. So, it is never --

Rodrigo: **00:19:17** … to look back though, three months, six months, one year?

Mike: **00:20:00** TPRN.

Jack: **00:19:21** So, we'll put the long-term results on there. But you know, those will move, strategies will move up and down the long-term results over time. We don't say like, you know, we don't feature the best performer in the past month or the past or past three months or something like that. But as those change the best performers long-term, you can see in the website data immediately as something else goes to the top everybody searches for it. I mean, you do have the Buffett's of the world to do, at least are in the top ranking or in the top 10 no matter what, but it is people chase performance, they search for whatever the best performer is.

So right now it's this twin momentum strategy we're running because that is the best performer but that does change depending on -- or the Mohan Ram paper as well which is also one of the better performers. But that'll change. If we got a huge run in value and the value ones move to the top, there'll be searching on Jim O'Shaughnessy *value compositor*, or something like that.

Adam: **00:20:08** So, what's the twin momentum strategy?

Jack: **00:20:12** It's a guy named, I'm going to butcher his name, it's Dashan Huang is the way I pronounce it. But that's probably not the right pronunciation. But it's a paper that basically looked at combining price momentum with fundamental momentum. So they use a straight 12 minus one sort for one half of it. And then the other half of it is seven different fundamental variables, you look at the trend in those seven fundamental variables over time, and that becomes a fundamental momentum component. And so you have sort of a dual sort, you sort on price momentum, and then you sort on fundamental momentum, and then you take the best combined ranking, and you put that in there. So, that's been doing well, as you probably guess, in the past with what's going on in the past decade, the growth/momentum type stuff has done better. And so people are attracted to that.

And also, I think one of the challenges with momentum is people don't love price momentum because they can't explain why they're buying the stocks. At least we've found -- I don't if you guys have found that as well, but we have. It's like, well, if you have to tell someone to buy a stock based on price momentum, well, why am I buying the stock? Well, you're buying it because the price went up. Well, what about the fundamentals? You know, is it cheap? You know, are these things growing? And you have to say to them, well, we don't really care about any of that, like, it's just the price went up. And so I think fundamental momentum, whether it enhances returns or not, people are very attracted to it, in that it gives you a fundamental reason on buying the stock besides just the price went up.

Rodrigo: **00:21:27** So, you think there's a stick-to-it-iveness that the narrative there has that pure momentum doesn't?

Jack: **00:21:34** Yeah, and I think, I don't know if you guys have found this as well, but I think over my career, the biggest lesson I've learned is the best strategy for anybody is the one that they believe in, and the one they can stick with. And so from that perspective, if you feel better, that the fundamentals are getting better, along with the price momentum, then that's a better strategy for you than pure momentum, whether or not the academic research shows that or not.

Rodrigo: **00:21:53** No, it's amazing to me how it's always -- people think that investing is about, well, let's find the best investment manager and give it to him or her. And the reality is that people invest based on their values, right? It's whatever they believe to be true. In Latin America, it's gold and real estate, and a business; one or two businesses on the side. In the US, it's Warren Buffett and value investing. You know, you go to Europe and it's a lot more acceptable to do quantitative investing. So values is everything and your values will dictate your ability to stick to a strategy. And it's really tough to -- it's like a religion. So, whenever I'm in front of a DFA manager trying to change their minds is nearly impossible. I don't think I've ever done it. I think I've only held -- I've only been able to convert that recently DFA converted when they finally came to a *come to Jesus moment* and said, I need to look at something different, but I've never been able to catch them and convert them, ever.

Jack: **00:22:55** And that was something I struggled with early in my career is I would always say to a client or something like that, well this is a better performing strategy than what you're doing, why would you not want to do that. And the reality is, I've learned that they're not going to stick with that strategy. If you have to convince them that it's the best thing for them, they're not going to stick with it. You're better off taking something that may be a little bit inferior to, at least in your own mind, if they can adhere to that strategy, they're going to get way better results with it. So, I've learned about that over the course of my career.

Adam: **00:23:22** What about the performance chasing? Have you guys done any analysis at all on how effective it is to be constantly rotating into the strategies that have the best performance at any given time?

Jack: **00:23:38** Yeah, I mean, we've done a little bit. You know, I'm not a big factor timing guy, although we do have some stuff on there where we've tested factor timing. Yeah. And I do think when you do factor timing, again, if you do it properly. I mean, I think momentum has probably been shown to be the best way to be doing factor timing, at least from the research I've seen. But that's not performance-chasing in terms of, you know, that's using the appropriate periods to measure momentum. And doing it properly in a quantitative system. That's not like, go to our website, like I was talking about before, and be like, "Oh, this thing looks the best. Let's get into this thing." And I think in the real world, that's probably what people do more often and say, oh, look at this momentum strategy, or these growth strategies look fantastic. You know, and, at least if I'm right, the next decade, maybe a little bit different than the previous decade in terms of how those strategies work.

Adam: **00:24:24** Yeah, I'm just wondering because obviously lots of academics and Vanguard and iShares, etc., have published research analyzing the performance of the top performing mutual funds or the mutual funds that had the highest flow over the last month or the last quarter or whatever. And almost universally, the return chasing strategies underperform. As you say, a momentum component to it, right, if you are disciplined in your rotation between funds in that way. But as you say, that's typically not how people do it, right?

People sort of arrive to, they come to oh, I need to select funds now, because you know, some life event or they've decided that they want to start investing, or they are doing a portfolio review at that time, and they go and search for the top performing funds, and then you invest in those funds, and it's fully idiosyncratic, right? And any strategy that adopts that approach is essentially doomed to fail. And universally the academic literature sort of finds that, right. So, I'm just wondering whether or not you have been able to sort of analyze the most viewed or most tracked or most popular strategies through time, and then how those popular strategies have evolved, after they became most popular. But I suspect that's kind of hard to do based on how your platform is configured.

Jack: **00:26:01** It is tough to do. But you're right. I mean, if you look at the way investors invest in mutual funds, what do they love? They love three-year performance. What is a horrific indicator of the future? Three-year performance. So, yeah, and I'm sure the same is true of our strategies. I'm sure people look at them and say, all right, what's doing the best over the last few years? And you know, that's going to continue? And to be honest, in short-term periods that can work. I mean, if you've been riding the growth strategies, it works. But unfortunately, long-term,

		it typically does not work. You know, we've been in a little bit of a weird market here where that type of thing is persisted. But yeah, I think you're right. I mean, I think tracking based on three years, I think that is typically a terrible idea.
Adam:	**00:26:33**	Well, it's just strange because it's not that tracking on three years, or one year or five years on its own is good or bad. It basically carries no information, it's basically random, right? And for certain classes of funds, if you're chasing into an equity fund that happens to have done better than average, the more likely the scenario is it's going to revert, because it's only done better than average through randomness. Right? So, it's a random chance and it's going to revert to the mean, right? But in other types of strategies, strategies with higher alpha or higher Sharpe ratios have sort of demonstrable ability to persist. But you've got to dig beneath the surface, you can't understand that from performance alone. Right? But everybody stops at performance because all of the other work, it's hard and nuanced, and requires a lot of experience in the industry in order to derive any useful meaning from it. It's an intractable problem, I think, for many investors.
Jack:	**00:27:34**	Yeah, no, I would assume people do the same thing they do with mutual funds with our strategies, or any strategies for that matter. I would assume they always -- they're always chasing performance, and they're always trying to invest in what's working. And typically, that's not the greatest idea.
Rodrigo:	**00:27:48**	That's what I was going to say that it doesn't -- a lot of these -- When somebody's selling a model and you see what they're doing, you think, well, we should intervene, we should try to educate, but it doesn't stop it. And if you don't allow him to do what they want to do, they're going to go and do it in mutual funds anyway. So, what you hope is that there's enough education with what you're doing that a small subset of disciplined investors are going to get the fruits of their labor or your labor that they can stick to something or an ensemble of stuff. So, they can always feel like something's winning when something else may be losing.
Jack:	**00:28:22**	Yeah, that was two things. One is that was the point of doing the content for us is, hopefully we could, and like you said, people will probably ignore it. But hopefully we could, through the content, we could educate people a little bit more about well, you don't want to chase the hot strategy here. You know, here's what happens over the long-term, here's what works over the long-term. So, we want to do that. But also in our, the capital management side of our business, that was sort of our goal was to say, all right, all these individual strategies, they're very focused, they're going to have really long-term periods where they don't work, no matter how good they are our goal was to try to

figure out how can we blend these together into something that people could actually stick with?

Because, again, going back to the lessons from my career, that was -- it's very easy. You know, and we had Jim O'Shaughnessy on the podcast, he said the same thing, it's very easy to say to people, oh, I've got this great 20 stock focus strategy you should invest in this. And I think early in your career you do that. But then you realize, all right people can't stick with that. That's going to deviate dramatically from the market. And as you guys know, everybody's judging you against the market. And so I've learned a little bit over my career about maybe being at that absolutely focus or that rigid in terms of here's what's working best so let's stick with it might not be the best idea.

Constructing Ensembles

Rodrigo: **00:29:32** So, you guys have the capital asset side. How do you think -- you had all these strategies you've been working on for years, as you construct, I imagine you haven't chosen one, you've chosen an ensemble of factors and strategies.

Jack: **00:29:44** Correct.

Rodrigo: **00:29:45** How do you think about the ensemble construction of those factors?

Jack: **00:29:50** So, we have two ways, and it basically goes back to the way people look at it in the research. We have sort of the integration method and we have the sleeve method. And I'm a big believer, when I don't know the answer or when I look at any issue and there's people that are smarter than me on both sides of the issue, I probably should be doing both things. And so that's what we do. We have one portfolio that uses more of an integration method where we're sort of looking for stocks that have, we're looking for stocks that simultaneously pass the most strategies at the same time. But we're also slightly performance weighting.

So, we're taking the strategies of the best long-term performance and weighting them a little more heavily in that composite. So, that's the integration side of it. And then the sleeve side is we're selecting the strategies that tend to work well as best we can together, and we're taking you know, 10 stocks from this one, 10 stocks from this one, 10 stocks from this one, 10 stocks from this one. So, because I don't really have an opinion, I know a lot of people have very strong opinions on which one of those is better. I don't. So we'll run both of them.

Adam: **00:30:44** It's an obscenely hard problem. You know, we've obviously done a lot of work internally on this, both just out of curiosity, and from the perspective of trying to improve our own strategies and emphasize signals that are more likely to be real and de-emphasize others that are less likely. And, I mean, for example, one quick study that I did, the group that that came up with the Q ratio model, or the Q model, the --

Jack: **00:31:17** …

Adam:	**00:31:19**	Yeah, exactly. I mean, their team posted all of their results online, I think it was like 180 different factor strategies by category. And just did some super simple tests on sorting them on their long-term Sharpe ratio, or on their long-term alpha, and a few other more esoteric sorts, and then continuing to sort of emphasize the ones that have the highest statistical validity and their historical performance. And literally not one of the different experiments that I conducted provided any confidence that we were able to select the most promising strategies going forward based on their historical performance. I mean, it's just, it's an astonishingly hard problem to solve. And we talk to people all the time, and obviously read all kinds of literature and speak to advisors. And I guess, in the absence of any other criteria, then they lean on choosing the ones that have the strongest historical performance, either in the back test, or in a paper or what have you. I mean, sadly, that just doesn't seem like there is any empirical utility to that approach. But I mean, if you don't have any other alternative, then I guess it's like the lamppost problem, right? Like, you look for it because you've got the data and you can do some analysis, even though that analysis is not useful. At least you're doing something and you're making a best effort.
Jack:	**00:33:07**	Yeah, like you said, it's a really challenging problem. You know, we had Sheridan Titman on our podcast this week. And I wrote an article sort of summarizing the difference, which is kind of cool. You know, that was a good -- I was surprised he said yes. So, we were kind of excited for that. You guys should have him on at some point, because you could probably do a much better job of getting into more details. We did more of a high level thing. But he wrote a paper sort of supporting the integration approach to it. And then I wrote an article this week, where I was looking at the different sides of it. And you know, I had a quote from Jack Vogel, who is much smarter than I am, who likes the sleeve method. So when I look at it this way, it's just like, I've got these really smart people on both sides. We probably should do both. You know, one of the things we try to do is we try to -- my Twitter name is *practicalquant.* And one of the reasons is because I try to -- we don't use, we calculate all the advanced metrics other people use, but we try to do this, we try to look at this in a way like our investors will look at it. So, for instance, when I'm blending strategies, I have to say, Are you guys familiar with Jim O'Shaughnessy's two points of failure?
Rodrigo:	**00:34:06**	No.
Jack:	**00:34:06**	So, he's talking about the two ways that investors can fail. And you know, one way is obviously, when they lose money they can sell. The second way is when they're underperforming whatever they consider their benchmark to be, they can sell. And throughout my career, I've come to accept the fact that the second one is worse than the first. I think if I'm down 30% and my neighbor's down,

30%, I think I'm more likely to stick with that. But if I'm up 5% and the market's up 25, you know, I'm not going to live with that. So when we blend strategies, we try to look at it in that way. And so we look at the unique blends we're doing and we try to say all right, what would lead an investor to panic who's following this blend?

And so what we look at is sort of the percentage of time that mix underperforms over a one year period, the percentage it underperforms over three, the percentage it underperforms over five and then we also try to look at magnitude. So if I'm more than 5% behind the market over a certain period, I'm more likely to panic. If I'm more than 10% behind I'm more likely to panic. And so we try to look at the percentages of all those and just say, you know what, we'll keep an investor in this portfolio. And that may not be as advanced a statistical method as other people use. But for us, it sort of gets it exactly the way our investors use the portfolios.

Adam: **00:35:13** Yeah. So, I'm going to put my dick hat on for a quick second because this is a bit of a bugaboo for me, but … when -- I always think it's useful in communicating, and I feel like Jack, you actually have a really good grasp of this nuance. But I think it's important when communicating about these concepts to use the right tense, right? Because what we know is what happened in the past. Right? So, we can say that these strategies do this is different than saying these strategies have done this in simulation or in with historical performance, right? And I guess, I think that they do it, it assume that the historical performance does in fact, indicate future performance. Right?

And I think what we both know is that the correlation between historical performance and future performance is extremely low. Right? If it's not zero, it's very close to zero, right? So we could say that this maybe was the case, historically, but we really don't know if that is at all going to be the case going forward. Right? And that's true from a -- I mean, there are certain things you can say, which is that by design, this strategy is going to have a higher tracking error than this other strategy, right, either it's concentrated or it's in small caps, or whatever. Right. But in terms of the actual performance of the risk metrics, I think it's really helpful to try and communicate in a tent that allows people to connect the dots between, yeah, what happens in the past, but we probably shouldn't have high conviction that we're going to see the same kind of quality of profile going forward. Is that fair?

Jack: **00:36:56** That's right. And I think that's what we try. And I probably used the wrong tense when I answered the question, but what we try to impart to people is that we don't know for sure that any of this is going to work. I mean, you can say the value factor has worked historically, but no one is going to sit here and say with 100% certainty it's going to work in the future. We don't know for sure. And so what we try to do is the base rate guy, and so we try to look at the past and say, what can we learn from the past in terms of how we can blend these strategies together?

And we also have to apply some degree of intuition to that, because, for instance, if you looked in the past 10 years and said all right, what's the optimal blend of strategies? Well, it's a growth strategy coupled with a momentum strategy, coupled -- it's not indicative of the long-term. And so we try to also take a look and say, when we're making these blends, well, we should have value in there, we should have momentum in there. And it only makes sense to have strategies that have proven themselves to be uncorrelated. But you're right. I mean, you can't sit here and say, the past is going to repeat itself, because we have no idea if the past is going to repeat itself. What we try to do is use it to inform people as best we can. And we also try to do that on the negative side.

One of the things we implemented a while back is we were frustrated with clients seeing sort of the bad side of the strategies and then panicking and selling them. And so we implemented this document we would give clients which was basically like, here are the all-the-horrible, awful things that will be happening to you, over the course of your time having us manage your money. Here are the losses that have occurred in the market, here are the worst periods of underperformance these strategies have ever seen in their lives.

Rodrigo: **00:38:24** I love that. I'm a big fan of that.

Jack: **00:38:27** Yeah, the goal is not to try to sell people on how great these are. The goal is to get people to stick with them. Because if they can't stick with them, they're useless. And so you know, we've tried to do that as much as we can to try to identify here, like you said, here all the bad things that come with this. We don't know for sure what's going to happen. But we're trying our best to practically think about how we can use the past, maybe, to predict the future. I don't know if that makes any sense.

Rodrigo: **00:38:49** Well, look, we have to make an effort, right? Investors are going to do -- they're going to try to search for patterns, they're going to try to do things regardless of what advice you give to them, right? So, the ensemble approach that you were talking about makes sense. These have underpinnings from either a risk perspective or a behavioral perspective that are like to work long-term. You know, we intuit that these weightings make sense, but we're not 100% sure. And by the way, the most important thing is you can invest in the shittiest strategy on the planet, as long as you stick to it, you'll probably do okay. And I'm going to walk you through what shitty means and how … this is what happened in X year, had a 30% drawdown and it took X amount of time to recover.

I used to do that. I used to send out a good, welcome to the club. Thank you for buying the … going to be about the worst thing that you're going to feel in the next 10 years doing this. And every time that that would happen, they come back to us and be like point to exhibit A. You remember that email? It shouldn't have been a surprise to you. Right? And it keeps them solid and keeps them grounded for sure. I really, really enjoy that strategy. And I think that when we're dealing with the markets, there's a lot of we don't know what's going to happen in the future. But we have to use our intuition, we have to make our best guess, with the best data that we have. And I think you guys are making a good effort on doing all of that, for sure.

Adam: **00:40:16** Agreed.

Jack: **00:40:17** And I'm also -- I mean, I'm someone who endorses indexing for most people, although I'm not necessarily a believer, particularly where we are right now, with the index valuation. I'm not necessarily a believer that's the optimal strategy. But I think when you live in a world where everybody judges everything else against the index, I mean, behaviorally, the index is probably better for a lot of people. Even if I think there's a value premium or momentum works, if I'm going to be judging myself over short-term periods against that index, it's better for a lot of people just to buy the index.

So, we ultimately tell a lot of people that's probably what you should do. Because, again, if you can't stick with the types of things we're doing, it is worse than the index. I mean, it's 100% clear that if you're going to bail out at the worst times, if you're going to sit there through, and you know, the worst time sometimes people think, oh, I'm going to have a bad year and have a bad three years. I mean, look, it just happened with what happened with value. I mean, value just had a very, very long period, where it did not work. And if you can't, and …

Rodrigo: **00:41:11** Oh, it started working?

Jack: **00:41:12** I wrote an article because there was sort of this narrative, that value is back after March of 2020. But the reality is, when you sort of look behind the scenes at the factors, it really was more of a low quality small cap rally than it was a value rally. When you strip those out, there wasn't like that much going on with value. But in the value indexes, you certainly got especially the small cap value indexes, you certainly got a huge bounce back. So, yeah, no, I don't think and now we're kind of back the other way. So, I don't think value's working again, but it's just indicative of the type of thing if you're going to follow a factor like value you've got to be able to sit through, because if you look through history with value even looking back to 2000, I mean, there's been these, a lot of times the big returns, companies, really short periods. And if you can't sit through the horrible periods to get the short periods, then it's no good to you.

Mike: **00:42:02** I think you really hit on a point that bears emphasizing and repeating in as many different ways as we can. And that is that if you're going to pursue any kind of objective that leaves you different than your friends, then that's really, really hard, regardless of the long-term outcome is better. So, investing in an index, as you mentioned, is a premium quality investment process. Not because it leads to any kind of outperformance or underperformance. But by definition, you are with your herd the whole way through, through the elation and through the pain. You have all of the company. And so you're not different. And in that is what makes it, I think, such a compelling strategy.

Adam: **00:42:54** It's a tribal experience. Right? You know who your in-group is, you know who your out-group is, you guys can suffer and … together.

Mike: **00:42:59** You're down 30%, everyone's down 30% You're up 60%, everyone's up -- like that is -- quintessentially, that is a thing that most humans like to travel in a common tribe. And so for me, I like not being with the tribe. I like when someone looks at an investment and says you got to be out of your fucking mind. And I'm like, ooh, this is a good idea. Or tells me why …

Adam: **00:43:29** Mike had three conversations like that, and he backed up the truck. He told me that himself.

Jack: **00:43:34** It makes sense though.

Mike: **00:43:36** Oh, yeah. I almost sold all the tobacco stocks once I talked to Hantel. I'm like oh, this is common knowledge now. Everyone's buying tobacco …

What Do Clients Want?

Adam: **00:43:44** I thought you were going to go a slightly different direction because one thing you've been really good about continuing to sort of pound home, because from a product development standpoint we're always sort of like, what do people want? What do investors want? Right? Like, we can do lots of things, what do they want? And so Rodrigo, at one point said, well we need a product that is maybe not so designed to maximize the Sharpe ratio, but rather designed to maximize the information ratio relative to investors' benchmark.

And then Mike raised a really amazing point, which is, what exactly is their benchmark? Because right now, their benchmark is the S&P 500, because it's done so well over the last 10 years. But if you'd ask people what their benchmark is in 2008 after the S&P had underperformed every other global market for a decade, then they would have a very different perspective on what they're focused on. Right? So, some peoples' benchmark changes over time. Sometimes you're focused on small caps, sometimes you're focused on value stocks, sometimes you're focused on growth, sometimes you know, like, it's very hard -- …

Mike:	**00:44:53**	This is an extension of the same problem, Adam, right? So, the first thing is, oh yeah, if you can define what your benchmark is and who your tribe is, then the next thing you have to realize is that's going to change. Right? So, from 2000 to 2014 or 2000 to 2008 when the S&P had no returns and emerging markets went up, I don't know, 10X. I mean, I remember BRICs. I remember potash, and all of the fertilizer stocks being very, very popular across North America. And Amazon did nothing for three years. And no one talked about Amazon being anything except a shit technology …
Adam:	**00:45:35**	… get a 90% drawdown.
Mike:	**00:45:37**	Correct. Yeah, precisely. Anyway. So, there's this idea of, hey, benchmarks are good in a lot of senses, because they put you in a group. But then there's this extra dimensionality, which is your benchmark preference is also going to shift through time. And this makes it really hard.
Rodrigo:	**00:45:55**	This is what, sorry, Jack, go ahead. ReSolve has spoken long enough. You go.
Jack:	**00:46:01**	No. I was saying right now, certainly the S&P 500 is everybody's benchmark, given what it's done. And I know you guys are big risk parity guys. We run some multi-asset stuff based on some research papers, we found these things called *generalized protected momentum* and *protected asset allocation*, I don't know if you've ever heard of them. But you know, and that's really a problem right now because if you're doing anything multi-asset right now, you're way behind the S&P 500. So, these are, I think, very sound quantitative strategies we extracted from research papers, but people want no part of those right now. You know, you're talking about underperforming with certain factors, at least you're 100% long stocks. If you're trying to do this multi-asset stuff right now, I mean, certainly it will have its day in the sun again. But that's when you get back to Jim O'Shaughnessy second point of failure, that's where it's really hard, is where you're doing things other than stocks that can be really hard in terms of if my benchmark is the S&P 500. You know, during these long bull markets I'm underperforming, and it becomes very challenging.
Rodrigo:	**00:46:56**	Yeah, doing the right thing has been doing the wrong thing, from a business perspective. And oftentimes, it could be for -- if you don't have disciplined clients, you're doing the wrong thing for them. All right. You got to match whatever their values are. So I think …
Adam:	**00:47:11**	Well, yeah, so this is actually -- Sorry, finish, Rodrigo.
Rodrigo:	**00:47:12**	I was just going to say that the way we've had to grow our business, is to stop trying to sell and do belly to belly and pull people in. The only way to build a multi-asset non-correlated business is to put yourself out there and self-select. The people that come are the Mike Philbrick's of the world that want to do the

complete opposite and are happy to take the pain into a multi-asset strategy. And they stick with us, right? We have a unique subset of investors that we've been able to pinpoint. I'm actually curious to hear, have you done segment analysis of your audience? And what type of personalities tend to gravitate to your strategies?

Jack: **00:47:52** No, we haven't. I mean, we know a little bit more about the clients that actually invest with us, but like the Validea subscription audience, yeah, I don't have too much information on that. But even in our, you know, most of our clients tend to be long, only equities we tend to be the ones pushing on them. Like, for instance, right now we're taking these multi-asset portfolios, and we're increasing our exposure to those slowly over time, because, again, people can't, you know, if you get too crazy, or if you get too far from the S&P 500, but as the market gets more expensive, we're slowly adding exposure to these multi-asset things.

Because the one thing you can't do is be like, all right, the market's expensive, I'm going to cash. So, we think we need strategies that make sense that have long-term track records that are multi-asset that we can add to, and so we slowly have been doing that over time. But yeah, most of our investors are long only investors. That might change a little bit if you get a protracted bear market or something, people are going to have -- I know we went through 2008. So, I know people have very different opinions at the bottom of 2008 than they do now. But for right now people certainly love long stocks.

Adam: **00:48:52** I want to throw a yellow card at Mike here. Mike, come on, man. You can't be raising individual strategies here and asking for explanations yellow card, dude.

Rodrigo: **00:49:04** So, let's go back to the fact that everybody wants to be long only equity. I found that in my career in North America as well. I think what's interesting is, what is right is being a, like you said, when people come to you, you're going to give them -- they do passive because you're going to be able to stick to it, and that's better for you. But it's funny to me how American investors think that the markets are just going to go up forever. Right? It's not true and it hasn't been true for many global markets in history, right? But there's a belief right now that no matter what happens, the US of A will always provide, right?

There's really -- it's such a -- doing the right thing on something that we don't know what's going to happen with all these factors strategies. But we also don't know what's necessarily going to happen with the S&P 500 in our lifetime, right? Like it's so it's such an interesting concept for me. Italian market goes to zero. You know, you look at Israel, you look at Peru, you look at -- there's multiple markets that just never had that chance. And yet, here we are, that's the belief, is Warren Buffett. Invest all your money in the S&P 500 index, you won't be disappointed.

Jack: 00:50:24

And there's a reason he biased this whole thing, obviously. Everybody is into whatever is working. I remember like, at the end of 2008, you guys know the permanent portfolio, obviously, there's that mutual fund that tracks it. And it had its largest inflows ever. It became a huge fund right at the bottom. And so people do whatever it is, that's working right now. And then they tend to reverse themselves when it's far too late. So, I think to some extent, we're just talking to nobody, by saying these types of things, because they don't want to hear it.

But you know, I agree. I mean, I would be -- I mean, I, most of my assets are in the multi-asset portfolio right now. Because I'm a big believer that right now, markets are expensive. I want to have multiple assets here, especially with uncertainty about inflation. You know, I want to have some exposure to value. I mean, I don't know that that's going to work. But I want to have that because the S&P 500 if you look historically, at expected returns, when it's this expensive, they're not that great. So,

Mike: 00:51:14

You said it, Jack, you don't know if it's going to work. And I don't know if all the other stuff is going to work. So, you need to take a measured approach across a myriad of strategies, so that something will be working.

Jack: 00:51:25

That's right. Yeah.

Mike: 00:51:27

You're so right. You just threw me into a deep depression. We're literally talking to nobody.

Jack: 00:51:32

No, I think to some extent we are.

Mike: 00:51:35

Like, holy macro, can you see my brain splattered on the wall behind me? Like, it's huge, changed my paradigm?

Rodrigo: 00:51:44

Yeah, …

Jack: 00:51:48

But the problem with this, though, is you have to also keep in mind what's possible. And so as much as we say valuations are high, expected returns are low. Like, I mean, if you look at Japan, I mean, if you look at the tech bubble, I mean, this could go on a lot longer before -- and we can't predict that we can't do anything about it, there's no investment strategy we can follow that's going to -- but I mean, it could go on a lot longer. I mean, we can't sit here and say this is when it's going to end. You know, I mean, these valuations tell us maybe something about what's going to happen in the next 10 years, but they tell us nothing about what's going to happen in the next one to three.

And that's the hard part about this is if people are seeing S&P up, S&P up, S&P up, it's hard to sell these other things until you see them working to some extent. Like, for instance, we've had clients now moving money to value not because of all of our great arguments about how cheap value is or anything about that, but because value came back after March of 2020 to some degree. That's when clients are like, all right, now I'm going to put some money in value. So, that's the hard part is until you see it with your own eyes you're just going to believe S&P up, S&P up, S&P up is just what it's going to be.

Rodrigo: **00:52:47** Yeah. No, we're seeing the same thing in our, the fund we sub advise in the US. You talk about this inflation trend, and that if inflation comes, you're going to want to have exposure to commodities, and active commodities and all this stuff. And it hasn't happened for many years. So, people left, people just kind of left and all of a sudden, this month, they're all emailing saying, "Hey, I bought back. You guys are doing great." Like, no, I actually think we've hit the peak of the next of the recent inflationary thrust perfectly wrong timing. I want to ring the bell. No, but if I say that Mike then it won't happen. The opposite.

Mike: **00:53:26** Oh, I see what you're doing.

Rodrigo: **00:53:27** But it is fascinating to continue to see it even with educated investors. And it's just disheartening …

Aha Moments

Mike: **00:53:33** … ourselves, we all fall into this, right? Just because you know about the behavior of vulnerability doesn't make you immune to it. We are all continually falling into it. So, it's, as you say, Jack, you put rules around it. The reason we're quantitative investors is because you want to put rules around your decision making. So, you're less prone to making decisions influenced by recency bias, which influence your overconfidence bias, which makes you think you're very confident in the current decisions you're making. And of course, they're totally data driven decisions that you're making, which, for all of us, is entirely untrue.

I do want to ask you one thing. So, we're sort of November of 2021, and so we're getting close to the end of the year. So, Jack, what's sort of the most surprising thing that you've learned this year? Was there any aha moments for you? You've been at this for sort of the better part of 20 years and really kind of researching gurus and factor strategies and all kinds of ways to slice and dice this. Did you have any moments this year where you're like, damn, that either particularly resonated really well with me, or that's really new novel, neat, and I hadn't considered that because you've been scouring sort of the landscape for 20 years. Is there any aha moments for you this year?

Jack: **00:54:51** Yeah. There were a ton. Well, first of all, not related to our own strategies. There was that someone took $8,000 and turned it into 5.6 billion with Shiba Inu. That was probably number one, although they probably couldn't sell it for that. That was certainly a little shocking for me. But yeah, I mean, I think it would go back to like the stuff for Corey Hoffstein covered in his piece, the idea of the impact of option dealers and the impact of a lot of things that don't necessarily have to do with the fundamentals of the company. I've always been this guy that reads the Ben Graham quote all the time about the voting machine and the weighing machine, and that the weighing machine in the long-term will win out. But what I think I've learned is that the voting machine, the market is really always a voting machine. It's just a voting machine that tends to care about fundamentals eventually. It's not a weighing machine long-term.

I mean, ultimately, voting drives the market. But you hope that the people who are doing the voting eventually will be rational, and will care about the fundamentals of what they're buying. And so I do think, and I'm not an expert in this, but I do think we're sort of in a period where maybe we're going to see longer periods of detachment from those fundamentals. I mean, we've always seen periods of detachment, but we might see longer periods of detachment from those fundamentals than we have in the past. And that's something just for me, for anybody running a fundamental strategy, I think we have to think through and you'll understand what are the implications of that.

Mike: **00:56:05** I think Mike Greene and the reflexive nature of the cash flows that come into the savings vehicles, and the implications that passive investing has to funnel though that capital actually provides a competitive advantage, right, where that particular set of circumstances may not have existed in previous iterations of the market. And so it's ever-changing this whole game, and maybe it's not a weighing machine anymore. Maybe it is a voting machine.

Adam: **00:56:35** Yeah, it's totally a voting machine, and all the voters are on crack, dude.

Mike: **00:56:42** … voting to give themselves more crack.

Adam: **00:56:43** Yeah, I vote for more cracks.

Jack: **00:56:50** I mean, Adam's interview with Mike Greene was one of the most eye-opening interviews I've ever seen because you did a really good job of getting his ideas out there. And even things like the fact that passive indexes hold a lot less cash than active managers. So you give cash to a passive index, a lot more of that cash is going to be invested. And as this money rolls from active manager, it could lead to like, sort of a melt up type thing in the market. I mean, I've learned so much from -- I've learned a lot from Mike's research. But there's a lot of things like that that are going on now.

I mean, I didn't know anything about option dealers, to be honest, before the 2020 thing. And I've done a lot of research on that now. I've learned a lot about how they impact the market. And obviously options activity is up so they impact the market more now. But I think those are a lot of things as a fundamental investor, you have to at least think about. I mean, I don't think you can completely dismiss them. You have to think about how does this -- I'm a value investor, how does this play into the way I think about the markets? And I don't think I have a perfect answer for that right now. But I think it's something that I think about all the time.

Mike: **00:57:45** It's a great point, the alchemy of finance. Anyway.

Rodrigo: **00:57:50** Anyway, I was just looking at this concept, you talked about multi-asset and I was just actually talking with a group. And one of the questions was, why do you think multi-asset alts have just done so poorly in the last decade? And the obvious answer is what you just said, Jack, right? The only place to win has been the S&P 500, maybe treasuries, maybe a 60/40 US base, everything else has done really poorly. The tactical is not great, diversification has not paid off. But there's been a lot of strategies that have had equal or higher Sharpe ratio to the S&P, right? But when we discuss it, I'm like, what's your favorite strategy right now? It's like, oh, this strategy is amazing, has a Sharpe ratio of two. But still, it's been disappointing, right? Because they've just doesn't done much. And I'm like, well, what's the volatility? Well, the volatility is 3%? Right.

Okay. So, you have a Sharpe ratio two, with a volatility of three, which per unit of risk, you're going to get a unit of return. So, you're getting six units of real return in that fund. Right. And then you have S&P, which historically has, let's say, a Sharpe ratio point five, with a volatility of 20, right, and you're getting your 10% return, you're still beating that two Sharpe portfolio. I mean, the issue doesn't end up being that necessarily being long passive S&P, or any fun is better than multi-asset. It is the lack of implementation of modern portfolio theory, to use capital efficiency to get that extra exposure for your two Sharpe portfolio to crush it.

As you guys were talking, I just did the RPAR index times two to match the volatility of the S&P 500 and it does better than it, all right, so I kind of feel like the narrative needs to change here, right? Multi-asset hasn't worked if you're unwilling to use leverage. It also does a pretty good job. Like, most tactical mandates just run at a significantly lower volume and therefore significantly disadvantage. It's not a fair race.

Jack: **00:59:58** You know, it also plays into sort of the different audiences. You guys primarily, I would assume deal with an institutional audience, and we deal with a retail audience. And so my retail audience stops at Sharpe ratio. They don't want to hear that. They're basically like what performed the best, I want to see that. And so our, the argument you just made, although a very valid argument is not one we can necessarily make, because it's to a different audience, that's a different argument. But that's what I thought was really genius about return stacking is the idea that you accept the fact that people are going to judge you against the 60/40 portfolio, give them that return, and then stack something on top of it. Because you guys would probably say risk parity is probably the more optimal portfolio than return stacking.

		But you have to, you have to accept the fact that people are judging you against the 60/40 portfolio. And that's better than the alternative. So the return stacking I thought was a really interesting idea. You know, it's something I hadn't thought of, and I enjoyed interviewing you about it on the podcast, but to me, that's a really cool idea, because it accepts the fact, the behavioral aspects of the way people actually work in the real world.
Mike:	**01:01:03**	Yeah, took us 10 years of banging your head against the risk parity wall. We don't learn fast.
Jack:	**01:01:09**	No, I don't either. Don't worry.
Mike:	**01:01:10**	That's it. I don't have any follow up.
Rodrigo:	**01:01:11**	And look at me still raging against it. Right? I'm still pissed off.
Mike:	**01:01:15**	And sometimes we don't learn at all.
Jack:	**01:01:19**	Believe me, I'm in the same camp with you.
Rodrigo:	**01:01:21**	No, but it was funny talking to them, because they're like, well, we look, we're thinking about having a sleeve that has, but like sovereign bond-like volatility. So, we want a strategy that can have that type of risk profile, another strategy that has a corporate bond volatility profile, another one that has like equity, like volatility. What do you recommend? And I'm like, the same strategy lever to different volatilities. In fact, we live through this, right, as you as you see different. We run like a 25 vol strategy and six vol strategy. And I literally got, like, congratulations on that six vol strategy, how well you guys manage the 2020 crash? That's amazing. You guys must be really proud. And then the guys that were looking at the 25 vol strategies, hoof, saying what's wrong with you guys? You guys got absolutely hammered, right? It's the same thing, but at different levels of risk. The best thing fits in any risk bucket you want. You just have to kind of scale it. But anyway. But that was like an institutional conversation that was like eye-opening for them, which is you talk about retail, this is at the institutional level, man, it's everywhere.
Jack:	**01:02:29**	Yeah. And you know, you guys can probably help me figure out how to explain this to retail, because I've just been trying to explain NTSX to retail, like the way it works, like levering a 60/40 portfolio, and it's complicated. You know, people don't necessarily understand how it works. And as soon as the word leverage is introduced, risk gets matched with it right away. And so trying to explain that is challenging, although I think the concept is a really good concept.
Rodrigo:	**01:02:51**	Yeah, the return stack language seems to -- is helping us a lot for sure. The idea of return stacking …
Jack:	**01:02:56**	That was a really smart term to come up with.

Rodrigo: **01:02:57** … whatever return you have on the one thing, we're going to try to stack returns on top. That starts the conversation, opens things up a little bit more. So, start with that, start playing with it. But, it's still tough.

Mike: **01:03:09** I think it's also important to keep in mind when an institution asks a question like that, it comes back to just like absolute power, money flow corrupts asset returns absolutely. If you get massive money flows into an asset class that are persistent over time, they drive that asset class price up, and where the money flows are coming from that asset price goes down. And when you get flows coming out of emerging markets and coming out of commodities persistently for 10 years, and flowing to one asset class, US stocks and US bonds, right. I mean, that's the answer. We've seen it in so many different manifestations in different ways. You see either an avalanche of money coming into a space or leaving a space, and that has cataclysmic effects.

And sometimes it's for a reason, money goes where it's treated well. And if we are in the midst of a commodity impulse again, well, money seeks for the best rate on its discounted cash flow rates. So, of course, it's going to start looking at areas where cash flows from oil and gas are maybe you're going to be robust, more robust than they were in industrials, or some other company that is a user of that input and will feel that in their margins. Right? And those macroeconomic regime shifts have implications for asset prices. And that's why we went from Exxon being the largest company within the S&P 500 in 2007 and eight and now it being I don't know, what even is it now, Google or Microsoft or one of those

Adam: **01:04:47** Microsoft I think.

Rodrigo: **01:04:49** Isn't Tesla like 98% of the S&P right now?

Mike: **01:04:52** Yeah. I mean, that's the great thing about a market cap weighted index is it's a momentum based.

Understandability

Adam: **01:05:00** I want to get Mike revved up. I want to get Mike revved up, Mike, because we were talking about understandability, right, and how retail doesn't understand NTSX and they don't understand the leverage and this and that. Mike, how much does retail understand or how much do most investors, never mind retail, but how much do most investors, including many institutional allocators, really understand about the nuts and bolts of what's going on in the portfolio, right? Like, I feel there's this emphasis on understandability, how relevant is that, in your opinion?

Mike: **01:05:35** I think it's totally irrelevant, right? So, do I understand how the toilet works? And because I don't understand how the toilet works, do I go and have a poop outside? No, I use the toilet. Right? I mean, come on. And then the way in which

		people fool themselves into thinking as though they understand. If I hear another investor say, I invest in blue chip companies, I'm going to throw up. Like, as though you could understand the …
Adam:	**01:06:05**	Like, GE, Bank of America?
Rodrigo:	**01:06:08**	Coca Cola.
Mike:	**01:06:10**	Explain to me, a simple company like Coca Cola, explain to me the derivatives book of Deutsche Bank, please, by all means. It's a conservative bank, or any bank, with their offshore entities, their offshore profits, how they onshore those profits to avoid taxes in a legal manner. Like, it's insane for anyone to talk about a banking institution, as though this thing is a non-leveraged, safe dividend type investment. Ridiculous. Coca Cola, what are the inputs for Coca Cola? Well, you got sugar, you got carbonated water, you got transportation, you got bottling contracts. This is supposed to be a simple company? Are you kidding me?
Rodrigo:	**01:06:50**	It also doesn't just sell Coca Cola. Like it's just yeah,
Mike:	**01:06:52**	Yeah, you can't contemplate the multi-dimensionality of all the inputs, and think that you. I buy blue chip stocks, like, honestly, please stop, can we all stop?
Adam:	**01:07:02**	I think of the time, right, when we could sort of rely a little bit more on a company earning its margin from its operations. Right? And I think we're very far away from that, where now the vast majority of profits for so many companies in so many sectors, all of the margin is earned on the financialization side, right? If you look at sort of car companies, or like so many manufacturers, you know, I've got a very good friend who operates in the airline industry, and his, he generates all of his margin, from allowing airlines to move their inventory off balance sheet, and be able to declare some sort of financing rate on that inventory, they'll have booked those as earnings only to then move it back onto the balance sheet for the rest of the quarter. Right? But basically, the whole operation is vendor financing, like in a financialized economy, operations for most companies are almost irrelevant, right? And what happens on the surface is that you earn money on spreads on financing. And so we've never been further away from being able to understand the true operational, like, operating leverage of companies than we are, I think, in the current environment. And I think that complicates matters even more for investors who are trying to think about things from a fundamental perspective
Rodrigo:	**01:08:24**	Which is why momentum is so -- momentum and trend are so interesting, right? Because there's a component in every live trading asset class in the world that has to do with the zeitgeist of the world, right? Look at any stock, look at Tesla. For the longest time, it continues to be something that is based on a future dream, not even a future expectation of cash flows. Right? What is Bitcoin, really? What is every cryptocurrency out there right now but a dream? Right?

What was that line from Marcus Aureluis that you gave me? Anyway, it doesn't matter. It's all very interesting that today, today, and maybe always, there's a portion that has to do with reality and underpinning of an actual economic interest of an organization that is growing and is creating something society is going to benefit from.

But there's a large portion that has to do, even if it's only transitory with pure zeitgeist. And so to think that you're going to capture everything through a single factor like value, without ignoring how that this is all a story. As Noah Harari really clearly told us in *Sapiens*, it's all just story based. How do you capture that story? Well, you do it by just saying, oh, something's gone up. I'm going to invest in that thing that went up until it stops going up. And I'm going to short the thing that's gone down for one period until it stops going down. How do you not capture the zeitgeist and call yourself an investor?

Jack: **01:09:55** It's one of the reasons we use momentum but also, I use this with clients all the time, this whole idea of the price is truth. And so irrespective of whether we're right about value or right about this other stuff, I mean momentum is something that's just, go invest in whatever it is that's going up. And so in this type of world we live in, I mean, I think momentum makes a ton of sense, like it should be part of these processes, because a lot of stuff for me and you guys are smarter than I am. But a lot of stuff's been going on that I just don't totally follow.

Like, I remember you brought up Tesla. *Squeeze Metrics* had a post recently, where he was talking about how this could end with Tesla being 25% of the S&P 500. And like, that's so beyond what I could even conceptualize that I have to take a step back and think, I mean, I don't know if that's possible or not. But if that's a possible version of this world, like, what are we going to look like? What is value going to look like? I mean, I have to think through all those things, because it's -- and you guys probably have an opinion on that. But that's just a very different world than I thought was possible before you know, this whole -- the Coronavirus crisis?

Adam: **01:10:50** Well, based on the value … lived through that, right? If you talk to the guys at GMO, for example, like the value guys lived through that, from 97 to 2000. Right? And that was almost a lightweight version of what we may see in this cycle, given the amount of financialization and gamification, etc., that is embedded in the system right now. So, I mean, we could see just the most catastrophic drawdown for value strategies in history, well, worse than what happened, what happened in 2000. Before this is true, that's not my base case. But like you say, Jack, in the current market environment, you need to be prepared for a lot more outlier outcomes than I think most people are prepared for.

Mike: **01:11:39** And Jack, you said it well, too with Japan. Right? Japan was a two to 3X overvaluation on the NASDAQ.

Jack:	**01:11:48**	It was about 100K or something at the top right?
Mike:	**01:11:51**	Yeah. It was significantly more overvalued than we got to in the tech. Which, by the way, that doesn't mean that that's the limit. That's not the limit. That's just another limit that happened. Well, we could double that too. What makes you think that that's the ceiling …
Adam:	**01:12:11**	Well, just imagine the CE if Tesla, like it did 25% of the index.
Jack:	**01:12:16**	To your point. You know, it's terrible. If that's the world we see, it's obviously terrible for value. But also, what's it like for the index investors once Tesla becomes 25% of the index? Like, what are their future returns look like? I mean, they can't be very good, I wouldn't assume right?
Adam:	**01:12:30**	Yep.
Rodrigo:	**01:12:31**	Well, it all depends, right? Like a lot of this -- what's interesting about what you mentioned, Adam, on the gamification of things is that the gamification has led to real outcomes for companies and their ability to survive and thrive, right? I think that the GM or GME was able to, or like *Gamestop* was able to pay off debt, was able to buy back stock, pay off debt, survive and start like thriving again, right, based on what? Some dudes on a computer that really liked them decided to gamify the thing. Like, there are real impacts to the zeitgeist, whatever that is. And I think Tesla has been able to accomplish and create real things based on an audience, a zeitgeist, a belief system, or religion whatever you want to call it. So, the answer is -- capture the imagination and then coming up with real shit that they wouldn't be able to do if they didn't have the money behind it that came from stock issuances, borrow and the like from this movement, right. So, I don't I don't know if the answer is Tesla is clearly a zero. Clearly it's not a zero and I don't know if Tesla doesn't discover, I don't know, cold fusion all of a sudden, and it and everything catches up because of this. So, it's a bit of a brave new world. And again, … emphasizing how momentum -- you need your value because there's -- we got to be grounded to some sort of reality, but you also need your growth and you need your momentum because that just follows the thing that the price and the truth of price is telling us, right?
Mike:	**01:14:07**	So, I want to just caveat the whole momentum thing because I've been a -- I love momentum. I have been a momentum guy for years and you get punched in the dick repeatedly for years as like it's just you get dick punched for fucking years following momentum as one area crests and the other area falls. It's just like someone speed balling you speed bagging you. It's horrible. So, I mean, I know … like this, oh, it's so good. Trust me, it is a horrible strategy.
Rodrigo:	**01:14:46**	This is where value like, this is where ensembles come in. All right, it's about the blind spots. Clearly there's value in value. You need to identify true companies making real things that are undervalued by the market, 100% you need to do

that. And some portion of the population is paying attention those things. Some portion of the population doesn't give a fuck about those things. And that is also truth in a different way. And you need to capture that in a different way. Right? Put them together, obviously is magic, the rebalancing premium and all that. But it's just an explanation as to why these other things that shouldn't exist, because people don't want to believe that it's all storytelling in different ways. Right? And you need to capture the different parts of the story.

Mike: **01:15:31** I mean, it is really a stretch for a lot of people. I believe that it's storytelling, even fundamental analysis is storytelling. It's a broadly adopted way in which everyone has a lens that views the world, which then dictates how cash flows are situated, which then dictates how assets move. And if we decide that that's going to have a slightly different lens. I mean, obviously, Ben Graham's seminal work in that field kicked off the whole sort of zeitgeist around fundamental investing, for the last, what, call it 100 years. And maybe it'll be something else that grasps the world. And we institutionalize it through institutions like the CFA, and we teach people all to learn in this way. But this is, when you --

Again, the excess return the specialness comes from doing something different. Right? You know, having played sports at a high level, you think your protein powder's any better, you think your workout's any better? Like, what are you doing on your team? What is the best NFL team doing? How are the New England Patriots able to win in a zero sum game 75% of the time, for decades, right? There's some magic there that they're doing. They have some sort of assembly process or some, there is some magic there that's not just sort of, hey, we work harder than the other guy, we put in more time. They're doing things differently. They're taking steps that others can't or find uncomfortable or can't do, because of a myriad of reasons, right? And this is --

When something gets institutionalized and lens get there, you've always got to be around the periphery. I think that's something that at ReSolve, I would say we pride ourselves on in so many ways. Whether it was keto diets, whether it's doing different types of training physically to achieve other outcomes. Like, there's all kinds of things where we're kind of always in some weird spot where there's these four guys in Russia that do the deadlift like this, and this is how you do it, or like Louie Simmons' *Westside Barbell*. There's a reason why eight of the top 10 dead lifters in the world are all at his gym. And there's a reason why Omaha has all of these investment portfolio managers that crushed the S&P 500. It's not my mistake, it's not coincidence, I don't think.

Rodrigo: **01:17:57** No, it's finding those areas, those dead areas that nobody wants to touch and participate in before everybody else …

Mike: **01:18:04** Some magic, yeah, something.

Jack: **01:18:06**

And you know, to your point, I mean, if you're going to succeed in investing, you have to be willing to be different. And with different, I don't know who it was, was it Corey who said no pain, no premium, or Wes? I forget who it was. But whoever it was that the point is, yeah, being different is going to be very painful at times. And if you can't suffer that pain, you're not going to succeed. I mean, that's probably the -- maybe the number one learning for my entire career is that. And for the investors who can't suffer that pain, buy the index, buy the 60/40, portfolio and move on, for the people that can, they probably will earn an excess return over time, but it's going to be ugly, it's not going to be the smooth ride.

I mean, you're going to look like an idiot. You're going to be at a cocktail party sometimes when people are laughing at you, because they bought Shiba Inu or something, and they're making huge returns. And so that just comes with the territory. And that's been the hardest thing for us is like, figuring out who the people are that can handle that and understand that they are willing to be different. And that gets back to the idea of telling the people all the terrible things that are going to happen to them. It's the idea of trying to identify those people who are willing to be different, versus those people that you should just say, all right, go to Vanguard and buy the S&P 500. And that's a work in progress, because I haven't figured it out. But I think it's something we will continue to get better at, hopefully, over time.

Adam: **01:19:17**

To your point, I think it's worth emphasizing, and you did say this earlier, so I just want to repeat it really, that no pain, no premium has two dimensions. One is an absolute dimension. So, you can't generate a premium unless you're willing to tolerate losses, like absolute losses, right? But you also can't generate a premium unless you're willing to tolerate tracking errors, right. There's two ways to generate a premium. One is to take risks, like absolute risk, like risk losing your wealth. The other is to take relative risk, risk being different. Right? And I think, really the way we have approached the problem from the beginning is I don't like taking the risk of losing my wealth. I will risk being different. But being different, I think, to your point, Jack, because I think you've said this earlier, I think being different is harder than risking losing your wealth, right? So, the reason that we talked about tribalism, etc., right?

But by virtue of that, I think being different also has the opportunity to generate the highest premium. Right? You actually are able to generate your expected performance, if you can tolerate being different, is actually higher than your expected performance if you can tolerate losses. And I think this is something that if there's one thing that I've sort of taken away over maybe the last three to five years, that is a really interesting thing that I have come to which I think has sort of crystallized, why we've decided to go this direction. But it also is a harder path, like for an asset manager is a harder path because it's harder to be different than it is to suffer losses together.

Jack:	**01:21:02**	I agree. And I think the other thing for me is, I've learned that being different is not a one/zero type thing. So, 50% in the different and 50% in the same is a good thing for some people because they can stick with it. And so I used to feel like, all right, let's be completely different. And now I sort of learned that there's a continuum, and you can sort of evaluate each person and decide how willing they are to be different. And then you can maybe position them according to that.
Mike:	**01:21:25**	There's a dimmer switch.
Jack:	**01:21:27**	Yeah, I agree.
Adam:	**01:21:28**	You just want to be different enough to be able to generate the premium, but not so different that they're going to bail, but when that difference gets too large, right? That's the kind of Pareto frontier you want, like, a certain expected return, or a certain level of absolute risk in terms of volatility and a certain level of tracking error, right, where you're trying to sort of optimize on that frontier, which is a moving target too for most people, right, depending on how they feel, what benchmark they're tracking, etc. Right? So, this is a hard problem. But I agree, the dimmer switch …
Rodrigo:	**01:22:01**	Speaking of doing different things, and going against the grain, what I've been working on is diving, is doing free diving, and the different techniques that exist in order to be able to hold your breath and what you can do to improve those things; looking at videos, reading books, and on the whole topic. And one thing that was very interesting is one of the best divers out there, says, look, this is the best technique to actually physically learn to hold your breath longer. And it's go out there every day, and hold your breath for four minutes. And look, I've done it, the way it works is in three phases. The first phase is you feel pretty good. The second phase is you start feeling really shitty, and that you kind of want to give up a little bit. And the third phase, which is equally long as the second and first phase is when you start actually gasping for air and you're convulsing, and you can actually hold on to that for an equal amount of time. So, I was able to do that up to four minute hold, which I never thought in a million years I could do, right? Now, what he says, to get the best of this, do that every day three to four times. After the first time I did it, I was supposed to do a second round. I did two minutes, like I did not want to be in that level of pain. And so I was watching a video of this top guy in the world and he's like, here's the technique, this is the best thing. But the thing that's actually going to get you to freed up for the rest of your life and get you prepped and get you good enough is to do two minute holds, do five rounds of two minute holds three times a week. And never go to the limit because it's so psychologically painful that you are simply going to give

		up on doing it, and you're going to give up on the sport. So, that dimmer switch approach -- like it's so painful you can't do it.
Mike:	**01:23:56**	Rod, this is where the funny thing is, you're absolutely right, by the way, right? What's the dose that is the effective dose to get you to the place? It's interesting though, when you coalesce with others who are doing said thing, you will do the four minutes because everybody else is so you just got to go find the freaks. And if you hang out with the freaks, you're not going to be the one who only does it three days a week, right? So, it's kind of this interesting thing. So, if you really wanted to do the maximum, you would -- it's just like Louie Simmons, you'd go to the Westside Barbell if you want to deadlift 1,200 pounds.
Rodrigo:	**01:24:37**	Those guys are all crippled and nearly dead, right? Like, what he talked about is that there's a point in time to win trophies. We're talking about long-term investing, right? This is about freediving for the rest of your life.
Mike:	**01:24:49**	We're talking about gaining some level of expertise in some area that is really sort of three standard deviations above the norm. And if you really want to do that, go hang out with a bunch of other three standard deviation freaks. And that -- I'm not saying that's optimal too, because then …
Rodrigo:	**01:25:11**	Again, I agree with you. You might, in a moment in time, in a moment in time, you are going to achieve that excellence by being in the maximum amount of pain. In investing, it's about staying power. Right?
Mike:	**01:25:29**	So, think about -- By the way, we agree here, so we're not disagreeing. I think there's a nuance in why have people been able to coalesce around certain investments and hang in there, whether it's Bitcoin or Tesla or -- because they have this group, that is their new tribe. Right? So, all I'm suggesting is that, and I'm not saying it's the right thing to do, is if you wanted to do the everyday, three days a week, that terrible thing, you just hang out with 10 guys that did that. And then you would do it, because those are the guys you're hanging out with and you would not want to underperform with those 10 people. So, if you coalesce around a whole bunch of Bitcoin guys, you're going to hoddle because you don't want to be the guy who sells and is left behind with your hoddlers. Right?
Rodrigo:	**01:26:16**	Are the only value investors left, West Gray's people? Is that what you're saying?
Jack:	**01:26:21**	No, the key here is we've got to find like other value investors to, you know, bring together with our value investors so that they believe in the way the Bitcoin people believe.
Mike:	**01:26:29**	Right, you got -- Jack, you should think about building the communities within your interface. I don't know, you probably -- you may do this already. But build the communities around the strategy. So, the value guys can get around the water cooler and have their little mushroom cap of tea and say, oh, it was a

		tough day in value market today. Yeah, but you know, we love it. And then you got the momentum guys …
Adam:	**01:26:50**	And break …
Rodrigo:	**01:26:52**	Tina, Tina, there is no alternative.
Mike:	**01:26:55**	We … the opportunity for the tribalism within the area in order for them to have the stick-to-it- iveness in order to make it through the dark times.
Jack:	**01:27:04**	Because we don't want them at the cocktail party with the S&P 500 guys, and you typically don't want them there with the Bitcoin guys. Because that's going to be an even bigger problem.
Rodrigo:	**01:27:14**	That's so true.
Adam:	**01:27:15**	It's suicidal with …
Speaker	**1:27:21**	On that note …
Mike:	**01:27:22**	All right, boys, what do you think?
Rodrigo:	**01:27:23**	That was great. I love that.
Jack:	**01:27:25**	Thank you guys so much. I really appreciate you having me on.
Mike:	**01:27:28**	Recap where everyone can find you. And I always mispronounce Validea. How do you say it again?
Jack:	**01:27:34**	It's Validea, but it's … I think pretty much everybody's mispronounced it. So, it's not … So, I'm on Twitter, *practicalquant* and then when I write articles, it's at Blog.Validea.com. So, those are probably the two best places to find me. And obviously, we have the *Excess Returns* podcast co-hosted by me and Justin Carbonneau.
Rodrigo:	**01:27:55**	Guys, everybody, like, hit the Like button and Share this content. For every person that hits a Like button. Mike is donating a million dollars to your favorite charity. He's announced it.
Jack:	**00:01:28:06**	Donate some Shiba Inu, right?
Rodrigo:	**01:28:07**	Yes. That's right. I didn't say which dollars, I said dollars. Yeah, guys. Thanks a lot for those who are still around. And yeah, we're also all on Twitter. Reach us at Investresolve.com, and I am doing the outro so I'm buying myself some time until I figure out how to do it. All right, guys. See y'all. Thanks, Jack. Really appreciate it.
Adam:	**01:28:33**	Have a great weekend.
Jack:	**01:28:33**	Thank you guys, appreciate it.