Adam:	**00:00:02**	-the same when it comes to financial markets. Ladies, Gentlemen, welcome to the stage the lovely Dave Nadig. Put your hands together.
Mike:	**00:00:09**	I put my hands together.
Rodrigo:	**00:00:11**	Welcome, welcome.
Adam:	**00:00:12**	Dave welcome.
Rodrigo:	**00:00:13**	What's everyone drinking today?
Adam:	**00:00:16**	It's a nice glass of wine. Mike do you want to give the compliance spiel?
Mike:	**00:00:20**	Sure. Well, I want to hear the details of Dave's-
Adam:	**00:00:24**	You're right.
Dave:	**00:00:27**	This is an Angel's Envy Manhattan.
Mike:	**00:00:29**	Whoa. So what's the story on Angel's Envy Manhattan's?
Dave:	**00:00:33**	It's just a really good bourbon.
Mike:	**00:00:35**	I love that. I too, am drinking a bourbon sour, a whiskey sour bourbon sour. However, this is handmade. That's the froth of an egg white that I put in there myself squeezing.
Rodrigo:	**00:00:47**	Good for you.
Adam:	**00:00:47**	That's why I haven't been able to reach you on Slack for the last hour. Now it's all come together.
Mike:	**00:00:51**	It's precisely right and it is to let you know what? I wanted to bring my cocktail game up because I knew Nadig was going to come on with something special and he was going to bring the championship belt.
Dave:	**00:01:03**	Eggs, Eggs in alcohol? Never-
Mike:	**00:01:05**	Where are you going to get your protein?
Rodrigo:	**00:01:08**	Have you ever tried it?
Dave:	**00:01:09**	I have tried.
Rodrigo:	**00:01:11**	This is why you can drink endlessly without getting drunk. You get your protein in every shot
Mike:	**00:01:16**	True story.
Adam:	**00:01:17**	All drinks have raw eggs in them.
Rodrigo:	**00:01:20**	Another Canadian specialty is the Caesar which comes with...its Clamato Sauce. In the US it's not very big, but it just comes with the Clamato Juice, but the key is to actually get clams in a can and drop him in at the bottom where the long-
Dave:	**00:01:38**	You're just making crap right now.
Rodrigo:	**00:01:42**	This is the perfect beach cocktail.
Dave:	**00:01:45**	And then you get a toe and some beach rocks.
Rodrigo:	**00:01:47**	Get a, vodka, the Clamato Juice, some salt and pepper, some Worcestershire sauce, a little bit of veggie, whatever pickled veggie you want on top, but you put the clams at the bottom with a long spoon and then you drink while you eat. It's absolutely delicious.
Adam:	**00:02:04**	You typically only eat those-

Rodrigo:	**00:02:05**	… for eight hours at a time. Well, yeah, it's a breakfast of champions. Then you add an egg for breakfast.
Adam:	**00:02:11**	Exactly. Yeah. That breakfast and brunch.
Rodrigo:	**00:02:13**	What did we drink yesterday Mike? I didn't get the-
Mike:	**00:02:17**	We had the Australian, we did the Shiraz from Australia. We had a flight of some Australian shiraz and then we had the Battle of a California syrah versus a French petite syrah. So it was quite the day, was all the Shiraz. All of them.
Dave:	**00:02:36**	I'm guessing the petite syrah was nice because it's more interesting and spicy.
Mike:	**00:02:41**	I liked it better and it was French and the French just do wine better than everyone else.
Rodrigo:	**00:02:48**	We just lost 50% of our live participants.
Mike:	**00:02:53**	Speaking of participants, all participants should be notified that whilst the advice with respect to wine and fine liquors is absolutely within the scope of this conversation. All investment advice should be achieved and attained from a professional in your community area, licensed area, et cetera. This is for entertainment purposes only. Dave is very entertaining as well as are the rest of us. So, don't take any of this as investment advice.
Dave:	**00:03:24**	You know, every week when you do that little spiel, and I keep waiting you to say seek the advice of a professional, unlike anybody here. You never deliver the punch line now.
Adam:	**00:03:34**	It goes without saying. Don't you think?
Mike:	**00:03:35**	I try not to say that.
Adam:	**00:03:37**	If you want to prove that every episode.
Dave:	**00:03:40**	Right.
Adam:	**00:03:41**	This is really just going to be an episode of critical roll.
Mike:	**00:03:46**	Yeah. You should definitely do that.
Rodrigo:	**00:03:49**	Corey is asking why does Dave look so much better than you guys.
Dave:	**00:03:53**	Clean living man.
Rodrigo:	**00:03:55**	Corona living.
Adam:	**00:03:55**	With better cocktails, more creative cocktails.
Rodrigo:	**00:04:00**	So you were saying, you were telling me offline what type of exercise were you and your wife doing? What did you guys decide to do?
Dave:	**00:04:05**	Before people hopped on, we've had the other side of the COVID experience. I know a bunch of people have put on a little bit of weight and they're now trying to get out from underneath before the winter hits here in New England, we had the opposite which was this stuff hit and I got off the road, and all of a sudden I used to travel 60 to 70% of the time. It was very rare I had five days in a row without going somewhere. So once I was locked in for a while, my wife and I both just started jumping in, we started with around a P90X - three, which is near the old Tony Horton video series.
Mike:	**00:04:38**	I love that.

Dave:	**00:04:40**	… just pure cheddar. And then we both decided we might do a lot more lifting so we jumped into a lifting regimen that we've been doing ever since. Now we're down four days a week on lifting and two days a week of something outside big hikes, cardio. I'm also training for March for the Fallen, like I know some other folks, looking at the calendar - two and a half weeks? Yeah, I'm screwed.
Mike:	**00:05:07**	Two weeks a day.
Dave:	**00:05:08**	Totally screwed.
Adam:	**00:05:11**	He's still not doing a little sheepish here. I'm feeling definitely like we're not equipped for that this year.
Mike:	**00:05:17**	We're going for a walk.
Rodrigo:	**00:05:18**	We're doing a virtual one, right. … and walk.
Dave:	**00:05:20**	I'm going to get up in the morning I put my shoes on and start walking. I just don't know what's going to happen after that.
Rodrigo:	**00:05:28**	Dave, you travel a lot, why don't you give for those listeners who haven't heard about your background? What were you doing when you were travelling? What's your expertise? What are you known for?

Backgrounder

Dave:	**00:05:37**	Yeah, sure. So I'm largely called like the ETF guy. I started in the ETF business back in '93, which if you're keeping track is before there were ETFs. I was part of a team, it was then Wells Fargo Niko Investment Advisors in San Francisco, working on what would be ETFs two through 14 which were called the WEBs or the world equity benchmark shares which, I think those things finally started trading in '95. Might have been early '96. But I was on the buildup team for that. I was a child to be clear, it's not like I invented them or anything like that. I was a 20 something year old getting coffee for people who knew more than I did. But I was trapped in that index structure products ETFs business, which was a huge part of what Wells Fargo Niko was trying to build then. Then was on the team that became BGI, Barclay's Global Investors when we sold the business to Barclays, and then was there for about 18 months doing the transition, mostly shutting down all of the retail fund businesses in Asia and Australia. Eventually, long story short, I was an active fund manager during the .com boom, that didn't work out very well.
Mike:	**00:06:46**	That's a great story by the way. I like that. Can you tell that story, or no?
Dave:	**00:06:50**	I can, but we'll get there in a minute. Anyway, long story short, I ended up back in the ETF business in the early 2000s and was at ETF.com for about a decade, ended up being CEO at ETF.com and then fairly recently, just in January left ETF.com to join ETF Trends and ETF Database, which were competitive sites, trends being the more content oriented one DB being the more data and research oriented one. I focus on product structure, I focus on quant financing as it impacts actual advisors and investors, not necessarily the depth you guys

go because you guys will go real dark deep. But I'm mostly a poser when the math gets too hard. So once you put an integral in the equation, then I tag.

Adam: **00:07:37** That's where Mike comes alive.

Mike: **00:07:40** Anything scribbly, in crayon, I'm only there then.

Adam: **00:07:46** Exactly. So there's a story to tell them about your-

Dave: **00:07:51** I was both the best and worst active manager in the world depending on when you want to start the measurement points. So we started... I ran a fund with partners, obviously called Open Fund with the company was called Meta Markets and we started in 97-98 something like that. We were a new economy tech fund, it's clingy to talk about it all now. We basically bought momentum, flipped IPOs and that worked incredibly well until it all worked incredibly badly. We had 150% up year and a down 94% year. Just straight up.

Mike: **00:08:33** That's like a breakeven.

Dave: **00:08:35** Yeah, it was. Basically, it was like a mining expedition. Then, we were starting to go bankrupt when the market crashed and by the time 911 happened, we were really, get out, that was all she wrote. So we just shut the thing down. But it was fun, but it made me even more convinced I should be a quant and not an active manager.

Adam: **00:08:54** Say more about quant financing. You're mostly focused on quant financing of ETFs. Say more about that-

Quant Financing of ETFs

Dave: **00:09:04** I come to ETFs from a quant background. When I started in this business, I was drinking the Kool Aid of indexing of the late 80s, early 90s, which was really everything in the institutional space at that point. So, at Wells Fargo Niko, our clients were the Federal Employee Retirement System and CalPERS and the Harvard endowment and all these huge pools of money that had migrated towards passive, really in the late 80s and early 90s. So from there, it was all about now, what's the next thing? What do you add? Because honestly, the margins were crap back then and they're still crap now. We ran the Federal Employee Retirement System in 1993 for I think two basis points for the large cap equity.

Rodrigo: **00:09:48** 93?

Dave: **00:09:48** Yeah. 93, 94. It was definitely sub five. It was very thin. But it was, I don't know a 10s of billions of dollars mandate.

Rodrigo: **00:09:59** Sure. I didn't know it went that low even back then.

Dave: **00:10:02** It did. Now, interestingly, one of the games back then which everybody now realises but didn't then was the ability to lend. That was where all the money was, and the inefficiencies in the second lending market were just phenomenal. That has carried on into BlackRock's business today. BGI became...it was bought by BlackRock, iShares became the brand in the late 90s. But under the hood, there the secret to their success has often been a very, very good sec lending programme.

Adam:	**00:10:35**	I was going to ask you actually just from your on your ETF side, are we at the point where we're seeing negative TERS yet because of the basically the fees are zero-
Dave:	**00:10:46**	We had a couple but didn't last. So the So-fi funds are still out, those are at zero, right? That's part of the schtick there. Is there some money to be picked up off sec lending? There was a rebating fund that was rebating $50,000 dollars a year past zero to the fund, that one got closed down. At that point I think people legitimately look at that and think it's a gimmick. One of the things that's happened is the margins and sec lending for most stocks have collapsed because there's just more information. It's a much more open market. There are services like Data Explorers that will actually tell you how much you should be paying for a borrow, those kinds of things. So they're quarter-
Adam:	**00:11:24**	… supply, right? Because Vanguard and BlackRock basically lend out all of the securities in their-
Dave:	**00:11:31**	Vanguard is much less. Vanguards much...so different firms have very different approaches to that. BlackRock has been a very aggressive securities lender, meaning they're going to try to have as much of their portfolio out at a time as they can. They run that programme internally, and then they split some of the top line revenue, most of the top line revenue back to the funds, and then they basically try to earn a profit on the part of the revenue that they're collecting, that they have the staff at desk. So I think it's a very equitable relationship and I think they're very good at it. Other firms, I think Vanguard in particular and this could be wrong now, but historically they've used lending agents. They hire somebody else to run a sec lending programme and then they share 100% of the profit back to the fund, which is different, profit versus revenue. So, there's been a lot of debate over the years about which one's fairer. I think in general, BlackRock investors have done better on their deal with BlackRock, which is probably 75-25 now, for a long time it was 50-50 then it became two thirds, one third, it's definitely going in favour of investors. But for a long time in index management, the norm was a 50-50 split, and most of, a lot of the revenue at least was being made on the sec lending side of the desk, not on asset management, not on pushing the button on the spreadsheet to re-val your S&P 500.
Adam:	**00:12:56**	Right. So, for ETF Trends you cover the stuff that's at the forefront or new and novel in the ETF space. What are some of the things you're looking at right now?

ETF Trends

Dave:	**00:13:06**	Well, this year has been a really interesting year and not just for the normal reasons we could expect, not just from COVID and election years and global politics and all that jazz. We had a couple of big changes. This is the first real year of what we call the ETF Rule, which has just basically made it a lot easier for people to show up and launch ETFs for a lot less money. That has not led to a huge raft of new ETFs granted they're 2500 of them. So we probably have

enough, but the other thing that happened was we saw the passage or the approval of a whole bunch of so called active non-transparent structures or semitransparent or we could just give up and just call them all active strategies, because that's really what they are. That's been a really interesting part of the market. We've had some really successful launches, American Century has a couple hundred million in their strategies now, T-Rowe just launched basically their four best asset managers in the T-Rowe enterprise as ETFs, those seem to be doing pretty well. For a nerd like me that was super interesting because there was a lot of question about will the structure work and is one better than the other and this one and, the end result cut to the chase, they're all working, they're all fine. They're all perfectly well designed, and market makers are more than happy to show up and keep these things trading until something hits the fan and so far, everything's worked perfectly so …

Rodrigo: **00:14:31** Just so I can understand what that Rule has done. You're basically not forced to divulge your positions at all times. How long can you keep...like you have to report what one quarter and put in a year?

Dave: **00:14:45** Yes. So basically what, so two different things. The active non-transparent structures, each one of them is different. The first out of the gate was from a company called Presidian, which is owned by like Mason, T. Rowe Price is doing a different structure with, Nizi has their own strategy, it's a bunch of different ways of doing it. But at the end of the day, what you're doing is saying we're only going to disclose the way a regular mutual fund discloses, which is quarterly, usually with a 15 day lag. That's sort of the standard, frankly for most of the industry and most of the industry is just fine with that, like most active managers even in SMAs aren't sending a daily portfolio position report to every SMA client, they're just giving you an update monthly or quarterly and that's fine. We're all fine with that. That's what these structures do, is they basically say we're going to this sort of standardised quarterly disclosure model, they could do it sooner if they wanted to, but quarterly is what most people are settling on. Versus ETFs, normal ETFs, fully transparent ETFs where you're basically showing your portfolio every morning at eight o'clock whether you want or not because that's how you built that structure. So it lets an active manager effectively blind their portfolio the same way they would if they're running a traditional mutual fund.

Rodrigo: **00:15:56** And the concern from a market making perspective was that the spreads were going to be much wider because they don't have as much transparency. How has that worked out?

Dave: **00:16:07** It worked out. Every one of these solutions has their own trick for how they solve that problem. Because if I'm supposed to arbitrage a basket in the morning to be able to do a creation, I got to know what's in the basket because I got to be able to run a hedge. Nobody wants to take a giant unhedged risk. In a traditional ETF you know precisely what you have to deliver at the end of the day, and the manager knows precisely what he's going to get. There's no friction. So that all works really well and that's why ETFs function and all of these non-transparent structures have some way of signaling to the market making community what fair value is. That could be a verified true portfolio value disseminated every second, like a truly verified indicative value that's just a constant data stream which once you have that, being nerds you would know, you can then build a model that's going to map that pretty tightly. You already know basically what's going to be in the portfolio because you know what it started with 30 days ago or 40 days ago. So that makes it pretty easy to run a pretty tight hedge because we're not talking about crazy strategies. These are all US equity strategies.

Rodrigo: **00:17:13** It will get much more difficult as you get more esoteric for sure.

Dave: **00:17:17** Yeah, like emerging markets and derivatives would get really tough, but the stuff that's come out is pretty...I wouldn't say it's vanilla, some of its very high conviction, high active share stuff, but it's still playing out a US equity beta. So it's pretty easy to figure out a half day hedge to get to the end of the day. Sometimes there's proxy portfolios that they publish, that are guaranteed to be 95% of the market cap of the actual portfolio. They all have different nuances, but they get to the same place which is they give the market makers enough confidence to be able to go in and arbitrage out any big price discrepancies and so far it's worked.

Mike: **00:17:57** Is there any fungibility side to that where usually if you're big enough you can say, I'll take the underlying, are these ETFs preventing that, so that they don't deliver the underlying to I guess, the maker, or whomever.

Dave: **00:18:13** Again, there are a bunch of different models here. In the proxy model, you get delivery of the proxy, that's what you're going to get handed. It may only be 95% of what's in the actual growth equity fund, but you're getting the 95 out of 100 growth names that you expect to get. So you can just choose to do that. The same thing on the way in, you have to deliver those 95 out of 100 names to be able to get the shares of the ETF. So that works fine. What you don't get to do is what's happened in some fixed income products historically where, hey, you know what? These underlying's really hard to buy so I'm not going to bother, I'm going to buy the ETF and then present the basket and get the underlying handed to me. That's happening in like junk bonds, junk muni's, big institutional players will use ETFs effectively as a washing machine to grab some of that stuff out that's a little bit tough to get clean. You can't do that in these non transparent structures at all.

Adam: **00:19:07** Some of these models I guess are, if you're provided the NAV, and you're then you need to build, so the market makers got to build a model. So, it's some kind of asset pricing model, presumably, it's going to be based on some kind of estimated betas to industry sectors or factors or just cap on beta. I think we were chatting before, you read Corey Hoffstein's new paper?

Dave:	**00:19:34**	Super great. Yeah. Anybody hasn't read it yet Corey…
Mike:	**00:19:39**	Shameless plug.
Adam:	**00:19:42**	Exactly. He did talk about this as a contributing factor to the increasing fragility of market structure where you've got market makers who are trying to model their exposures for hedging purpose using some asset pricing model and typically that's levered to market beta and so changes in market beta change what they need to hold in their model and vice versa. And it introduces more as well.
Dave:	**00:20:15**	There's a lot of reflexivity. It's not just ETFs. Our whole market structure right now has multiple reflectivity inflection points. Can you even say that?
Mike:	**00:20:28**	Reflectivity inflection points.
Adam:	**00:20:30**	Absolutely can.
Rodrigo:	**00:20:32**	Reflexive reflectivity is the correct pronunciation
Dave:	**00:20:32**	And what that paper does which is, it quite brilliantly goes through and says, where are all of these unexpected relationships, and some of them are very strong, and identifiably correct and provably true, like the pro cyclical rebalancing of leverage or something like that. Those are like that's just math. That's how that works. There's no way around it. There's no dodge, there's no better product. Some of it is a little bit harder. You guys have talked about this with several of your guests here. Things like, what are you doing to the price discovery mechanism as X percent of the market becomes quote unquote passive. Those also have these reflexivity qualities to them. They're much harder to prove, the transmission mechanisms are sometimes specious. But they're still true in the sense that yes, if 99.9% of the market was indexed we would have no price discovery, et cetera. Like they hold up when reduced to their logical absurdities, but we live in the real world which is a lot messier.

Frictions in Passive Investing

Adam:	**00:21:38**	So what are the frictions in in the real world that in your opinion derail or diminish the veracity of some of these stronger claims about the impact of passive investing like the ones made by for example Mike Green. And I don't want to single it out but just that general-
Dave:	**00:21:58**	No. That was a great conversation. I loved that conversation. I'm not going to sit here and try to refute his 50X multiple math or that stuff, but some of the complexities, they get lost in there. The first one is just this assumption that passive is passive, and that all passive is created equal and that when we say something like, ooh, the markets 15% passive now, what does that mean? That's such a big umbrella because inside that 50% passive, you have an enormous number of people making systematic value bets, and an enormous number of people simultaneously making momentum and growth bets in passive vehicles. But nobody would try to tell you they're ambivalent about which one happens for price discovery in those underlying stocks.

Adam:	**00:22:46**	This is just a nomenclature challenge, right? Corey and I were chatting throughout the day about this because you get this pushback on indexing is passive or not, or so much of what Mike Green is saying and what Corey was asserting is predicated on a definition of passive, which is market cap weighting. And if you're deviating from cap weighting, then you're active and we don't need to have a discussion about nomenclature. But if we just say, so actually, I'll throw it back to you. So there's been claims that about 45 to 50% of the market is now passive investing. Does that include non-market cap weighted index investing in that number or do you have better or more granular numbers that you would
Dave:	**00:23:33**	So, first of all, we don't have any of those numbers because the only thing we can track is public product. The vast majority of index money is not visible, it is not something that you're going to see when you go to your Bloomberg screen and pull up…
Adam:	**00:23:42**	Blackrock came out with a report a couple years ago where they also surveyed something like $6 trillion worth of global institutions and so they're trying to triangulate.
Dave:	**00:23:56**	Look, it's a big number. It's something less than 50% and more than 10. That's like we're in that range-
Adam:	**00:24:02**	Like the 95% range.
Rodrigo:	**00:24:04**	Is that what you got?
Dave:	**00:24:05**	The problem is, like that would be a problem if what all that money in, was either like AQWI or VT or something like that, but it's not. Yeah, there's a big chunk of it that's in the S&P 500. Okay, well, let's start with that. The S&P 500, the most actively managed index in the world. There's a committee that decides what goes in and out of it. We just saw that, Tesla, while it is 1% of the market is not allowed into the S&P 500. That's for reasons based on something-
Adam:	**00:24:34**	I agree.
Rodrigo:	**00:24:36**	Wait. Dave I didn't hear this. They excluded it because of a technicality, or a discretion?
Dave:	**00:24:44**	They excluded it for reasons they have not chosen to disclose.
Adam:	**00:24:49**	But either way it's pretty close to...I agree with you technically it is an active index. There's a committee and they select and sometimes there's oddities, but generally…
Dave:	**00:25:00**	… 15% of its value, because a bunch of people in a boardroom made one decision. That is not passive investing.
Adam:	**00:25:11**	But it's also not typical, right? Like, that's an outlier event.
Dave:	**00:25:15**	No, that is not an outlier event. Like look at what happened when the Q's just decided to spontaneously rebuild the NASDAQ 100 index, because they didn't want to have to kick Apple out. These big old name brand indexes that we talked about, like the NASDAQ 100 and the S&P 500 and the Dow, god forbid, they're not passive, and they're not actually particularly useful target vehicles

for investors. If the passive number we're talking about whether it's 10 or 50% was the Russell 3, then we'd have a much bigger problem. But underneath this umbrella of passive are people doing low vol smart beta, and hedge funds doing sector rotation strategies. If you look at flows, yeah, big cheap beta does tend to dominate flows but it's not the same big cheap beta. If everybody decides to sell their SPY and buy IWM which is the small cap ETF, well, okay, that's price discovery, we just did a whole bunch of selling of large cap in favour of small cap which, in fact, is what we saw a bunch of in August.

Adam: 00:26:19 But if they were to sell SPY and buy the Russell 3000, or a VTI or something like that, and so it's a total market index, you're still 95% of the cap weight of that index of the weighting of that index is still going to end up to be the same.

Dave: 00:26:36 Right. But that's not what we actually...so when people talk about indexes, that's not what daily flows look like. To Mike's point in his previous, when you had him on, he's talking about this incremental flow that would happen if everybody sold Contra Fund and bought SPY. The problem is they're not going to buy SPY, some of them are going to buy Principal's Mega Cap, Smart Beta Fund and some of them are going to buy the Q's and therefore load up on Tesla and some of them are going to buy SPY and skip Tesla entirely, and you add all those decisions together every single day and it is not a monolithic move into cap weighting. That's just not-

Rodrigo: 00:27:15 The monolithic discussion often comes around this idea of forced retirement plans. You're working, a portion goes into your retirement plan, that retirement plan goes to these passive vehicles and I don't know as much as you do.

Adam: 00:27:31 Cap weight.

Rodrigo: 00:27:31 Cap weight, that's what I was going to ask. I don't know as much as you do. The retirement accounts seemed to me to be very cap weighted oriented, they're not getting fancy with factors, they're not getting fancy with anything else, and they're not timing between IWM and in the SPY. They're really just buying an endless amount of that very passive ETF and I don't know what that number is, but if it continues to go the way it does.

Dave: 00:27:57 But the irony is that defined contribution space is one of the last places that active fund managers are still pulling in assets, if you remove the defined contribution market, the US mutual fund market would be a fraction of the US ETF market. Like the defined contribution assets dominate the active flows. Ironically, the opposite is true which is that, that endless bid on the bottom of the market while it rolls up to cap weighting, because by definition, all active managers together equal the market. The way it's being implemented is some Dodge and Cox fund that's still charging a buck and a half like that's weird they're still going to get assets.

Adam: 00:28:39 At the margin are we seeing more money flow? Your typical defined contribution fund, there are very few funds that are migrating from passive

		index based default options to active default options - there are much larger number that are moving the other way, and a …
Mike:	**00:29:04**	It's in a state of disequilibrium.
Adam:	**00:29:06**	Yeah, so it's at the margins. I will certainly agree with you or at least I'll concede to you that there is still a very large fraction and one of the larger fractions across all the different investment cohorts in active funds, in the defined contribution space at the margin you are still seeing a continuous flow of funds toward the passive space and away from the traditional active space and towards cap waiting. No?
Dave:	**00:29:34**	Yeah, so I'm not trying to argue the active is the middle of some massive comeback, and we all missed the memo. That's not the point. I'm not going to make that at all. I'm simply saying that when we're starting to talk about things like structural impacts on price discovery, this is a big complicated hairy market. So I get nervous anytime anybody tries to tell me, because of cap weighting the market is destroyed. Because I look at flows every single day and on any given day it's just as likely for me to say huh, like flows into SPY and its ilk are down 10 billion and flows into momentum tech stocks are up 30. Like, that's not an unusual day in this year. But try to tell me why that means that we don't have any price discovery going on.
Mike:	**00:30:22**	Well hold on a second. So we have your 1993 example for you replicating indices at two basis points, 30 years ago. We know like institutions have a pretty dominant place and there's a whole bunch of assets that are just parked, sort of market cap. They're not even part of this discussion. I'm not sure that it really matters in the sense of, it is the madness of markets to some extent. You're in a disequilibrium state where you are going from active to passive every day, not every day, generally at the margin where the prices are made.
Dave:	**00:31:08**	With you 100%.
Mike:	**00:31:09**	So this is the challenge, right? The active manager has a set of stocks, they're sold every day and then they're placed with their cash into the index, generally speaking. Not on hold, but at the margin that disequilibrium is where we sit at the moment and that is the thing that can cause distortions until such time. The whole argument that, oh no, a market cap could be 85% of the market, but 15% would preserve price discovery because that 15% would go and find the price. In equilibrium, agree, on the way we're going to have large distortions based on hurting, human behavior, all of these other issues.
Dave:	**00:31:55**	I think we would all agree that the S&P 500 is a decent proxy for passive investing in the United States. Certainly the most used, most tracked, most invested large equity value.
Mike:	**00:32:08**	I don't want to lose an argument, it's okay.
Dave:	**00:32:10**	But if we start with that, then explain to me how in this time when we would expect even more money to be running from their underperforming active managers that you're charging too much into the S&P 500. Why are we seeing

		a higher concentration spread and performance than we've ever seen in my career, where you've got 10 stocks in the S&P 500 responsible for 40 something percent of the returns and the others-
Mike:	**00:32:36**	If I'm a return chaser, I'm going to chase those 10 stocks.
Dave:	**00:32:41**	Right. But my point is that all the money was going into the S&P 500 you would actually expect the top and bottom stocks to be quite tight. That's not actually what we've seen, like I didn't-
Mike:	**00:32:51**	No, I don't think so. That one little point of disequilibrium that causes the 10 stocks to begin their roll down the snowball hill creates more and more self-reinforcing price discovery which says no, I should own more of Microsoft, Facebook-
Dave:	**00:33:10**	But that's an active management decision to follow the money's path.
Mike:	**00:33:14**	True. That's fair. So it's a hurting/ self-reinforcing cycle.
Dave:	**00:33:21**	Like the first papers I read on this like in the late 90s, early 2000s about how indexing was going to destroy the world, or go read the" indexing is worse than Marxism" argument from Bernstein. You go read that paper, the core of the argument is price discovery is going to and is collapsing and therefore the mean performance dispersion between the best and worst stocks in the S&pP500 will continue to collapse until there's no longer a meaningful difference from the best stock and the worst stock in the index. The actual math is, the exact opposite has happened. We've had just massive divergence between-
Adam:	**00:33:54**	I don't think that that's...I don't know that that's what that implies. One of the things that fell out of a lot of these conversations about cap weighted indexing is the fact that the...so imagine, and I'm just throwing numbers out there, but imagine that Apple has 5% of the cap weight of the index. I'm not sure what they have. But let's just say that 5% of the cap weight of the index and that it's 50 times larger in terms of its proportional weight in the index than the 10th largest stock. Does Apple also have 50 times the daily dollar liquidity as the 10th largest stock? And if they don't, but at the marginal dollar they do, would you go into that stock?
Dave:	**00:34:43**	It's pretty close. Trading volume on $1 basis tracks mark. I haven't run this study lately, but I've never run that study and not had it be pretty damn high correlation between-
Adam:	**00:34:55**	But even if it's wildly off, even if it tails off at like it's 80% or 90% or whatever, then you're going to have a disparity where you've got dollars that are going to flow into the market, they're going to hit the offer, there's going to be at the margin fewer shares, dollar weighted basis, fewer shares on the offer and all things equal, there's going to be not enough supply in the largest stocks to meet the demand, because there just isn't the same proportional level of supply as there is required for that share of market capitalization.

Dave:	**00:35:37**	I actually think there's something much more interesting going on here. So it's not that I disagree with any of this. Clearly, if you reduce this argument to its absurd level, sure, indexing destroys the universe.
Rodrigo:	**00:35:51**	That's Butler's favorite approach to all arguments.
Dave:	**00:35:55**	… Everything's got to be what it is, but I always come back to these two things it's like we can have this interesting debate about this and you can't tell this is one of my favorite topics ever. But we can have this debate, there's a bit of so what? Like are we going to literally ask Congress to pass a law banning passive investing and exactly how would you implement that? Literally, there's a little bit of so what?
Adam:	**00:36:16**	I don't think there's...Well, we might complain internally about this dynamic, but that's not really the point. The point is, if this dynamic is true, then what should we do or how should investors position?

Positioning Investors

Dave:	**00:36:31**	I'm glad we got there. I think that's interesting but I think actually there's a much bigger story behind this, which is that because of the way media has started to influence investing, like started with Reg FD, and it's just gotten worse and worse or better and better depending on your perspective where everybody knows everything all the time. What that means is larger companies are always going to have more focus whether that's research, data, news, whatever. And smaller companies are going to find it harder and harder to break through. This is just another version of these inequalities in the economy we're seeing over and over and over again.
Adam:	**00:37:11**	Differential attention.
Dave:	**00:37:12**	Yeah. So, the reason we talk about the FANG stocks is, not because it rhymes and it's cute. It's because you can go through almost anybody's model, ESG, smart beta, tech, trend following, thematic, and you'll find the same 50 stocks in almost all of them. Some of them get splintered off like the energy stocks don't end up in the ESG stuff. But boy, it's incestuous and that stuff overlaps. That's not because it's wrong. It's because the way we think about investing is now permeated by this information frequency culture. And so, we created this bizarre thing where stock 504 in the cap spectrum doesn't have a pathway to get the same attention except doing it the old-fashioned hard way of running a better business, earning more money and having their fundamentals show up on somebody's screen.
Rodrigo:	**00:38:09**	So with this information, I just want to understand we're talking about 500 stocks in the market, the ones with smaller market cap have less resources in order to get the attention that they need. You're talking about attention on who's coming to their quarterly calls, doing a report on them, I just want to separate actual research being disseminated to these allocators that you mentioned versus just simple zeitgeist says it's in the twitter sphere. It's in the zeitgeist, everybody on the planet's reading or hearing more about these larger

		stocks and therefore at the margin, they're getting more of a bid than the other lower cap stocks.
Dave:	**00:38:48**	And to loop this back to some of where Corey was headed in his paper, and back to the point of like, if we assume that some version of this is true about the markets, what does it mean for how we invest? How we tell our clients to invest, let's focus on that, because we're not going to pass the laws banning indexing. It's ridiculous. So what does it mean? I think it means that we are in this period of heightened volatility and that's part of why I love the fact people are trying to talk about this in terms of convexity, because what it means is the steady state market, whatever we're thinking it is, is actually the most fragile state of the market, not the sort of lowest entropy state. It's actually the highest entropy state, it's the most likely to get tipped off. So, if you accept that, then what that means is low volatility would be the time to just lever the hell out of both your puts and your calls. Just create that smile and accept the fact that if the market goes like this, I'm going to lose 2% and I'm fine with that because that's not the equilibrium state. So that's where part of why I love Corey stuff so much, is part of what like recently I've gotten, to get the name of the funds wrong. There were three ETFs launched this week that I was just like nodding my head about, Corey will type in Chat. I think it's SPYC, for convexity and it's two old industry veterans who basically are building products to basically do this and say, look, the equilibrium stream is not steady state markets anymore. Let's assume that's the disequilibrium state and put all of our extra energy in making sure we make money on the tails. Which I think is a really interesting-
Rodrigo:	**00:40:25**	Well, it's been interesting this last week how NASDAQ lost 10% faster than in its history. Like it was like four days of massive losses, …
Dave:	**00:40:36**	Yeah. Well, a whole separate conversation about volatility equaling speed, which I think is a really interesting way of thinking about it. Somebody on your show that said recently that idea that we haven't actually increased volatility all we've done is shortened time that feels much truer to me than anything. There was a great NPR story like 10 years ago on auditory, making the sound of trading audible and when you do that you can literally hear how the markets changed, which I think is really interesting.
Rodrigo:	**00:40:36**	That's neat. Now, I got to look into that.
Dave:	**00:41:11**	I'm rambling now.
Rodrigo:	**00:41:12**	I see ticker symbols here and in the podcast that we-
Mike:	**00:41:16**	As long as they're not mine.
Rodrigo:	**00:41:17**	I didn't really advise…
Mike:	**00:41:21**	You can say whatever you want.
Rodrigo:	**00:41:23**	SPYC, SPUC and SPD, whatever they are.
Dave:	**00:41:26**	Right. So, it's SPY convexity, SPY up convexity, SPY down convexity.
Adam:	**00:41:31**	Once. So what are the underlying mechanics? Are you familiar with them yet?

Dave: **00:41:36** I believe what it is just getting beta exposure to start with, I don't know whether they're buying IVV or whether they're doing that by buying all the stocks. My guess is they just launched, they're buying IVV or VU, and then they're just using derivatives, using options to basically profit from being wrong on the downside and profit from being wrong on the upside. So, you're effectively taking the dividend yield of the S&P 500 which is 2% headed to zero, then using that to fund the options on either side.

Adam: **00:42:05** And you're just buying more straddles as vega compresses because you can spend the same dollar amount but buy more units as vega compresses and vice versa and try to preserve-

Dave: **00:42:17** Further proof the only class any MBA should take is options and just move on. Because if you can under...not because you should all be trading options because once you understand all your Greeks, everything else just falls into place.

ESG

Adam: **00:42:28** Yeah, you're able to price everything else more appropriately. You did mention ESG. This seems like-

Mike: **00:42:36** Don't get me started.

Adam: **00:42:38** -a cavalcade of-

Dave: **00:42:39** Mike I would have thought you were Mr. ESG.

Mike: **00:42:42** Yeah. I'm also very politically correct.

Rodrigo: **00:42:49** You have to leave two progressive countries. So that he can be-

Mike: **00:42:56** I love ESG. I just would like to know whose E, whose S and whose G. … I like to espouse and once we identify that, then of course you can do it. I think Notre Dame has done a wonderful job, and Notre Dame in their investment endowment has espoused an E, an S and a G that are very congruent with a certain religious catholicism, which makes perfect sense. I understand that wonderfully.

Adam: **00:43:28** But the problem is…

Mike: **00:43:29** Yeah.

Adam: **00:43:30** Lapsed Catholic.

Mike: **00:43:32** Aren't they all? Aren't we all? It's all built on forgiveness, anyway. The point is, until you can get to that group that you identify with, this is really hard because you need to identify very specifically who you would like to identify with in those E, S's and G's. So that's where it falls down for me a little bit. It's not that it's not a good thing. That's just my philosophical issue.

Dave: **00:44:00** You're totally right. The problem with ESG is, ESG is packaged products. Packaged products are the worst way to implement ESG, except for every other way that we've had pretty recently because like literally in the ETF space, we have the Catholic Values Fund and the LGBT Fund, both classified as socially responsible investing. Obviously, those two portfolio managers would not

		agree when they got into the same room. Like as an ETF nerd, I basically have to say yeah, these are both values based on investment.
Adam:	**00:44:33**	How do you, values based investing, exactly it should be …
Rodrigo:	**00:44:36**	We should start a values based ETF company and have, like choose your own values.
Mike:	**00:44:44**	Choose your values, are you a monk?
Rodrigo:	**00:44:50**	Choose male rights.
Dave:	**00:44:53**	Are you a monk, probably gets narrow real tight.
Adam:	**00:44:57**	I'm into bald male, bald male rights. … what?
Dave:	**00:45:03**	… they put their head polishing fund.
Rodrigo:	**00:45:05**	I want the AUM on the bald, rich white man.
Dave:	**00:45:15**	But this is the problem of ESG. It has been a big year for ESG. It's been double the flows we've had in any year in ESG ETFs. If you actually layer in under mutual funds, it's even more. So it's definitely not a fad anymore. There's hundreds of billions of dollars showing up in these strategies, again, led by institutions. That's where all this started. Because like you said, People like Notre Dame can articulate a mandate very clearly and have the assets to be able to say you, manager, go run this strategy for me. That's where ESG ends up. I think ESG is what cracks direct indexing open for the average investor. Certainly, firms like Parametric and Optimal. They built whole businesses on this already whether they called it for ESG reasons or not, but a lot of advisors I've talked to, they actually are approaching this from a two prong perspective, the two biggest problems they have, some guy walks in who's a Google executive but wants to be passively invested and now you've got to figure out how to get him into a bunch of index funds that don't have Google in it. Good luck with that. And chances are, he's probably not going to short Google to get it out of his portfolio because when that shows up in the PR, that's real bad. So solving that problem, what do you do? You get in the S&P 500 minus one, very easy to do in a direct indexing platform. The other thing you let them do is say and I don't want to own tobacco stocks. And then he can just say, okay, it's S&P 500 minus three, that's super easy. There are a lot of platforms building their, Canvas from O'Shaughnessy Asset Management's probably the one that I think is getting the most attention or traction with a certain class of billion plus fin twit advisor. But I think that that is the future and it becomes a feature really quickly once folks like Schwab fed that into fractional share program and now …
Rodrigo:	**00:47:02**	Is there a category is, are these advisors, can plug into these platforms and choose categories for their clients? So 500 minus.
Dave:	**00:47:15**	There are quite a few platforms that do this now. O'Shaughnessy has been pretty out there on financial Twitter about it because that's where they are. But like Just Capital's been doing this, Ethic Invest, Open Invest, there's quite a few of these platforms sprouting up right now.

Rodrigo:	**00:47:31**	It's very interesting in this world of protecting your 1% to become the ethical advisor where you're paying them to make sure that you go to heaven, rather than hell. Maybe that's brilliant, like it's just another angle of marketing.
Mike:	**00:47:47**	The interesting thing about this angle, and this is where whose E, whose S and whose G, if you can actually customize that to the point where you can make it bespoke for the individual. You now truly have an ESG and you have I think an extra layer of defense against behavioural vulnerability. Because if I'm part of a tribe, that even gives that extra layer, but if I've articulated a level of values, now I'm not beholden to performance vis a vis an index of ruthless capitalists. What I am is, I'm a thoughtful investor who's decided on how I might invest ethically and I'm willing to suffer the slings and arrows of whatever performance cometh, because I will only invest in an ethical manner. So you get this extra layer of behavioural attenuation if you can actually deliver an ESG that is totally customised to someone's value set. I think it grows in power exponentially if you can attach it to a group obviously, because then you have a group of people who are supporting one another in whatever the performance would be. Out performance, under performance and whatnot.
Adam:	**00:48:58**	I think it's fantastic because what it means is that there an entire new cohort of investors who are nonprofit seeking, so they're willing losers from a profit seeking perspective, which means that, hey, maybe factor investing might experience a renaissance. There may be some nickels lying around for what passive indexes to, or active indexes to-
Mike:	**00:49:19**	I thought I was in the role of...sorry.
Dave:	**00:49:23**	No, I'm going to blow up.
Adam:	**00:49:25**	I've been encroaching on that for years.
Dave:	**00:49:27**	I'm going to pop your bubble on that because what we've seen recently is that probably since the Volkswagen blow up, most of the data being used to drive ESG portfolios. And I'm not saying this means it's ESG. I'm saying most of the data being sold to people implementing ESG strategies, which means it's coming from usually Sustainalytics or MSCI. If you actually use that data, it turns out to be, whether it's useful as a social tool or not, it turns out to be a pretty interesting risk management tool. And that's really where this has started to raise...like the average ESG fund has beaten the crap out of the average non-ESG fund so far this year. Now the reason's fairly straightforward.
Adam:	**00:50:08**	A self-fulfilling prophecy I think.
Dave:	**00:50:11**	No, because the current crisis we're in has killed, energy, transportation and manufacturing.
Rodrigo:	**00:50:20**	Are we getting that cascading effects? Are you pro cascading effects again? So, one of the one of the interesting discussions between... really what you're saying is, the ethical versus the alpha, right? And so I was at an alternative conference recently where Caisse de Depot was saying, look, we're going to become much more prone to look at the ethical nature of how you invest in the

funds. But there's a big...we have constituents, and our goal is to provide a certain level of returning alpha. And so we have to put these two things together, this idea of excess returns and ethical investing, and ensure that we're meeting our ultimate objective, which is to provide real money to our constituents at the end of the year. So what's more important then to our constituents and what's actually the goal of what investing is about? It's a tough debate, and I would lean towards make the money.

Mike: **00:51:25** You capitalist pig.

Dave: **00:51:27** It depends on your mandate. I'm an Episcopalian and I'm very tangentially touching some of the folks that do the Episcopal endowment management and all that stuff. And it has a bunch of ESG stuff in their investment mandate there, they low carbon, all that kind of stuff, which sounds like, because I grew up in the 80s. That sounds like I'm giving something up. But increasingly what we're seeing is that doing something like using the input of how exposed somebody is to weather events, that's actually Risk Management. Whether you care about the environment or not you can't argue the frequency of high impact storms from an economic standpoint has gone up. So that is a data set. You can argue about why I'm not here to have a political argument. I'm just saying, I have a bunch of data that suggests…

Mike: **00:52:19** Shouldn't the risk premia associated with companies that have that-

Adam: **00:52:23** Exactly, it should be higher return.

Dave: **00:52:28** They were because they're being priced down. So if you assume that they're managing those risks well, and that there's not a chance they're going to have a dead year because they were exposed to a bunch of weather events and all their refineries went offline, then sure if they manage that well, they should earn a huge excess return. But currently they're priced is if those things basically never happened. So very few companies are correctly priced for their exposure to weather. I would argue some Ag's are pretty well, like soy beans, soy beans respond pretty damn well to weather forecasts because- looking at that.

Adam: **00:53:14** But I think it's a bit of a slippery slope. Because it's just really easy to build an index that expresses biases that you can position as, for example, anti-carbon companies, have performed better than carbon heavy companies over the last 10 years or over the last 15 years, but really, it's just because they've been energy light and energy's underperformed. It's really easy to create narratives to support a values argument, and sell that.

Dave: **00:53:48** You don't have to do any of that. My point is, you can do it using … here so you can be an automaton and approach to this from Big Data perspective. I have 4000 inputs, I'm going to mine that data to see what's predictive of standard deviation in my stock price. Totally standard Big Data thing to do. If you chose to do that, and ignored intentionally everything around board diversity, everything around governance standards, everything around regulatory play ball, everything around bribery statutes, everything around energy, like if you chose to ignore every one of those datasets which is now publicly available and 10 years ago was not available at all. You would be in violation of your fiduciary duty. These are important data sets about risk parameters that you have to at least test.

Adam: **00:54:40** No, I absolutely agree with that. We've got new data sources that provide completely different dimensions of risk on individual companies. They should absolutely be factored in. But I don't think that's quite where ESG goes. … they're factoring them in order to be able to express a set of values or create a narrative around these sets of values to appeal to.

Rodrigo: **00:55:11** It's an ESG bug, not a feature. That's the side effect of what...it's not what they cared about, it's not what they wanted to do but all of a sudden, alpha generators have access to this database, that ethical managers are not using it for that purpose. You talked about standard deviation around certain features. That's what they're doing. They're using it to become a better ESG fund for their constituents. But a byproduct of that has been that everybody else can benefit from better information.

Adam: **00:55:42** It's been a bonanza for people who want to data mine an index with strong historical performance that also they can spin a great values story around, a cynic would say. …

Dave: **00:55:57** Again, it doesn't matter whether you're a cynic or not, If the end result is you've generated better risk adjusted performance for your client? What I'm saying that there's an increasingly large body of evidence that whether or not you give a shit about anything, pardon my French, if you're simply trying to generate a lower standard deviation higher alpha after...ESG is a pretty damn good way to do that. Like when I started doing ETF analysis 10 years ago, I was building this data set for ETF.com, we put in a measure of risk adjusted alpha because it's like, okay, and literally no smart beta fund, no actively managed bond fund, which is all we had. None of them generated out of the 1200 funds we were looking at in 2010. Not one of them generated risk adjusted alpha over three years or longer. Not that surprising, it's a tough thing to do. You look now, almost every ESG fund does, on a three year basis.

Adam: **00:56:55** So don't they load on quality above all?

Dave: **00:56:57** Well, that's not what they intend to do. What they intend to do is look at things like board diversity and carbon impact, et cetera. Those tend to be whether they are important or whether they're proxies for other things being managed. Like diversity in a workforce and board diversity are one of those things that are canaries in a coal mine. I tend to be, I'm getting political, I tend to be pretty left of center, that's fine, whatever. I know that's not the same as everybody else. But regardless of that, dismiss all of that, having a reported highly diverse board implies certain things about how you're managing the company and it's the implication that's actually important. But having one other voice on the

		board, I don't actually believe is the thing that made your company perform better. But the fact that you made a point of doing that probably implies you're listening to your employees more than you would be otherwise. And that listening turns out to be a risk management factor. That would be my argument.
Rodrigo:	**00:58:02**	You got the whole team speechless.
Adam:	**00:58:04**	I think it's interesting-
Mike:	**00:58:06**	I think that's fine. At the end of the day, if we go to 2008 when oil and agricultural are ripping, you can go do your analysis then and tell me how that works for you. It's not the same. The thought of having some ethics would exist. If you had done that you are a loser. Amazon doesn't do anything. Nobody does anything. Agrium, Potash, Exxon is the largest company in the freaking world. All of the data that you would have mined to support the case in that slightly different timeframe would have invalidated this, if the idea is that we're going to provide excess returns.
Adam:	**00:58:47**	The reason why ESG is coming about right now and it's not just the political climate. It's also because the quality low vol companies that typically are included in ESG indices have outperformed for 10 years in a different market-
Rodrigo:	**00:59:03**	Is it correlation, or is it causality? It's true. I remember when Mike was talking about the commodity crisis, my Wall Street moment was being in the muck in Toronto during that massive commodity boom. There was a fund whose benchmark was the Canadian S&P TSX 60 and it was a long only equity fund that charged two and 20. And it was crushing that benchmark, and why I was questioning that benchmark is because it was 100% energy and mining and potash. It was not a little bit of alpha. It was just massive. But when you compared it against...my whole shtick was, okay, cool. They're beating the S&P, but compared against the Commodity Index, and they're underperforming. They're still underperforming a passive index, which you would enjoy. But at the time when it's if you're in ESG fund or let's say somebody created an anti ESG fund during the 2000 and 2010 period, they would have crushed ESG funds in your model. A lot of correlation we got to end up because you convinced me on the causality. I'd love for that to be true. I did a thesis in college on that thing, on that same thing, quality management, quality board, see how their profitability was in the organisation, and there was a correlation there. We said that, so I'm kind of with you.
Dave:	**01:00:30**	Back to this sort of this people hurting and the convexity issues here. Regardless of whether any of us is right in our argument on either side of this and the people in Chat who are violently disagreeing with us, doesn't actually matter. I'm totally fine if everybody thinks I'm a moron. The problem is, flows are- Lots of other people think this way too. So whether you buy my argument or not, again, bring it back to what are we doing for our clients? What are we doing as investors? If going forward more and more people are going to be including these values based decisions in their investing, what should you do as an

		investor? Now, if you believe this is a short term flash in the pan that will disappear in 16 months, great. Take the counter on it. We have $30 trillion in assets being handed down from people who are average age 75 to average age 45. That group average age 45, also called millennials, you look at the surveys on that, they are off the charts on their desire and expressed interest in values based investing. And that's a question we've been asking since the 70s and no generation has ever pulled anything like this one. Now skeptically you can say yeah, until they lose money, blah, blah, blah. However, it doesn't mean-
Mike:	**01:01:55**	I don't know that that's the skeptical view. I think that's the outside view. Show me some people that want to lose money.
Dave:	**01:02:02**	But the point is they are not-
Rodrigo:	**01:02:04**	They are not millennials Mike.
Mike:	**01:02:05**	They are the market then this will come.
Rodrigo:	**01:02:07**	The millennials might accept that they think that Tesla, that Elon Musk is a god that's going to save humanity and therefore their ethics go-no but they're making money, they haven't lost it yet.
Dave:	**01:02:18**	Exactly. It's like if this is my point about things like Tesla. Like, whether I like Elon Musk or not has no bearing on anybody in the universe. It's just a question of whether or not I believe other people are going to like him so much.
Mike:	**01:02:33**	No I get that. You're up in my Keynesian beauty contest now. I am 100% with you. I've one algorithm we need to solve, how do you make one good drink and then not have to just drink straight bourbon after because your cocktail is done? If you don't mind can you get me that algorithm on how I get a second drink
Adam:	**01:02:57**	… get a second drink..
Mike:	**01:03:00**	I know. Me too. But that's why I brought the bottle of bourbon, I got to have a fallback.
Dave:	**01:03:09**	For what it's worth just to cap ESG because bourbon's actually an interesting case in point. I'm not one of these people that believe that like alcohol stocks are going to go down because so many people don't want to drink booze. Like I'm a realist. I live in the real world. The idea of like, sin stocks and non-sin stocks. Like, if that's how you want to invest. That's great. That's awesome. I'm only trying to figure out what do I think the mass of people are going to do and I genuinely believe there is a mass of people who are going to care about social issues, governance and global warming. And whether or not you believe in that or not, doesn't matter if more buyers of stock believe that.
Mike:	**01:03:49**	What do you think about marijuana stocks in the US?
Dave:	**01:03:52**	There are no marijuana stocks in the US.
Mike:	**01:03:55**	I'm talking about the future.
Dave:	**01:03:55**	Now, Canadian small caps are the win. I think local.
Rodrigo:	**01:04:07**	Didn't … launch Toke?
Mike:	**01:04:10**	Yeah CBD stuff.

Dave:	**01:04:13**	There is now, I don't know much about it, there is now an ETF in the US that claims to only invest in US listed illegal cannabis adjacent companies because there is no actual publicly listed cannabis companies in the US
Rodrigo:	**01:04:25**	And pharmaceutical companies.
Dave:	**00:04:27**	Love dancing to make your index work.
Adam:	**01:04:33**	Is that what it is? I've never heard that before, but I like it. Hilarious.
Rodrigo:	**01:04:38**	I agree that. It is like that whole ethical theme. I just can't go anywhere without hearing about it. But what's happened is it used to be like a year ago it was like okay, great. Let's invest in your stuff. By the way, do you invest in any of that sin stuff? God no, we use futures contracts so that's got nothing to do with. Okay, great. Now it's becoming part of like questionnaires and it's just going to get more and more stringent from there that it just goes bananas for me.
Dave:	**01:05:13**	There's a great question in Chat which I want to actually address. The question becomes how long investors or corporations will tolerate underperformance in the future when it happens versus politically correct images or beliefs. I think it's a false premise.
Mike:	**01:05:27**	What?
Dave:	**01:05:28**	Because I actually don't think like let's just take one small issue. Let's just take board diversity, and let's narrow it super down, do you have a woman on your board? If that became the rubric by which people allocated capital, then companies who put a woman on their board will do better as a class because they'll get more capital, like it's-
Adam:	**01:05:51**	I think that's true at the margin but there are much larger forces at play like the point I think we were making earlier is, this is all well and good until there's a fundamental shift in the macro dynamics. So if we go into an inflationary environment and commodity producers are again driving index gains, then typically commodity producers are not known for their diverse boards and wanting to promote women and minorities, but they are going to completely dominate and they will be a reversal where a lot of tech oriented companies which thrive in deflationary growth environments like we're currently in, will move towards the bottom of the heap, you'll get five or 10 years of underperformance and the S&P will be roaring.
Dave:	**01:06:40**	If you have anything allocated based on minimum variance. So, if you look at the things that have actually pulled in money, it's things like SNPE which is the S&P 500 sector balanced, kicking out I don't remember what it is, like 25% of the company.
Mike:	**01:06:54**	Allows for the fact that in a gold and precious metals index there's just less women that are employed in the mining industry and they have the opportunity to bubble up through to the directorships. And anyone who has more, if you have a woman or more, you will have more representation in that index. Is that sort of-

Dave:	**01:07:16**	Look at SMPE and E5 which State Street just launched and their whole shtick is we're just starting the S&P 500. We all agreed those companies should be there and we're going to sector balance them. So if energy is 10% this year, you're getting 10% energy. But the 10% energy you're going to get is going to be the one that scores highest on carbon mitigation, on how they're handling-
Mike:	**01:07:37**	Now we're back to...that's fine but now we've compromised our values. That's fine. I like it better too but if I had values, I wouldn't.
Dave:	**01:07:53**	But you don't.
Mike:	**01:07:54**	I don't have values, I just don't care. If I had values I would be like I don't want that.
Dave:	**01:08:02**	Right. So ,we'll make a special Mike Index next.
Mike:	**01:08:05**	Well, that's a whole different world there.
Adam:	**01:08:09**	Remember CalPERS back in like the late 90s. When was it that they kicked out Philip Morris? And it just blew the earnings yield on tobacco stocks to the moon and anyone who decided that was just made out like-
Mike:	**01:08:26**	Retail investors who probably still hold my retail career back then, those investors still hold that Philip Morris. And they've done very well by violating their values.
Rodrigo:	**01:08:41**	Other people's values.
Dave:	**01:08:44**	But I think this does get to the point of like how much are people willing to vary from the market to express these opinions and the money has all shown up in strategies, very little from the market. They improve their ESG scores by 20%. They go from a 50 to a 70. It's not that they all become saints, it's just that they incrementally do a little bit better because again, the math is showing, that actually reduces your portfolio volatility, it doesn't impact your returns.
Rodrigo:	**01:09:15**	If I'm a gold stock CEO-
Mike:	**01:09:18**	We control for center …
Rodrigo:	**01:09:22**	No, we don't. That's definitely different type of value, that score is high. The point is that if I am a competitor within the gold space, and gold is killing it, the first thing I'm going to do is make sure I tick off the first 10 boxes of whatever the most ESG Venn Diagram is.
Dave:	**01:09:40**	Or whatever was influencing capital, but my kicker needs to start with a C, okay, I changed the name of my company, you do what you need to do to make that change.
Adam:	**01:09:52**	Yeah. That's fine. I think that's a much more enlightened view from the perspective of asset owners because the portfolio manager gets to claim the optics of ESG without really compromising any of the profit seeking values that they are actually accountable for as a fiduciary.
Rodrigo:	**01:10:15**	One of our portfolio managers at Resolve just, Ani, why don't you put up her comment there? 100% agree. If you see it there, hashtag say we are.
Mike:	**01:10:27**	This is a really huge honour.
Rodrigo:	**01:10:32**	It's a huge honor, yes. ESG on ReSolve. Guys, allocators, listen up.

Mike:	**01:10:37**	My daughter had the opportunity to go into finance, but she was not particularly enamored with the male dominated sort of sphere that it is.
Dave:	**01:10:49**	You mean like the four white guys on this call.
Rodrigo:	**01:10:53**	That's the thing of the past, all that's going to change.
Mike:	**01:10:56**	Thing of the past, I feel like I'm in the present legacies.
Rodrigo:	**01:11:01**	Nothing changes in a year. I'm a Peruvian and one of these things I'm like, now that I'm where I am, I'm getting a little darker. I'm starting to be older for you guys, for a Latin American. So you're seeing progress. … on one of these. In 10 years, it'll get to the right-
Mike:	**01:11:26**	We shouldn't underestimate what is the inching towards better behaviour across the board. Not arguing against that.

Women In ETFs

Rodrigo:	**01:11:40**	Yes, last night's discussion with one of our traders, portfolio managers internally who ran a prop desk in Chicago was enlightening. He's got a singular focus on making profit and he said something last night that surprised me because when he'd talk about his traders , he'd just talk about them just broadly. But he had more women in his team than anybody else in his organisation. And it was because he doesn't care, like he looked for the merit. Can you pull through? Can you actually deliver on what I taught you? Can you make money and if you can, you're in. And then when he looked around, he had more women than anybody else. I asked him, what do you think that was about? Were you just better at choosing merit based people? He was like, no, there's clearly a bias in the industry there, and this idea that there's not women in finance, because it's not an area of expertise, like your daughter not liking finance. That's an anecdote. I think that once you break those barriers down, and JP is a perfect example of a guy that would be able to do that. You can see a lot more representation of women in finance.
Mike:	**01:12:57**	I can't wait to tell my daughter Mackenzie that you referred to her as an anecdote and her feelings are not meaningful in the greater construct discussion.
Dave:	**01:13:06**	I will say this from the years-
Rodrigo:	**01:13:08**	Thank god I'm stuck on an island
Dave:	**01:13:11**	From the ETF side, we've been trying to put together some ETF industry group since about 1999. There is only one and it is Women in ETFs. We've never been able to get the industry to agree on anything except for Women in ETFs, which I would argue is one of the powerhouse forces in the ETF industry. If that group gets together and decides a thing, it probably happens. So that is a narrow thing about the ETF industry. It's one of the things that I loved about the ETF industry. It's one of the more diverse parts of finance which means it's like not even close to representation of the actual population, but compared to trading floors in New York. Yeah, sure. I think that's true of quant finance in general. I think if

		you looked at the number of CFA's that are minted every year, I'll bet you it's got a better demographic split than the broad finance industry for sure.
Adam:	**01:14:02**	Definitely. Yep.
Mike:	**01:14:03**	I remember my daughter again, I'll hearken back while going through school and-
Dave:	**01:14:08**	Her name is Anecdote - is that right.
Mike:	**01:14:10**	Her name is Anecdote. Anyway, I won't mention her by name because I haven't approved this conversation for broad distribution. So if she hears it, I will have lots to pay. But there's a programme called Women in Finance and she was recruited, applied in that, in her first and second year got accepted. And it's a quite a comprehensive programme. It is a wonderful programme. The whole point was that they don't...women make decisions to opt out of finance prior to their Masters. So what they wanted to do is provide women the opportunity to operate in finance, come in to finance prior to the graduation of their undergrad because they need to get them there and influence women and encourage them to get into this industry before they graduate and go into their Masters. It has to happen before that. A great program, shout out to Women in Finance, really amazing program, still wasn't able to convince my daughter to come into finance but that's another story I suppose.
Rodrigo:	**01:15:14**	They crushed those math tutors too. I remember they were like rotating in and out of your house – the worst.
Mike:	**01:15:22**	Of course, older graduate in art history and economics.
Adam:	**01:15:26**	She's gone on to engage in the noble pursuit of law.
Mike:	**01:15:32**	Yes. I can feel the lawsuit. The family lawsuit coming already.
Rodrigo:	**01:15:40**	All right guys. I do have to get going. You guys are free to continue to chat. But is there any …
Mike:	**01:15:50**	I appreciate your time Dave. That was a wonderful journey …
Dave:	**01:15:55**	Hopefully it wasn't just all me just rambling about random crap.
Mike:	**01:15:59**	No. We were all rambling.
Rodrigo:	**01:16:03**	It was great. I like seeing the other side of the of the cascading effects Mike Green type of argument which is-
Dave:	**01:16:11**	Everybody should go download Corey Hoffstein's's paper, Newfound Research.
Mike:	**01:16:16**	We probably should get someone from Women in ETFs on this.
Dave:	**01:16:21**	I will make a few suggestions for sure.
Mike:	**01:16:22**	That would be awesome. Thank you for that.
Rodrigo:	**01:16:25**	All right, man.
Adam:	**01:16:27**	All right. Thank you. Have a great weekend, guys.
Rodrigo:	**01:16:29**	All right.
Mike:	**01:16:29**	Yeah, enjoy. Cheers.