

[00:00:00] Chris Schindler: Like in 10 years, if you had to build a portfolio and say, 10 years from now, this is the portfolio I want, what would it look like? And the key part of that statement is you have no idea what the world's going to look like in 10 years. You have no idea if you're going to like stocks more than bonds, if you're going to like commodities.

If you're going to, you have no active, you have no possible active view in 10 years. And so that's the, and so think of that as your definition of passive, as your definition of beta. Build the best portfolio you can that you'd be happy having in 10 years, and then think of active as everything that you do between now and then.

[00:00:42] Adam Butler: Okay, today everyone is going to be very excited to see we've got Chris Schindler back in the hot seat, from [Castlefield](#). Chris, how you doing today? How's Toronto?

[00:00:54] Chris Schindler: Not so bad right now. One or two degrees, better than last week when it was about minus 10 and snowing. So probably not quite as nice as where you guys are, but...

[00:01:03] Adam Butler: That's possible. It's pretty gray here today too, but no snow on the ground, you'll be happy to hear.

[00:01:11] Chris Schindler: Oh yeah.

[00:01:12] Adam Butler: For those who don't know, we've had Chris on two or three times in the past. They're always crowd favorites. We both, we go broad and deep. Chris's background we'll get, we will obviously give a more detailed, background or bio for Chris, but, worked at one of Canada's major public pension plans for many years, ran their quant desk and has spun off into his own quant hedge fund, primarily trading global futures markets.

So, we're going to cover a variety of topics today related to his past and his present and potentially his future. And, so let's start with what ...

[00:01:59] Mike Philbrick: Let's not hide where he is at, it's [Castlefield](#), is that, that's the name of the firm, right? And where, is there a website? Is there, just let's get it out there at the beginning too.

[00:02:08] Chris Schindler: I mean, there's a website that has, I believe, a phone number and an email address, and that's about it on it right now. So...

[00:02:14] Mike Philbrick: Very, very...

[00:02:17] Chris Schindler: Very professional.

[00:02:18] Mike Philbrick: Close there. I love the scarcity.

[00:02:22] Adam Butler: Close.

[00:02:24] Mike Philbrick: Yeah.

[00:02:27] Adam Butler: Right. So let's start with what we're currently facing. You know, it's funny because I think our first chat was probably in 2020. We had this crazy concentrated tech rally, actually. It was kind of like this meme stock, low grade, low quality tech rally, and we're sort of back in a way to where we were there.

We don't have any specs to contend with at the moment, but it, we're back into that, massively concentrated technology-oriented large cap rally that we experienced for much of the 2010s, certainly the back half of the 2010s. So I thought it might be useful to kind of revisit that period. You know, I think a lot of people who've only been investing for the last 10 or 15 years have only really experienced an environment where US and especially US big cap tech was really the only game in town. Do you think we're back in that kind of environment, or do you think there's going to be a lot more opportunities over the next decade than we experienced in maybe the previous decade?

[00:03:34] Chris Schindler: Holy moly. You guys come out swinging. Yeah, so, and I guess you don't go back to 2010s, you can go back to the 2000s or, you know, the Nasdaq bubble, when you really want to talk about, concentrate?

[00:03:48] Adam Butler: I mean, it was, that was interrupted, right? For that

2000 to 2012 period, right? We had this...

[00:03:54] Chris Schindler: In Canada, I remember we, a huge problem for anyone forced to benchmark to public markets where, like a public market index where, if you want to hold a Canadian Index, you have to have like 30 or 40% of your weight in Nortel, you know, and so, you know, there's obviously a lot to this question, and do these environments show up? They, yeah, they obviously do. Have we been through one? We absolutely have been. The future's a bit hard to

predict, but you can kind of point to some features of tech that make it much easier, I think, to explain how it can get so concentrated and how it can get like what looks bubbly at times I guess, as well.

And part of it, I think has to do with just, it's, I think it'll be pretty hard for someone to just say, I'm going to start up a new business and turn it into a billion dollar show and in a couple years. But like, obviously with the infinite leverage of technology, especially online technology, and the huge scalability, you can create these huge potential future businesses, almost out of like, it feels like out of nothing.

And they're so hard to value and, right? Part of the problem with the NASDAQ bubble was like, everything looked reasonable. Well, I don't know if stuff looked reasonable or not, but you want, you can imagine why this one company, if it succeeds, could be massively successful and could be massively valuable.

But the challenge was, all 10 or 20 of them couldn't be. And so you had situations where individually it might make some sense if you didn't get a sense of the context of the entire space or sector. So that's like, that's part of the problem. And we've seen that over and over again where it, they can't all succeed because they're together.

They're making a bigger claim on future economic growth, or future wealth that just, that is impossible to exist. And so together, all these valuations can't make sense, and then you've got to figure out like, does the entire index have to reset, or do you have to go after the individuals and figure out which ones will go, which ones won't.

Because it's so easy looking back to say, man, these were billion dollar companies, but you know, if they're the one-in-50 survivors or if you got entire spaces that just didn't work and went to zero, it's much harder to predict that going forward. But, you know, and I mean, obviously that's the challenge, and I guess the other thing is, because a lot of these businesses, and I understand, I'm talking about more of the ones that we just don't know what they're worth yet, because so many their cash flows are way out in the future. They're kind of, well, they're almost like a private equity firm that's marked to model.

They don't have anything that really moves them up and down on sort of, on the day to day, and they're just based on some future possibility, and that leads to two or three really weird price dynamics, which can lead to this concentration. The first one is like when you have, like, know

analysts and I think that there's a fair amount of evidence that analysts tend to crowd with each other, and strangely, the more volatile and uncertain the stock, the more they tend to crowd with each other relative to the volatility.

They have this benchmark risk of being benchmarked to their peers and looking wrong relative to their peers. And so you actually find that for really uncertain stuff that's a really high vol that they crowd even more and it creates more of these crowding effects and you get more of these sort of bubbly effects.

And so that's like part of it, and that leads to momentum in these names, which can really happen. And that, and of course they drag retail in along with them along the way, and you can put that up against what feels like almost a totally different statement, but I think are, they actually kind of work together, which is the, when you have a dispersion of opinions on something just straight up though, and I'm not talking about like analysts, all crowded here. I mean like actual people in the market who are betting, actually have a dispersion of opinions. You know, like cap in sort of assumes that everyone has modest expectations, but like, that's clearly not true. And as soon as you allow for heterogeneous expectations, you get these sort of weird effects where, the more uncertain the outcome, the more the price gets pushed up.

And I don't know if you guys have seen any of these papers, but I mean, these are, this is sort of a, is this making any sense to you, or do you want me to go into this a bit more detail? Yeah. So, imagine if you had a world where there's a, there's some people thought a stock was worth 101 and some worth 102, and some worth 103 and some worth 99, 98, 97. And you kind of think that in a perfect world, it would settle up what the average dollar thinks it's worth.

And we've had this conversation a lot about privates because it really, really shows up in privates, and in, private equity is the most extreme form of this. The price doesn't settle what the market thinks it's worth. **The price settles in what the most wildly optimistic person's willing to pay.** So, if someone's going to buy a house and you know, the market thinks it's worth a million and some people think it's worth 800 and someone, and one guy goes, it's worth 200 or it's worth 2 million, it sells for 2 million. It sounds more like, and so prices push off to the right when you have dispersion of opinion, when you can't short the price back down to zero, and the privates cannot be shorted back.

So they go all the way to what the most wildly optimistic person's going to pay. But if you have a world where you've got more longs and shorts, or you have not enough shorts to pull the longs back,

and we're always in a world where there's a long bias, there's more like, there's more potential long buyers and short buyers that a dispersive opinion is going to bias you towards the tails and to the right tail.

And so the bigger the dispersion of like, I don't know, this thing is worth, and some people think it's worth nothing, some think it's worth a ton, that pushes you to the right as well and creates a bubble in that space as well. So you can kind of see how the massive uncertainty of these things will result in a bias high, and momentum, which we see all the time. And so, does it, so you can push all that against ... It makes it pretty risky against. I think like one other thing you have to pay attention to and look, there's always crazy issues when you're doing market cap and market cap weighting and people have that as a benchmark, right?

And the challenge with market cap is your benchmark meets, is that it can be an incredibly painful benchmark. It's because if the small number of names do extremely well, and you're anything other than the market you're going to get, it's going to crush you, at times.

And there are going to be times when you crush it because it does badly. But it's a really inefficient benchmark in a lot of ways for, to measure your performance against. But it is what people do measure performance against. And so you get these benchmark issues associated with it. And, there's a whole universe of quant, and how do we think about alternative to market cap indices, you know, and think of them as processes and benchmarks, and this is going to go on a total left turn, by the way here, but, you know, I spend a lot of time thinking about how do we alternatives to market cap weighting, because you do get this massive concentration risk in a small number of names, and the most naive alternative to market cap weighting, which for sure eliminates like, you know, any kind of mega cap bias, is just to equal weight things.

And, it's actually like in the very long term, a surprisingly strong solution for equities, is just to equal weight all the names, but it's shockingly naive. And so, we did this, we ran like an alternative to market cap weight. We ran an equal weight, and there are lots of problems with equal weight, but what it does do is it says, I don't care what anyone thinks this is worth. I don't care what the market thinks it's worth. I don't care. I'm just going to put \$1 in each of these things, and so be it. Now, like lots of problems with that. But one of the ones that always bugged me about equating anything was this definition of, well what's the thing you're equal weighting? I mean, you could say like, imagine I'm equal weighting countries around the world and I'm gonna put \$1 in the United States and \$1 in Canada and \$1 in France.

And then imagine the United States breaks up into 50 independent little countries. And that thing that you used to have \$1 in, you now go, now I'm gonna put \$50 in it. You're gonna bet 50 times as much on the exact same thing, just because of how it was defined. And you have this problem with equal weighting, which is, I call the unit problem of equal weighting, which was like, how do I think about what's the unit?

Because it's clearly, it's a definitional issue. And if things come together, if things split up, I'm gonna completely change my weightings based on what shouldn't change my weightings. And that's like a big problem with equal weighting. And so market cap weighting, it's got like a lot of efficiencies to it.

It's got a lot of, like I say, efficiencies. It's got theory behind it that you can kind of stand by, but at the end of the day, it's people's opinions about things. It's the whole market's opinion about things, but the price does move on. That equal weight got this definition of independent unit problem.

And so there's a subcategory of things in between. And so this is what we, this is the sort of the three categories of alternative indices. We created what we call kind of like a *fundamental valuator*, right? And a fundamental valuator is different again, because it takes something about the companies.

And so like, you know, when Rob Arnett, I think, is a guy who's really covered this a lot, but he would say like, it can be anything. It could be a number of parking spots in the parking lot. It could be a number of employees, but it's typically revenues or dividends or cash flow or something that kind of speaks to the size and, and he doesn't sell it this...

[00:13:16] Mike Philbrick: More towards a fundamental criteria, rather biases it.

[00:13:18] Chris Schindler: And so if you think about equal weight and equal weight got one extra, really, this is totally off fire now, but it's got one really cool feature equal weight, which has got like a cult, like an energy capture or a volatility capture. If you have a number of companies that are equal-weighted and you always have error terms, you know, like you have surprises, surprise the upside, surprise the downside and what a market cap does.

Or if you take an equal weight and you don't rebalance it, then the companies that get surprised, the upsides grow. So they have positive shocks and the companies that have negative shocks shrink,

and you end up over-weighting the ones that have positive shocks and under-weighting the one with negative shocks.

And, and if there's any reversion to the mean. And so if prices project those further out, if there's any reversion to the mean, then you've, you're kind of backwards in what you'd like to do. What you really want to do is buy the one you expect to revert back and you want to sell the one that's had a positive bias, and market cap is the exact opposite of that.

So anytime you equal weight, or anytime you rebalance to a starting process, you're gonna capture some of that natural mean reversion, and in fact a huge, huge proportion of a lot of quant alpha and value add is in fact, that energy recapture. And so I think Rob is able to show, I don't know if he showed this or something else did, but you could take like the inverse of his portfolios and they also beat market cap, just because that energy capture is pretty helpful anyway.

But the like, so one of the things that any kind of fundamental weighting does is that, when the fundamentals change, you buy more or less, but it doesn't move the price because of people's opinions. Because the market's opinion and projecting that into the future, because that projecting into the future tends to cause issues.

So, and if he's never sold it as this, I've never really seen it presented this, but the reason I like idea is if I took a company, I split it into 10 pieces, I will still have the same amount of weight in that new thing, split up 10 ways, that I would've had in the original, and vice versa.

And so it's kind of an equal weight, but it's an equal weight by size or something a bit more fundamental than just like this equal weight. And between those, now you start to say, how do I invest in a market that's got some very, very concentrated companies in it? And you have to think, take a step back and say, if those concentrated companies were in fact a hundred companies that came together, well maybe it's not so bad. Maybe that is, well, you know, like it's a quarter of the weight. But, if it was a massive conglomerate that brought together, maybe it's not as concentrated as I think

[00:15:38] Adam Butler: Mm-Hmm.

[00:15:39] Chris Schindler: But if it's a single thing with a small number of risk factors, just blown up a massive size and go, that's when I've got to be more worried about.

And so we start to think again, how do I determine how many effectively independent companies are in that company to get a proper sense of how concentrated it is? And I'll just say those are, there's a lot of topics in that, but just say like, is there a fundamental reason why tech, and especially tech with earnings that are being projected way out of the future, is way harder to value?

Like absolutely. Does that result in trending and possibly higher prices that then have to correct and disappoint going forward. Like probably. Does that mean that Google, is Google a single factor or is it a conglomerate, or how do you think about it? I think you've got to get a little bit deeper before you say this is a massive tech concentration because Google's not really, Google's a tech company, but it's also an advertising company. It's also, it's a media company. I mean, maybe it's a bit more, maybe it's not quite as concentrated as it feels.

[00:16:35] Adam Butler: Well, some of them are more concentrated than others. I mean, obviously Microsoft is exposed to virtually every sector of the economy. It's a massive global conglomerate. Same with Google.

Nvidia reminds me more of like a Nortel or JDS Uniphase, right? I remember JDS Uniphase with their optical switching and you know, everyone assumed that the internet was going to have optical switching, and that was going to be the tech that everyone settled on, and JDS Uniphase just went to the moon.

You know, it's these kinds of concentrated bets on these narrow tech outcomes that become especially risky, right? But I mean, just from a, from an advisor standpoint, how do you manage this and manage client expectations? It terrifies me to see investing in global cap weighted US equities above 60% of global cap weight now, and seven companies worth, you know, up almost 30% of US equity valuation.

Like it's just a - you just have this sort of, you're going on this massive amount of faith and taking this huge concentrated bet. If you don't, you risk being totally left behind. If you do, then you're taking this concentrated bet. It feels like a no-win situation. I mean, how do big asset managers deal with this, especially when they're benchmarking against peers on a year-in-year-out basis? Like, it seems like it's just a hard problem.

[00:18:02] Chris Schindler: Yeah. And the challenge, and I don't know how you break it, but the problem with it, is the benchmarking. At the end of the day, if you are always going compare someone to something, then they are always going to have to look somewhat like that thing, and

instead of being a maximum share ratio investor where they're trying to make as much money for as much return, for as much risk as possible, you've forced them to have a different definition of risk, which is their tracking error to the benchmark.

And their optimization becomes return over tracking out of the benchmark, which is a fundamentally, much less useful thing, and it's much less useful for you. And I say like, when typically I say you're looking for managers and I think you just have to get comfortable with if a manager's properly a long, short space, they should have no beta anyway, and you shouldn't care.

You literally should just say, I've got my, and whether I'm talking about as a portfolio constructor, how much of this stuff do I want in my beta? Separate that question out for a second. Say, let's say I've somehow made that decision then for my managers. I should give them the right benchmark and I should give them the right risk definitions and the right governance.

And so that, this doesn't affect them at all. They have a good stock pick over here and they should make it regardless of what the beta is, and is doing. Now, that's a pie in the sky kind of nice statement. It typically doesn't go that way. But even for, even if you're saying like, I'm investing my money in this beta, what do I do about it?

And it's funny, because when we first started looking at this and how to think about weighting countries, and I think we're doing this research in the early 2000s and the the country that really stuck out in the history the last 20 or 30 years, was Japan, because Japan in the late 80s had looked exactly like the US does now.

It was a massive portion of MSCI and of course it got super expensive as again, there was all the Tiger funds and everyone was just throwing money into it for 15 years and it got so expensive, and then it just broke. And it broke, and if you were MSCI weighting Japan, you got crushed.

If you had, you know, underweighted a bit, you did well because you had a very, very large concentrated exposure to a relatively small subset of the universe. And, and you know, I think over the very long term, these moves tend to punish you, and you tend to want to dispartate because, because there's the, there's always the mixture of the fundamentals, and then the market mania behind it.

And the market mania behind it is the piece that always over-projects, and any market cap weighted, which is a mixture of the fundamentals and the market's projection of that into the future, is almost

certainly going to lead to over-projections. The problem is, can you survive in the short run long enough, leading against that to prove your thesis.

[00:20:52] Mike Philbrick: That's the tricky part. It's the combination of this overvalued market and a strong trend, right? So, and this is where it gets really dangerous because when the overvalued market trend turns, and increasingly you get that, larger and larger spikes in volatility, where the dip is bought until such time, it's a 25 or 30% and the dip isn't bought, or it's only bought up 10 or 15, and the trend is now changed and different.

And the world of investors is always sort of slower to pick that up in the final trend change. And then you have this exposure, this overexposure to the largest market, just by the market cap chasing, and you have the risk unwind and so that's, the valuation side of it is important, but man, when the trend is strong, it's a really hard problem.

[00:21:47] Chris Schindler: Yeah. And, which I guess when you're saying the trend is strong ... and the values, you're just, to put it another way, you're just saying the behavioral side.

[00:21:54] Mike Philbrick: Right. It's that, it's that momentum, that punching fist through the enthusiasm that continues, and as long as it continues, the valuations don't matter. I mean, it's expensive. It's not as expensive as it's ever been. It's not as expensive as Japan was, and we don't know if any of those are even limits on how expensive something could become in a strongly trending market.

[00:22:17] Chris Schindler: Yep. So, and that's exactly it. And so then, you end up with sort of various forms of this, which is like, look, you can stay long the trend, but you've got to be aware that the more crowded it gets, the quicker and sharper it can turn back on you, because there's a growing liquidity build up, and there'll be a growing liquidity rush on the way out.

I think, my guess is a lot of players get that. I don't know if the retail side sees it as clearly, but I think a lot of players get the growing riskiness of it. But there's a, there's always that. Yeah. But you have to keep playing while it's still happening, and it's very, because it's just so painful to lean against it. So, and this, it's, it all comes down to it's a benchmarking problem.

[00:22:59] Adam Butler: Did you ever...

[00:22:59] Mike Philbrick: Without a doubt.

[00:23:01] Adam Butler: Did you ever do any work internally on the double exponentials, like as the curve approaches a certain level of criticality and the fractals and all that kind of stuff? I forget the name of the French mathematician who was mapping all of that, and you wrote...

[00:23:17] Chris Schindler: ...

[00:23:18] Adam Butler: a paper, April.

[00:23:18] Chris Schindler: ...it?

[00:23:21] Mike Philbrick: ...or what?

[00:23:23] Adam Butler: He, one of..

[00:23:24] Mike Philbrick: Mandelbrot. Is...

[00:23:25] Chris Schindler: Mandelbrot would be one of like the fractal guys, but yeah, so the, I, I mean, yeah, that's a big, so I mean, when markets go parabolic, the issue is, always is like, it's the same definition of anything. It's like a bubble is really easy to see after the fact, after it's popped. It's very, very hard to know if this thing that's running up, is that the bubble yet or is it the peak, the bubble, you know?

And Jeremy Grantham, GMO has done a huge amount of work on trying to just, he's basically *all bubbles mean revert*. But the challenge with that is, after the fact, yes, all bubbles mean reverted because you kind of defined it as a thing that went up and came back down. It, you know, Microsoft or Apple, just like, are they bubbles?

Well, it's hard to say. They just, they kept going for like 15, 20 years. And so, I mean, maybe at some point in the far future you'll be able to look back and say yeah, they were bubbles, they mean reverted. But, I don't think it's quite as obvious. And, and so he tries to fight in bubbles relative to fundamentals. But the problem is, they mean revert or the fundamentals catch up, and it's one of those two.

[00:24:32] Adam Butler: The story always needs to have a plausible outcome where the fundamentals could catch up. I mean, there's very good narratives around why Meta, Google,

NVIDIA, Microsoft, deserve these ultra premium multiples, right? The new story is AI, and all the compute that's gonna be required. In 2000, it was internet and switches and all that kind of stuff.

In Japan, it was their six sigma manufacturing process. They were going to completely dominate global tech manufacturing and auto manufacturing. And, you know, that all got swept up in their banking sector and the real estate sector. You know, I remember in 1989 the Emperor's Palace in Tokyo was valued at a higher total valuation than all the land in California, right? Like, and there's a plausible reason for this every time, right? And there's this potential every time for this time to truly be different. You know, maybe fast takeoff AI actually does, mandate this kind of overvaluation. Maybe software, you know, Mark Andreessen said *software eats the world*.

Maybe this is the time when software eats the world. Like there's always got to be this plausible explanation in order for the markets to rise to this kind of bubble level, right?

[00:25:54] Chris Schindler: Maybe, but then you, it's like, unless there's, unless it's also an incredible, like, just creator of mass wealth for everyone. You can't plow this one up because it's potential ability to grab the ability and still keep these out there. There has to be like, like once again, you've got to add all up what, like those growths require, what kind of earnings and what kind of cash flows and what kind of percentage of the total world pie, at some point you go, does that make sense? Because if they're claiming 2X of what it will ever be, then no, those things don't all add up. It's just the question is like, one of those 10 may be correctly valued. Maybe that goes even bigger. But that's, I mean that's obviously, yeah, there's always a story. There's no doubt there's always a story.

And it has to make a bit of sense. It can make a lot of sense. The, you know, and we all heard the stories, like all the way through the years and through the decades. We've heard the stories. I mean, I guess NFTs had a story. I, it doesn't necessarily mean that they're gonna hold their wealth when the story moves on to someone else.

[00:26:58] Mike Philbrick: The other thing is the initial conditions can, they're important and they're different, right? 1990, you had a significant earnings contraction, yet the market did not go down. The early '90s, the S&P kind of sailed through whilst earnings were contracting. I mean, yields were high and they, it looked over the recession almost. And so you also don't know what the initial zeitgeist of the market is when you go through the transition. There's so many dimensions to this.

[00:27:28] Chris Schindler: Yeah. Well, yeah, it's like, no doubt. And, I think, you know, like, especially when Japan peaked in '89 and, and I mean, I'm gonna make up some numbers, but I think

like 15, 20 years later, it's stock market was down, I can't remember, like 90% in like, like it was so much, and its real estate market was down ninety-five percent. It was just unbelievable crushings.

[00:27:51] Mike Philbrick: It's only approaching those numbers today, but it's just getting back today. It's only approaching those numbers today,

[00:27:54] Chris Schindler: Yeah. Yeah, it's just...

[00:27:54] Mike Philbrick: ... but it's.

[00:27:55] Chris Schindler: And I think like from like 2000, 2010, I think Japan's earnings growth was faster than the US's. It's like, starting points really matter. And whether or not, and you're gonna see this lots of times, and you think about like risk parity stocks versus bonds, and you go like, like if you just went, like imagine you just, you make some magic statement.

It's like they both should have the same Sharpe ratio over time. And maybe that's true, maybe it isn't, who knows? But like, if this guy runs off at a Sharpe of one over the last 10 years, it's either getting ahead of itself, or catching up. And I don't know if you really know, because at the end of the day it, I mean, who's to say.

But, or maybe a bit of both, and it is either getting in front of itself and you should sell it, or it's catching up and it's a good deal. And, I guess that's kind of like a risk parity statement. It's like if you were, if the only two things you could invest in in the world were stocks and bonds and you had them, would you care if this one happened to take from this one and then this one happened to take from this one? If you have both of them, I guess you're probably kind of fine, so if you have the world and the world is taking from here to give to here, as long as you've got a well diversified basket, maybe you don't care as much, as long as you do that, right?

[00:29:15] Adam Butler: then you've got periods like 2022 that sort of makes a bit of a mockery of that stock/bond diversification, right? Like this, own some stocks, own some bonds. The idea is the bathtub. There's always a drip into the bathtub, and so the level is always rising. Whether it rises more into equities, that doesn't really matter versus bonds, because you own them both. But when that bathtub sort of contracts, the levels contract, then you've got stocks and bonds both losing together, right? Which is why stocks and bonds, the two-legged stool typically doesn't balance, right? You've got to add that third leg.

[00:29:54] Chris Schindler: Yeah, I mean, at least, I guess that, so the statement there was like, if stocks and bonds were the only two things you had, I guess, a world where you couldn't lever and de-lever, obviously, when we first started our risk parity work, I mean, the very first thing we did is went, stocks and bonds are dangerous, like hugely dangerous.

And that would be a crazy dangerous risk parity process, and assuming correlations are static and either zero or negative, is also massively dangerous. And so, you know, it's going to require some dynamicism and it is going to require some dynamicism on risk and correlation measures, and it's going to require other stuff because, and I think I presented this a while ago to you guys, I know I gave this presentation back in 2018, when the last thing anyone in the world was thinking in 2018, you've got to really stretch your mind back and remember. But it was like, people were still kind of freaking about deflation at that time. And the last thing anyone was thinking about was inflation. But it was, it's just all it is, inflation is always a risk and discount rate shocks are always a risk.

And, and so building a portfolio that's resilient to inflation shocks and discount rate shocks, inflation shocks is easier because you can put some other stuff. You've got some gold or some break-evens or some, you know, commodities. There's things that you can put together to get a decent attack on inflation.

I just can't write shock, you know, that's, it's self distinct from growth and inflation shocks is much harder to defend against.

[00:31:18] Adam Butler: Because you know, we just haven't had very many inflation shocks over the last few decades. So, hedging against inflation or owning assets in the portfolio that are designed to do well during higher than expected inflation shocks has kind of made you look silly for a long time. You get these sort of periodic spikes where it pays off, and then you go through these long stretches of sort of this, you know, or at least you have over the last few decades, gone through these long stretches of disinflationary growth, and any effort to diversify outside of stocks and bonds kind of makes you look silly for a long time. And then, you get this spike, and that sort of pays off. But it's just the investors haven't had much experience with that level of diversity paying off over the horizon that they've been managing money or had money invested in markets. So it's hard.

[00:32:15] Chris Schindler: Sure. And totally right. To that, I guess I would add a couple things like, and I can't remember what I presented. I should probably, would've rechecked my old podcast before I came on. But, the inflation, so something like a breakeven, while it should respond and it

responds to a certain type of inflation shock over a certain timeframe, which is not necessarily what you're always worried about, probably has a negative expected return over time, though, as a trade.

And, so if you think about the things that, like that you mentioned where you go, I want to have a positive expected return because I want it to contribute to my total portfolio. And, yeah, it's gonna be spiky at the right times. And then how do you build something that's inflation sensitive that has more of a smooth, positive return over time, while still covering your inflation shocks?

And that was the big, sort of effort in saying, first of all, when we built our inflation sensitive asset class against all sorts of pressure to say like, why would we bother? The answer is because it's a risk and it could happen. And so, whether or not you think it's gonna happen, let's call that your alpha on this whole thing. But, you know, portfolio construction at the portfolio level is just, I want to build things that are resilient to a variety of outcomes, regardless of who thinks what's gonna happen. I call that like a beta portfolio construction. And even then you say, what's inflation, and everyone's got a different definition of inflation, right?

An economist might say it's CPI or, you know, wage inflation, or they might say it's monetary inflation. A lot of them will say it's monetary inflation, is the correct definition of inflation. It obviously, as we saw in the seventies and the late '60s, or even early '80s, inflation can be driven by commodities, so I call it supply side inflation. And if the price of commodities go up by four times, well yes, that's going to be massively inflationary, if it's persistent and it's across the set. And so for each of those different definitions of inflation, you actually have different basket of assets to handle them.

And so for monetary inflation, like, what's your best defense guess? Monetary inflation. I don't know. There's like, there's a variety of things you can think about from real assets to gold. If it's, if you're looking purely at a definition of something like CPI, then maybe a real return bond, or a breakeven is a better focus on that.

If you're looking at a source of inflation from the energy side or from the AGS or from commodities in general, then obviously commodities are the best source of that. You know, we built very broad basket, inflation-sensitive set of assets because we thought inflation can be, there's lots of different definitions, there's lots of different causes, but that the reason you care about inflation and the reason you need this asset class, is because in general, inflationary shocks have a deleterious effect on most of the other assets in your portfolio.

And so there's gonna be times when your other assets get hit, especially your bonds get hit by inflationary, like unexpected inflation, but so do your businesses. And so, if you think of your equity in your businesses and you're generally exposed, you need something to protect you. And then the real question is, well, how do you build something that protects as well as possible, but still has a positive drift to it? And so that's where we kind of built a quant program or a systematic program that does that, right? And you can start to think about if I got these, what am I trying to do is, I'm trying to cover inflation, but I'm also trying to get the positive risk premiums and drifts in the commodity space. Well then you have to get, you have to dig a bit deeper than just going along a couple things. And that once again, requires a bit more expertise, a bit more specialization, and a bit more leverage and a bit more effort. But ultimately I think something like that can be really, really helpful for a lot of investors.

[00:36:02] Adam Butler: Yeah. I mean, before we...

[00:36:03] Chris Schindler: To, once again, if you thought your bathtub was just stocks and bonds, yeah. You're going to get exposed. The risk parity world is really like, it's that statement of like, if this is just money sloshing around, then if somehow you could own a bit of everything, then in that world, maybe you're kind of okay. But then that goes like, well, that's great. Money's sloshing around, and every single investor's like, wants to get that alpha. Like, I want to time that, I want to add value by getting in front of that sloshing or avoiding the sloshing or, and of course that's what all active and macro and everything is, is trying to time the flows of money around.

And it's like, like, yeah, stocks and bonds and commodities. If you got that, if somehow that flows your entire path, that's great, but I'd still like to capture some of that energy between them. And that's where, you know, I think...

[00:36:51] Rodrigo Gordillo: Sorry to interrupt, but I did want to take a quick second to remind listeners that while we do absolutely love providing our audience with world class guests and weekly investment insights, we wanted to remind you that we actually do our best work outside of this podcast, and we try to do this by providing cutting edge, globally diversified, and systematic investment strategies that are designed to be broadly non-correlated to traditional equity and bond portfolios.

So we actually manage private and public funds, as well as bespoke separately managed accounts for investors that seek the potential to smooth out portfolio returns in the long run. So, if you do

want to see that theory that we've been talking about put into practice, please do go ahead and check us out at www.investresolve.com . Now back to the podcast.

[00:37:33] Adam Butler: So, speaking of alpha and trying to generate it, we spent a lot of time debating where the greater, if inefficiencies are right and the more sustainable inefficiencies are, and we chatted a little bit about [Samuelson's Dictum](#) on this program, a few times, and whether there's a greater opportunity to generate alpha through security selection, or in the macro space, just in terms of hedging inflation risk. Do you think it's conceivable to be able to manage inflation risk through more effective security selection? Like, can you just select a diverse basket of equities and or credits that make you more or less resilient to inflation and you don't need to have that third leg of the macro stool?

[00:38:25] Chris Schindler: Uh huh. That's interesting. So, [Samuelson's Dictum](#), that's the micro-efficient, macro inefficient.

[00:38:35] Adam Butler: Yeah, yeah.

[00:38:38] Chris Schindler: I mean that's a, that's an interesting statement and I think it's one of those things that, you know, let me just quickly sort of say about inflation, I would kind of think of what you just said there is like, if I stock pick correctly, can I create, like can I cover inflation from credit and stocks as opposed to having to go into commodities?

Like, yeah, I mean there's probably some inflation-sensitive equities, and I think, you could probably find things that have some inflation sensitivity. [Is that something you would add to your basket of inflation sensitive assets? Yeah, probably.](#) I think you have to be careful and this is just an alpha/beta separation statement, but you go, if you think of portfolio construction as I'm gonna try and build my portfolio and, and I think of past, and we've had this conversation before, like what's passive? Like, nothing's truly passive, you know, and what's beta, and my definition of beta goes all over the place.

But if you say one definition of it is like, it's gonna do what it's gonna do, regardless of what anyone expects it to do, and so if you put money in it, it doesn't matter what you think this is gonna do once, if you just leave it, it will, it does what it does. That definition of beta, well, if you go, I'm gonna put my betas together to try and create the best beta portfolio possible.

There's obviously some active decisions there, but let's say there's like, you know, a not as much timing, then you need pieces that interact with each other in a nice way. And if you're leaning on your ability to see the future and stock pick correctly to cover your inflation risk, that's a little bit different.

That's like saying like, if I could see the future properly and I can call winners and losers, then I don't have this risk because I'm, because I can see the future. And it's like, well, maybe you do, maybe you don't. But that's active management and you're now relying on active management to cover your inflation risk.

And I would say you should do that as well. But when I think about how pieces of my portfolio interact and portfolio construction the way, and this is how we sold it to our board, and I think it's a really interesting thought process when you talk about your portfolio, your beta. And we said, what's the portfolio you want to have in 10 years from now?

It's like, not over the next 10 years. Like in 10 years, if you had to build a portfolio and say, 10 years from now, this is the portfolio I want, what would it look like? And the key part of that statement is you have no idea what the world's going to look like in 10 years. You have no idea if you're going to like stocks more than bonds, if you're going to like commodities.

If you're going to, you have no active, you have no possible active view in 10 years. And so that's the, and so think of that as your definition of passive, as your definition of beta. Build the best portfolio you can that you'd be happy having in 10 years. And then think of active as everything that you do between now and then.

So like, I'll have a view over the next month or the next two months, or the next five years and start to layer on that. But your center point, your starting point should be that thing that is the most unaffected by your view of the future, because your view of the future, make it, make those bets and decide how much risk to put in that bet based on how much, how confident you are in your ability to see the future, and do that.

But just understand that you could be wrong, and you might not see the future right. And you might not have that ability. You might not be as good as you think you are. You might be better than you think you are, who knows? But separate those two pieces out and build the best beta you can and that needs assets that interact well together regardless of your ability to call the future.

And then, if you want to try and add value through active management, absolutely do that. And if you think part of that value is alpha and part of it is inflation protection, however you want to define that, for sure, go for it. Size it, right? But separate those decisions there.

[00:42:08] Mike Philbrick: And the nice side effect there, Chris, the way you explain that is now you also have something to measure your active bets against. You have this, let's call it unbiased, do no harm allocation of beta assets that you will have today and have in 10 years, and you're going to make active bets against that, or add additional diversification to that. And now you can actually measure whether your steps were in fact accretive or were they dilutive to the actual long-term returns of your portfolio?

[00:42:45] Chris Schindler: 100 percent. And you're exactly right. And that was a huge part of the push for creating that, we call it *the theoretically optimal portfolio*. And you never quite get to it because you have constraints and you have, and you're not ever 10 years in the future. You have, and you have a starting point and you're trying to move from there to something.

There's a lot to that. But that's, if that's your center point, then you can measure your distance from that and you can start to justify your distance from that, and that starts to really be your set of active decisions. You have to start justifying why you are no longer, what and why you're not going in that direction or why you're leaning against that, and start to think about how much active risk you're taking in those active decisions, relative to that data. It's a really, really helpful starting point and it's a much, at least from my opinion, because this is what we kind of put in place. It's a much better benchmark portfolio than almost anything else you can define.

We talked at the beginning about the challenge of benchmarks and if you're, if you have your CIOs responsible for investing at the total fund level and you give them a benchmark that's 60/40, then it's gonna be really hard for them to be anything that's too far off of 60/40 because you've made that their benchmark, and now that their definition of risk is tracking error to a 60/40, and if you say your benchmark is the median manager, or the median pension plan or the median anything, that's going to look a lot like a 60/40 or an 80/20 or it's going to, at the end of the day, once again, they're centered around something.

That isn't necessarily the right starting point. And you go, how do we ever move off of that paradigm, and how do we move to something better, if you're always getting benchmarked back to that paradigm? But then the question inherently comes, well then, what do you want your benchmark to be?

And that becomes a really tricky question. But you say look, this is a good center point to start thinking about, and you have to be careful that it's not too pie in the sky theoretical. It can't assume that you can do certain things that you can't, in reality, like leverage requirements or you know, assets. There's not enough real return bonds on the planet to do what you want to do.

It's like, well, that's not a fair benchmark. So it has to be like, it has to move back to reality a little bit, but like, as a benchmark construct that you sort of say, I can measure. And I guess the one other way you can think about benchmarking yourself, and this is like also super weird, but we also put in place a little bit, was benchmark each year to the start of that year. So, because I'm just trying to break the, compare myself to the rest of the world or do what the rest of the world's doing. And now you can say, if I'd held the portfolio that I started with for the entire year versus what I actually did, I could not measure my changes to some arbitrary starting point, which is just as arbitrary as anything else.

But I can start to once again focus in my alpha, without contagioning it with someone else's definition of alpha, which is in their starting portfolio, which becomes my beta unfortunately. And I don't want my beta to be someone else's alpha as my starting point, because that really messes up the whole decision.

[00:45:46] Mike Philbrick: Nothing more dangerous than having a false premise to start the whole discussion of, oh, 60/40's your benchmark and beat the median manager, and that premise just contaminates every other decision down the track.

[00:46:01] Chris Schindler: Yeah, absolutely. And so portfolio construction at the total fund level is, it's hard enough as it is, but understanding, everything is affected by your benchmarks, like everything. And so trying to break the paradigm of, or like the worst thing if you're a CIO is some other team that's not you, like, a risk group creates your benchmark and now you're like, well, who's the CIO? Because the most important set of decisions, the asset allocation, maybe even the amount of risk you're taking have been, have been taken over by a different group, and now you're just a long/short TAA around someone else's starting benchmark.

And like, I believe the CIO should own the total portfolio, should own every major important decision. And so, and you can really see the challenges of that. But at the same time, you're a board member, you go, oh, like what are you, completely unconstrained? And so then you can start to define, well here's an alternative benchmark, or here's the definition of risk, which is how much movement from where we are comfortable here, to the end of the year, and we were just trying to

come up with alternative benchmarks that gave you the flexibility you needed to do the right things without giving you too much flexibility to cause unmitigated...

[00:47:09] Mike Philbrick: Do the wrong things.

[00:47:10] Chris Schindler: So...

[00:47:11] Mike Philbrick: The CIO's dilemma is just getting more and more complex, and...

[00:47:16] Chris Schindler: It absolutely is. That was a big part of the challenge, was breaking that benchmark.

[00:47:23] Adam Butler: Yeah. Another irony is that the fact that everybody is benchmarked to something is the, a big reason why a lot of sort of alternative sources of return exist, right? Like, if the true definition of risk is tracking error, and not the deviations and the value of the overall portfolio, then that is going to drive behavior that is aligned with minimizing tracking error, not aligned with minimizing total wealth variance, and that produces the opportunities that alternative managers, many alternative managers use to generate their returns. So, you know, you don't want everybody to become enlightened and abandon their benchmarks, because then it has the potential to kill the goose that that lays the golden eggs for many alternative managers.

[00:48:15] Mike Philbrick: But...

[00:48:16] Chris Schindler: Yeah, I wouldn't say it's it. Yeah, you're absolutely right. It's definitely one of the sources. It's probably not the only one, like benchmarking, but it's definitely one where, and you could kind of just argue, as I guess we have in the past, that it all comes down to anti-crowdedness, right? It comes down to when you have a bunch of people following some set of rules or some process or some benchmark. Whenever too many people crowd into any particular area, the prices get bid up and, you know, if the cash flows aren't affected by that crowdedness, because why would they be, the prices get bid up and the cash flow's the same, and returns fall.

Like crowdedness is always gonna result in lower Sharpe ratio because at the same time is that the returns fall, the risk goes up, because the possibility of that crowd all trying to lead together at the same time becomes significant as well. So crowdedness, of which benchmark hugging is a major one, is a significant source of potential alpha if you can avoid or take advantage of that crowdedness.

So all of that to say, if we backtrack and went inflation, and we can come at it from the alpha side, we can come at it from the stop-making side, and whether or not, I know you kind of started with inflation, or you even sort of went back and said, look, are we micro or macro efficient? I don't know. Like, these are interesting questions because in one sense, it really does look like we have massive examples where we've been incredibly macro-efficient over the last 20, 25 years, to the point of so obvious in hindsight, and maybe for many people, super obvious at the time as well.

So you might argue them for micro-efficiency and I guess micro-efficiency, it's got one other thing going for it, which is like, as human beings, if you think about it for a second, everything that we, like all of our senses are really good at relative, but terrible at absolute, right?

Like, if you asked me what star's brighter in the sky, I could say that one's brighter. But you know, or what's bigger, you know, like, or what sound is louder. I can do relative really well. And that's what our senses are built to do. We're terrible at absolute. I could not give you like any sense of it, how bright that that is. And in fact, even our relative senses are like log scale and you know, like what seems like twice as loud to us might actually be 10 times...

[00:50:39] Adam Butler: Mm-Hmm.

[00:50:39] Chris Schindler: ...more decibels and the same thing with brightness. And, but so like, so we're quite good at saying A versus B. And so if you think of like micro as a whole series of like, you got specialists focusing on a small number of stocks and you're stock picking and you're going a whole series of A versus B and doing some sort of ordinal rank, that's probably what we're most comfortable doing as humans, right?

And so, we probably are very confident in our ability to do that. And we probably are quite good at orderly ranking things, but then you, like you got a bunch of things that might even be ranked correctly, but when the whole picture, the absolute piece can just be miles off. And I think as humans we're probably no good at the absolute piece, and so without something to anchor that absolute to, it probably can go off in extreme distances.

[00:51:21] Adam Butler: Well, we sort of came at it, right? We came at it from the perspective of two dimensions. One is portfolio agility, right? Like the big players out there just don't have much ability to take major bets, take major tracking error against their policy portfolio, right? Like taking major equity overweight versus target, or major credit overweight or duration overweight versus target, carries a lot of risk, whereas taking, maybe there's more tolerance for risk within the

individual asset classes, right? And then there's just the agility, like you're swinging these massive portfolios around, you just don't have the ability to move quickly enough to take advantage of many of the macro or micro inefficiencies that exist, right? So, sort of taking it down one level, I would argue kind of 99% of all cognitive and computational energy focused on investing is within the individual silos, right? So you've got the equity group and you've got the credit group. You've got the rates group, you got the...

[00:52:43] Chris Schindler: There's no way the equity group can tell you equities versus a commodity. Like, it just doesn't, the question makes no sense. And so there, I think there's probably another thing that leads to micro-efficiency as well is the *stat arb* players like the ability to build a long/short basket in *ARB* that is infinitely more powerful than the one sided *ARB* of just trying to sell something you think is expensive or buy something you think...

[00:53:09] Adam Butler: Yeah, because you can hedge the beta within the security space, right? But there's nothing to hedge against directly in the ...

[00:53:15] Chris Schindler: ...and it's much slower. It's much lower breadth, it's a much riskier bet. It's one of those things that you have to trust that a bunch of other people are gonna come in alongside with you over time for it to work on your behalf. Whereas like in a *stat arb* player, you can, you can almost do it yourself if you know, so, and it's a very, very different risk profile.

So I think there's a lot of reasons why you could think of micro-efficient. I can also say like, the last three or four years, the micro-efficiency argument seems to have like, if you get too many people, you've had a lot of craziness, intraday. I mean, like, think about, I think much of the market's changed in the last two or three years with, we were talking about the retail-like player just coming and doing some crazy, you know, meme stocks.

But you also have like, like what's happened the last three years, it's like, I don't know how many day traders are still playing with cash equities versus the ones that are just playing with like massive, massive size of one day options. And the ability for a small player or a small set of players to come in and significantly move the market is changed a lot. And, these, I don't know why these things are like, it blows my mind that these are legal, because it just feels like if someone came in and fat fingered the market to the size of the amount of manipulation, that's a market manipulation because you just hammered the market that hard.

But if you went to 10 dealers and you bought enough of these things and then just nudge it, then suddenly you've got a whole bunch of other people buying aggressively on your behalf, bracing each other and potentially slamming way more into the market than you would ever do as an individual.

And you've just, you've given like this incredible weapon to a small number of players and it's been really disruptive at the micro and at the macro level over the last two to three years. And so you can really see like, I mean that's changed a lot.

[00:55:05] Adam Butler: Yeah. I mean, you could almost corner the gamma market the way you could corner the silver market back in the '80s.

[00:55:13] Chris Schindler: Oh, you absolutely have. I mean, the whole like, vol is such an interesting asset class, but it's changed so much in the last three or four years. You've got dealers now who are stuck, you know, short calls, like massively like in the market right now. And the same way as, like when, when you still think about the like, and this is, I think fundamentally, I think, and I think big pension plans kind of get this wrong too. And they go like, I'm being very, I'm being a good, I'm being a good player. When I buy a big put because I, you know, like if the market crashes, I make this money on the other side.

And what you don't realize is an option is not really a thing. Like you know, you buy equity, you bought a thing and you kind of know what you've got. But an option is kind of a promise by someone else to buy and sell on your behalf. Because when you buy an option with a dealer, they have to delta hedge it and so on the other side of that trade, if the dealer's on the wrong side, market starts to rise and they have to buy to cover that, the deltas that run away from them, they become a massive accelerant into the market.

And same thing on the put side. And so if the dealers get stuck on the wrong side of that trade, which they do all the time now, like this is, this has been the last three or four years, this has been the story. It's just quite an incredible force in the short term. And it can be an incredible short, and so you can really see a lot of market movement when the dealers are on the wrong side of their gamma exposures.

Now they've started to reprice it and they started to figure it out. But it's been a real change in the market, because for the longest time ever, it was priced by puts and as such there was this strong negative correlation between the VIX and the S&P and like that has gone positive at times.

And the whole relationship between vol and market moves is growing. And these one-day options are super interesting. They really transform things, but like, I would say that they're taking a ton away from micro-efficiency as we speak. You see how the *stat arb* guns are able to pull that together?

[00:57:14] Adam Butler: Yeah. So, okay, sorry, Mike, you had, looked like you...

[00:57:17] Mike Philbrick: Oh, I, I think you're gonna transition, just like I was thinking, the same thing you've got if you're transitioning to sort of strategies and changes in the market.

[00:57:24] Adam Butler: Yeah, well, I wanted to talk more broadly about diversification, right? We've done a lot of that on previous episodes. I wanted to really round it out, right? So, once you sort of, you, we talk about stocks, bonds, and inflation, hedge assets, right? I'd love for you to kind of rank for me, what are some of the other alternative betas or premia or whatever that, and I know it's always a continuum, right, from beta/alpha and, you know, you've already talked about that a little bit. But, how would you kind of rank, like where would you want to start as you're adding completely different flavors to the portfolio, in terms of what big players can actually allocate to? With the actual dollar size of these premia are they large enough for a sufficient number of players to actually be able to participate. How would you think about adding to the diversification of the portfolio, in what order, if you could rank?

[00:58:24] Chris Schindler: So I guess there's a couple. So first of all, there's the diversification into assets and there's diversification into strategies. And even then I would say that inflation-sensitive, it kind of has to be in between an asset and the strategy. I think if you, I think like what you described as if it was just assets, then it doesn't do what you needed to do and people aren't gonna stick with it because it's, it'll spike, but we're talking like once every 10 years or so.

You need it and then you look like a loser for nine years. But if you can get strategies that actually make money over time and give you that protection, you're miles ahead just because they're so much easier to stick with. And so, the alternative assets to stocks and bonds are obviously credit, and then the privates, and that's a totally separate discussion.

[00:59:11] Adam Butler: But are they alternative assets? Like do we even need to go there? Like credit's, you know, credits short vol at your, it's capital structure? Like, I don't know I've argued on many, many podcasts and in many papers, that credit's not even really its own asset class. And is private equity any different than equity?

[00:59:32] Chris Schindler: So, I've also made the exact same argument with credit. I mean, when we first tried to look at bringing it in as an asset class at the portfolio level, like once you cover, it's got an equity risk, it's got a fixed income risk, it's got a credit risk, and it's got a shortfall piece, it's got the illiquidity.

And once you take those pieces out of it, like as an asset class, it doesn't bring anything to your portfolio. But it's actually a very cool asset class in its own because it's this, it's not exactly risk parity, but it's a nice mixture of four different risk premiums. So it looks pretty good on its own.

It just doesn't bring as much as people think it does to a total portfolio. But it's a really big universe for value add. And so there's a, there's a lot of room for value add within credit, and I think there's a lot of ...

[01:00:12] Adam Butler: I think, the opportunity is to, is take a little away from the equity, right, and add a little bit to credit, acknowledging the credit gives you some of that equity

[01:00:19] Chris Schindler: I mean, from a factor. So this is, this was like, this is once again going back to the work we're doing at *Teachers'*, at the portfolio level, but like from a, we tried to get things into a factor perspective, and once you transform into a factor perspective, you go, like if, your factors are either call it growth and inflation, you can call it stocks and bonds and some short vol and some illiquidity, then you've mostly just defined credit.

You've also come pretty close to defining most of the factors that are in your privates as well. And so, when it comes down to a little bit of a timeframe, you know, privates are like, they are diversified. They literally, like they're definitely diversifying in the short term.

So if you look at your one year model like privates, they look really uncorrelated because they're lagged and because they're smooth, and the smooth means you get to make up their valuations. And in some cases you really just make up the valuations and they're lagged because it doesn't matter.

They, they're not in real time anyway. And so, those two effects are incredibly helpful for a CIO in the short term. They're probably not that useful for a sponsor in the long term. And so that's a, that's, I call it like a classic agent management mismatch because the CIO gets paid on return on risk, and, anything that cuts risk that significantly and recently is doing, boosting returns, is super helpful. But it's not necessarily really accretive to the portfolio in the long term. So that's the trade,

or it is in some cases, and it probably is at a certain size. It just probably gets over allocated to, because it looks artificially diversifying and artificially less risky than it actually is.

And so from that perspective, it probably gets over-invested to, so illiquidity in general is probably over-invested in portfolios and it has some inherent sources of risk as well, that you have to be super aware of. But if we say let's set the assets aside and think about strategies, my gosh, there's so many.

And I think I like, if, if you're saying I'm going to invest in strategies or I'm going to invest in ..., just creating strategies, you've got to split them into, I'm trying to think about the buckets you put them into. I mean, obviously, you break them down by asset classes and you break them down by holding period.

I think it's probably the starting point. And then you say within asset classes and holding periods, what have you got? And, you know, holding period is particularly important, because it's such a significant source of diversification, right? Like if you have managers who are trading intraday, even in and out a couple times a day, they're for sure going to be uncorrelated with your managers.

They're holding for five days or for 10 days or 20, and they actually create, like at the daily level, it was like a different asset, right? And so from a pure diversification perspective, that's super helpful. I mean, you can have a bunch of managers who are uncorrelated all trading at the same frequency, let's say 10 days. Then, if over the long time, over the long period, you know, they're doing different things from each other, they're gonna look uncorrelated instantaneously. They're all either long or short at the same time for a given day. So whatever happens that day, they're going to look like they're either, they're either lost or, or one together.

And this is one of the challenges with diversification over time, is that some definition of time, you're not diversifying. Right? I think we've talked about this before, but you know, diversification sort of says, if I have two assets that are uncorrelated, then I get a square root of two reduction in my risk, like 1.4 times reduction in my risk between two uncorrelated assets.

And that happens at like any definition of time. But if I have two managers that are uncorrelated over the long-term at any, at some definition of time, they're either both long the S&P or both short the S&P and that's actually not diversifying. That's additive.

And, but at some definition of time. So at the one day level or the one hour level, your managers don't diversify. They add and subtract to each other. But over time, that turns into diversification. And so it's very, very helpful to have managers with, that have different holding periods.

And, if you are building a multi-strat of managers, that's probably one of the things you start to think about, to start with, is how do I get different holding periods? And, then what are the strategies? Well, what are intraday strategies and what are the risk readings of those, and how do I collect them? And my God, there's a lot to think about.

[01:04:47] Adam Butler: And what's the capacity of intraday too, right? I mean...

[01:04:51] Chris Schindler: What's that?

[01:04:52] Adam Butler: You know, not everyone can allocate anything, but intraday would be especially difficult for, to allocate a massive amount of capital to, or to even get a meaningful amount of risk into, for many larger managers.

[01:05:07] Chris Schindler: 100%. So it's extremely hard from an oversight perspective. It's hard from a leverage perspective and capital efficiency perspective. It's hard to, from a portfolio construction. So you see multi-managers doing it and doing it somewhat successfully.

If you think, if you're a multi-strat and you've got a bunch of these strategies together, I mean, you think about this for a second and you go, one of the massive advantages to a multi-strat, especially if they're trading lots of different models in the same space, is netting. And I don't think it's quite as obvious to people like what a big advantage that is.

But if you had 10 managers and at any given point in time, some are buying S&P and some are selling, well then you don't get any netting, and you, what is that worth? And the answer, it is worth a shocking amount, because, massive amount, because transaction costs are so expensive and they're such a big part of any trading strategy.

[01:06:01] Mike Philbrick: Well, especially if there's a performance fee on top of that.

[01:06:04] Chris Schindler: Yeah.

[01:06:04] Mike Philbrick: You're wrong on one trade and you're getting 80% of the other trade.

[01:06:08] Chris Schindler: Yeah. And once again, this is the difference between cancellation and diversification. But if you had only two, one manager's long the S&P one year, and the other one's short the S&P the whole year, that's not diversifying. That's just, you've got no exposure and you're paying fees of the a hundred percent certainty, one side versus the other.

So that's the last thing you want. You don't want cancellation, you want diversification. But you know, if you were to think about like, you know, let's say for us, we have like 20 models, and if you look at any one of these models, there's a couple of things, there's a couple of really interesting concepts that come into play.

On one hand you could think about it, you said like, imagine I was intraday playing and I had lots of different strategies that came, and I was running like a, what we call a *complex event processor*, which is responding in real time. It says like it's 10:02 and your Trend Following model said buy, or it's 10:14, and this model said do this or it's, and if you just do those, all those in real time, yeah, you get that diversification benefit, but what, but you lose all netting because you've said, I'm trading this at this time, and you go and you buy and then an hour and a half later you trade this one, and you're selling.

And those don't touch each other. And so you're paying twice the transaction costs. If you can take all those trades and bring them together and trade them like say one time a day, then by definition, some are buying, some are selling, and you're gonna net those guys out and that's, so you connect, so you take trading time and instead of trading in real time, you compress that down to one or two or a certain number of times a day.

Well then you, you've created a netting process. But the trade off is you're a bit slower in responding. So the question is, how do I trade off the speed of response versus the value of this netting. And you've got to quantify both of those. What's my alpha decay, what's my cost of waiting to do a trade versus my netting value?

And, it's quite amazing. Like for us, it's one of the assets that you think you have as a manager is like, if you only had one process, and let's say it was a Sharpe ratio of one, but you know, like before transaction costs and it's making 10% a year, but your T-cost, 5% a year.

It's like, you have to think of that thing as losing 5% in trading costs. If you had 20 of those and you went to bring that new one into your process, you might literally net out something like 75 to 80% of the trading costs. And so that becomes much more accretive.

And in fact, it's something that you have when you have like multi-processes, is kind of this brand new, call it like an asset, this new benefit, which is that if I wanted to run this new process, if I, if this was, if I was a single manager and this was the only thing I did, it may not be feasible.

But when I bring it in and when I net it with the rest of my process, like it's T-costs almost disappear. And it's a bit of a function of how big it is and how it turns and how it trades with the other stuff. But like it's quite amazing how much of this T-cost can diversify away or just disappear into the process.

[01:08:55] Adam Butler: So this raises another quandary, which we also struggle with, because we also obviously run multi-strats. But, so you've got all these different strategies. They, even if you're, trading them all at the same time, so you, obviously you're maximizing the netting effect with that, but attribution gets really tough, right? So you've got different strategies that on their own, for example, may not be particularly accretive, but when you trade them with other strategies, because of the trade netting effects and the diversification you get within the portfolio, it's highly accretive. But then you've got an investor who wants to know where you generated your returns from, right? You could obviously describe that at the market level very easily, but going one level below the market level into the model level or the strategy level, that gets really hard, right? Because you don't know on a net basis how each of these constituents has contributed to the overall process. How do you guys think about that?

[01:10:00] Chris Schindler: So I guess there's a couple points there. The, if you do everything in gross space, if you do all your models, you say like, I'm just gonna take T-cost as this thing that's charged at the very end, instead of trying to attribute it back to the models, you can at least describe what the end of it, like model process was, before transaction costs.

[01:10:20] Adam Butler: Yeah, the growth.

[01:10:21] Chris Schindler: You can't, there's no way to take that final T-cost and give it back to individual models, or you're wildly overestimating transaction costs. And I don't think that makes a lot of sense. It gets even more complicated if you're doing anything on top of the models, like any kind of portfolio construction, which we do, right?

So, and then it's like, I like to let my models run independently, but every now and then if every single one of them is long equities today, I'm going to say, I'm like, I'm not sure I'm going to bet 20 times as much equities when just because all 20 models. It's very infrequent and very unlikely.

But yeah. And so there's gonna be a point in time when you're going to lean against the, that aggregate decision. And maybe that should come at a negative expected cost. You're leaning against the alpha process. But hopefully it's accretive on the risk side, because like there are occasional times when you know when it wants to do that, and you go, those are super risky.

Like if something happens in the market that one day you could have a really good or really bad day, but it's pretty random. And so, we say, well, we've got aggregate risk that we're trying to control. And now, you're at the level of, I'm mixing models, I'm netting models, I've got overlays on aggregate risk, and how do I assign those back to the models?

And you just can't. And so the best you can do is talk about the models in growth space and then describe these layers and speak them almost as if they're models themselves, right? This is a transformation process and, this transformation process, it transformed risk this way and it cost us, or it added this value.

And think of it as a process That's a yield. It's in there because you think it's utility or accretive. And then you always have to just pay attention to how much risk is in that thing, relative to these things, and in terms of the utility that you're trying to provide from it, because it's from a, if you think of it as a, either Sharpe ratio or utility enhancer, it's got to be, it's got to be either reducing risk or improving return or improving utility in some way that makes it accretive.

[01:12:19] Adam Butler: Yeah. And then you're also, you're constrained in your ability to articulate the value of that trade netting too, right? Like, you know, it's actually important to be able to demonstrate, you could have owned five different funds with this, with similar exposures, but your net return would be expected to be sort of 40% lower because you're not taking advantage of this trade netting. But you, you know, articulating that in a, in any sort of defensible, quantifiable way out is also very difficult. And then, while you can communicate this to institutional investors or accredited or qualified investors, then you can't communicate any of this extra context or color to non-accredited or non-qualified investors, right, who always operate at a major disadvantage to qualified investors who are able to then provide all this extra color, even though it's actually possible, from an accounting standpoint to describe the accretion from all these different strategy sleeves that are trading the same markets within the same account.

[01:13:25] Chris Schindler: Yeah.

[01:13:26] Adam Butler: It introduces all of these different complexities for different classes of investors that I think are counterproductive.

[01:13:32] Chris Schindler: Yeah. I, I mean, I think you can make a statement of, if I had no turnover control and no netting, my trading costs would be X.. And you can, and like, we can do that calculation that's like, imagine I, these are independent managers and you charge a T-cost assumption dollar and you go, boom, what's your number?

[01:13:51] Adam Butler: It's an estimate.

[01:13:52] Chris Schindler: It's always an estimate. It, it's trading costs. It, when it comes right down to anytime you do any kind of trade cost attribution, you're going to be estimating at that point, at, if you're going to try and put it back to models, you're going to try and do anything. You have your actual, this is the amount we actually paid, and then anything else as an attribution back, is going to be an estimate. But you can start with, and we do this, so it's a... if we had no netting, what would our T-cost be? And with netting, what's our T-costs? And it's really interesting because it's the, what is the incremental transaction cost associated with adding this new model?

And you have to say like if we, like adding new models, people always get this wrong, but you go like, I'm expecting this model to make \$10 million because I'm gonna put this much and expect the Sharpe ratio of one, but it doesn't work that way. Right? It's like when you add a new model, unless you take your risk up, the new model doesn't get to make it standalone money.

It's just, how much did it improve your expected Sharpe ratio? Because, you, if it only takes your risk up by 1% when you gotta shrink the rest of the process by 1% to keep the same risk target, and whatever it's suspected to make comes out the other side.

And so it's really, it always comes down to how much does it improve your expected Sharpe ratio. And you can also say, if I was running this amount of money, here's the total dollars I'd pay in T-cost. And if I was just running this model alone, here's the dollars I'd pay in T-cost. And when I add them together at the same risk, what does my dollars in T-cost?

And it's interesting, because occasionally you can add models that are, that have quite high turnover and you can add them to the whole process and your transaction costs come down, and it has a little bit to do with the size of the model versus the stuff you're doing. It has a lot to do with what is the model buying when the rest of your stuff is buying.

And so, if it's truly uncorrelated, it might add incrementally or it might take away because every single time that the rest of the process is buying and this guy's either buying or selling, you save some transaction costs on this, but you also save it on this one. And so you can, it is quite amazing.

But bringing stuff in that turns over quite high can take your transactions down and suddenly you go, that's a huge benefit to a multi-strat. I think it's a huge benefit.

[01:15:58] Mike Philbrick: Well, if you think about it, you're adding a model that has a trading frequency and that frequency isn't going to be more, or it's unlikely to be more than all of the other existing models within the portfolio, at that moment in time. Is that, am I kind of getting that right? So you've got this high transaction model and you've got 20 models over here. It's unlikely that that one model trades at a more rapid frequency than all of the other models, and then it helps inform those other models on their...

[01:16:28] Adam Butler: If you're not accounting for the averaging,

[01:16:30] Chris Schindler: So it could trade more rapidly than your average. It has to do with how big it is relative to your average, because if you've got 10 or 15 and, and like at any given point in time, some are buying, there's, call it like the lightest level, there's a 50% chance that the rest of your guys are doing is in the opposite direction with this guy.

So like, straight up the bat, if it's small enough, you can come pretty close to 50% of coverage. That's just what this covers of this guy. Every time you do that, this guy covers some of this one as well. And so like that comes right back on the other side. And so if you realize the total savings, it's both of those together, you can get to 75, 80%.

And so it's a pretty interesting reduction, meaning that you go, if you found these five processes and five different managers and they're each a Sharpe ratio one, but like they lose 5% in trading costs when you bring them all together, or if you bring 20 of these guys together, these incremental managers are only, are coming at like 20% of the turnover, which is just incredible.

And so it's not, we're not talking about the diversification of the alpha. We're talking like that, in addition to that is this massive reduction in cost, which is what you can see is like if you have these, I don't know, like Medallion, like who knows what they're up to, but assume that they're doing a ton of short-term stuff.

And, the danger with individual short-term stuff, once again, as we said, is that you don't get your netting, but if you do enough of it and then you can aggregate it carefully into slices, you could probably get a ton of netting and just incredible diversification. So, time diversification is super important.

And all of this was just to say like, if I was putting together a multi-strat, you gotta think about the different feature sets that you're diversifying across. And so you're diversifying across strategies and across assets and across time. And that's the three major distinctions. And to all of that across strategies and time, you've got this netting thing to think about, or even assets and strategies and time.

You've got this netting consideration, which is an important consideration, and I went way off track on your question. But, and then you say, what are the big categories? And, and so at the global macro level, you've got your, broadly speaking, you've got your Carrys.

And so, you know, obviously like most fixed income models start with relative or absolute Carrys, and whether they're risk-based or not is a big question. If they're not risk-based, then you're still gonna end up with a bunch of betas underneath it. But like, some concept of Carrys. Like obviously FX Carry's a really big and well-known strategy.

You've got your Carry's, you've got the Values, you've got the Qualities, and you've got Momentum, and then you've got the Volatilities. And I think broadly speaking, that captures a lot of them. And you can capture that set, in all of your major asset classes. Then you have the other ones, like Merger Arbitrage, you know, classic Risk Premium where it's, like the classic definition of Risk Premium where it's like, you know, like someone owns a company, it's trading at 20 and you hear that there's a merger announced and it immediately pops to something and you go, what, what does it popped here?

And obviously, a lot of people spend a lot of time thinking what they think it should go to, but it goes to, it used to be a company that its price moved based on earnings and it had a beta and, suddenly what you own for a brief period of time, is a coin flip.

And it's a coin flip on the probability of this merger going through. The price popped from 20 to 30 and if the merger doesn't go through, I guess it goes back down to 20. If it goes through, it goes to something, it's, that's usually a posted price, that maybe it's 40. And you go, why is it trading at 30 and not 40?

It's like, well, there's an implied probability of this deal going through. And so what you own briefly, you've just made 20, do you, it was at 20 a day ago, now it's at 30 and now you own this thing, which is no longer a stock, it's a coin flip. And you said, I don't want a coin flip. I don't want to like make or lose \$10 on this thing that I have no understanding about.

And I'm gonna ask someone else, like, someone else can take that trade on from me and they can own that and diversify. And I want out. It's a classic risk-free. So someone else will take on, they say, I'm going to buy these things and I'm going to bet that there's a certain probability of default and a certain probably of this thing failing., I mean, and a certain probably going through. And I'm going to price and size this thing correctly. And so that was Merger Arbitrage is a very classic risk premium, and I think a beautiful one, if it's done well. Where I always saw it done badly is on the portfolio construction side.

Because like anything else, people would tend to screw it up and market cap weight it and they go, the size of the deal would dictate how much, what I owned. And the last thing you want when you're flipping coins is to bet a thousand times more here and then bet because at the end of the day, that's going to catch you one day because the only thing that matters is the big one.

And then the other thing to understand is that if you have a whole portfolio ..., you have a growing data risk. We saw this in '08. If the market crashes or if you have a credit crisis or something happens, then all these deals, which you think are independent coin flips, can suddenly be very highly correlated with each other.

And so that's like you have in the background, a tail beta risk in Merger Arbitrage as well, but like a great risk for you to add if you can, if you can find it, and I really ran through Quality. There's so many different definitions of Quality in, across asset classes., within asset classes. Like that's a very broad statement. Same thing with Value.

[01:21:46] Adam Butler: Across asset classes.

[01:21:48] Chris Schindler: So I would say maybe not across asset classes. It's probably better to think of it across sectors within equities, but if you think of, yeah, I think like I guess you, you would not, you wouldn't do a cross section on Quality. What you would like, the best you would have is a time series definition of Quality. And then if you had like a variety of asset classes with a time sectional definition of Quality, some are higher, some are lower at any given point in time, and you can kind of think of that as a relative.

You could even risk that guy if you wanted to. And we actually do have one model that that does that. But it's like that, it's a very sloppy definition of cross sectional Quality, but it's like a series of time series definitions brought together. We'll have it all around our weight, across sectors and, and of a Quality definition.

So we got, think about FX for a second and say like, the major risk periods and effects would be Momentum, Value, Carry, and then maybe some definition like country, like, whether they sit in Value or not, like Value/Quality. And that would be kind of like a throw-together concept there.

But that, like even that three-legged stool in FX is a pretty powerful starting spot, and then you always got your Vol and so...

[01:23:04] Adam Butler: Value would be sort of like relative to purchasing power parity kind of thing.

[01:23:07] Chris Schindler: That, that's a very weak definition. Yeah. That's a good starting point and, and a surprisingly decent starting point of a long-term definition of Value FX, and then if you think about, you know, credit. So Credit still has like, well, Credit's complicated. because as we said, it's a mixture of things, but you know, Credit's gonna have a term structure piece to it.

It's going and like the Credit. So the interesting, when we first started trying to think about, and this is like back to 2006, 2007, we were talking about bringing credit to the portfolio level. But way back before we were talking about bringing into our risk parity. And, so we were building our risk parity as a mixture of stocks and bonds and commodities and strategies across all these non-assets.

And when it came time to look at Credit, we found Credit is a super weird asset class, especially if you're staring at IG and this is back in 2006, 2007, but we were looking at it going, it's really weird because if you just invest in investment grade, if you look at the returns of that process over time, they're not very good.

But meanwhile, if you go to the academic literature at the time, it was literally saying like, we don't understand what's going on with Credit. Why does Credit pay so much? Like it's if the Credit spread is paying more than it should. And there was this massive disconnect between what the academics were saying. If you look at company by company, look how much, like look at the probability of default and look at the actual defaults and look what they're getting paid. And like this is like, we

can't explain why the spread is so rich. Meanwhile, the people investing in credit are making very little. And, uh, and it was super unusual.

And it turns out the disconnect was most people when they invest in Credit are, are they, they're, you know, for the same reason that you'd see that, like the bond investors, they're trying to get some duration and they're sitting at the back end of the Credit curve. And if you, if you're sitting like I own credit, I buy a ten-year bond and then maybe by the time, such as 7, I roll it back out to 10.

And if you're doing that sort of 7 to 10 rolling out process, which is where the vast majority of people sit, you capture almost none of the credit risk premium. Like it's, you get all the risk and almost none of the fun. I mean, the Sharpe ratio there is almost nothing. But if you hold Credit right through to maturity, which means that you're holding companies that live with one to two years of default and the other default that they don't, it's a very different structure where if you hold it, that's where the all the Sharpe ratio is.

And you go, that's super weird. And then once again, it was like early on in our research going, that's this clearly a leverage issue because to get the amount of risk that you need and to get the exposure you need and the cash that you need to hold the stuff at the front end, you know, like very few people hold bonds right through to, they either like, like right through to time zero.

But if you do, that's where all the Sharpe ratio is. You go, why is everyone out here? And it's like, oh, there's two reasons. And the first one is like, and they're both classic Credit reasons. And the first one is the vast majority of Credit players who are just rolling this process out, thinking they're collecting the risk premium because they're taking the risk, without knowing that there's this massive ... in the curve because you've got these people selling here and buying here.

And at the other side is like, it turns out that the Credit curve is the discount curve for corporate liability for pension plans. And so if you want to immunize your pension plan, that's the piece you have to hold. It's like, well you should never be investing in a space where people are forced to be investors because that's gonna be very naturally crowded. It's the last place in the world you want to be.

But the vast majority of people playing Credit at the time were out there at the back end of the curve where there was just like no Sharpe ratio, and all the risk.

[01:26:35] Adam Butler: It's like the long end of the duration curve for the insurance sector and for the, for the...

[01:26:41] Chris Schindler: So, you know, Credit like, my God, like if you just wanted to have a form of Credit, all you would do is just buy from five or six years and hold it right through to maturity, like significantly higher Sharpe ratios. You go, is that a risk premium? Yes. Is it an active strategy? It's just different than what the vast majority of people are doing.

[01:26:57] Adam Butler: All the ETFs, like all the Index ETFs exposure to Credit are all constant maturity. So they're all, that's exactly what they're doing. They're constantly rolling into new bonds of, around that target maturity, right? So they're just not collecting that.

[01:27:11] Chris Schindler: Yeah. So, anyway, I assume this is obsolete information 15 years after we discovered it, but it's still, it is quite surprising where it's, I remember working with the head of Credit at the time and because it was just one of those, like, we don't understand, why would you just buy a bold process of Credit, a constant maturity roll?

Like why is the Sharpe ratio so low when it looks like they haven't made a lot of defaults and we know that they're paying a lot and the answer is, well, because it's like literally the curve has a pretty significant kink because this is where the buyers are and this is where the sellers are.

And it's huge pressure points. And if you just hold past that, there's something quite interesting there. You know, it's the same thing. We talked about this a lot. Like if, if all you're allowed to invest in is investment grade, well then every time something gets downgraded, you're forced to sell it.

And that, it's you, you wouldn't sell it if you didn't have to. And you know it's a bad trade, you know it's a money losing trade. But across that constraint of, if I own this name, once they're being downgraded, I'm gonna get fired, I'm happily gonna sell it, and I'm gonna give that money to someone else happily.

And that transfer of utilities is a classic risk premium. So if you're an unconstrained investor buying the *fallen angels*, like this is like, this is like 20-year-old unknown strategies. But buying the *fallen angels* is a very winning strategy and continues to be.

[01:28:27] Adam Butler: You know, it's amazing and like a number of managers come out and tried to launch these Fallen Angel ETFs and I always look at them and go, this is such a great risk premium to own. And then they, a year later they delist them because nobody's interested.

[01:28:42] Chris Schindler: Well, yeah, I mean, and I guess the reason it exists is because people can't do it. I mean, it's like, as long as you're, if you're an unconstrained investor, you absolutely should, you know, once again, these aren't really, maybe they're strategies. I, if you think about it that way, you're seeing just an absolute ton of overriding strategies that are coming into the market nowadays.

Uh, you know, because they're index enhanced and like it, to me it's quite incredible how much of these you're seeing and, and once again, these are stuffing the dealers full of just crazy amounts of gamma, I thought they're trying to handle, like, on the Sharpe downside. So, you know, it's just like...

But those are very simple strategies. I'm not a big fan personally of every aspect of that, but if you build a proper vol selling process and size it, right? Like, vol selling within FX within actually, of course is the main one, and to a certain extent in some, in commodities. There's interesting opportunities there. So if you think about like, what are the major strategies at the very, like, as I would've defined them back in 2006, 2007, you know, asset by asset. You've got a, well, you've actually got a let's call it a low vol if you want.

Define it that way. Where's the least leverage point within assets? You've got a low vol piece, you've got an inventive piece, you've got a vol piece, you've gotta carry it. And you've got like some vol, some value versus quality definition, and then every major asset probably has some sort of Seasonality or cyclicities in it as well.

And so, that basket is probably like the modern alternative risk premium basket. And then I would say like, you know, next generation that we sort of focused on a little bit is like, well, what about the players playing those baskets? Because if there's all those baskets and all those players, and in many cases now, the risk premium of the player playing the basket is stronger than the basket itself.

And you'll see this all, and like that's by the way, longer-term macro, you know, ETF Index anticipation. You know, like I'm trying to anticipate names coming in out of the indices. Like you've got so many players who are so big and doing that, it's such aggressive size now.

Like in anything, you can easily get more people offering the insurance, than you have people buying it. And you can get caught on the other side of that trade. I mean, it's almost like, like I think a lot of those strategies, which have Sharpe's of two, have just gone like minus two because very, very quickly it's like too many people tried to hoard toilet paper during Covid and then, and they all tried to give it back at the same time.

It's like you're literally trying to buy the toilet paper before someone else buys it, and hopefully there's enough buyers to buy it from you, but if too many people do that you can get caught holding your toilet paper, if you don't mind the analogy.

[01:31:23] Rodrigo Gordillo: Sorry to interrupt, but I did want to take a quick second to remind our listeners that the team works really hard on these podcasts. We spend a lot of hours trying to get the right guests and we do a lot of prep work to make sure that we're asking the right questions. So if you do have a second, just do hit that Subscribe button, hit that Like button, and Share with friends if you find what we're doing useful. Thanks again. Now back to the podcast.

[01:31:44] Adam Butler: So I want to highlight something that you sort of, you said, and, but you kind of glossed over as though it's sort of a given. But you know, you've got all these different premia. You talked about Carry and then you talked about FX Carry. You talked about Vol Selling in equities.

You talked about Value. And most people think about Value Equities and, you know, but you've got all these different, typically, but all these specialists, right? And you've got people who are familiar with Value. They're buying cheap companies or cheap credits or what have you, right? But the real magic for, you know, Vol Selling, Carry, it doesn't matter. The real magic is in selling all the Vol, is in getting all the Carry, is in arming all the Value across all the asset classes, all the different securities, and you know, to the extent that you can then trade against the baskets.

There's a whole other level there. But just to kind of diversify global premium strategy, it's available, well, it may not be available to everybody, but it's becoming more available every year, and most people just take little pieces of it, right? Like, I've got a Value tilt in my portfolio or a Quality tilt in my portfolio.

But it's purely on the equity side when, if you're just in into FX Carry, that actually doesn't have a very attractive profile. It used to have a more attractive profile. Now the profile isn't attractive at all, but global Carry is.

[01:33:09] Chris Schindler: ...or five years there was no Carry signal because the central banks drove all the interest rates down to...

[01:33:14] Adam Butler: That's right.

[01:33:15] Chris Schindler: You know, it's, I bet you there's fat Carry right now in a lot of places, especially versus developed, like, it's suddenly back. But yeah, that pillar of Value and Carry and Momentum is pretty powerful almost everywhere. Um, you know, AQR...

[01:33:30] Adam Butler: The magic is getting it from everywhere. Right?

[01:33:32] Chris Schindler: Yeah, and this is where I think systematic investing is interesting because it, like not to take away from discretionary players. I think there's a really interesting marriage between discretionary and systematic, because, you know, at difficult turning points are, when the world hasn't looked the same. Discretionary people have a chance to see into the future, and if they're good at that, they can add a ton of value, where the systematic players may get caught in those structural shifts.

But in a world of more stability, the systematic player, and the breadth that just can't be beaten, and can really do quite well. And so those two, they really do diversify at difficult times. But the expertise in systematic investing is in the systematic investing.

And so you'll see that like, you know, if you do Carry and FX or Fixed Income or Equities or Vol or Credit, it rhymes so much across those that the expertise is in building the models, as opposed to the asset class expertise required to go capture it. And it's the same for almost everything. I mean, I say if you're building a systematic model or management, you would never have a Commodity Carry expert. It makes no sense.

And you might want to talk to a discussion, I call my commodity trader to make sure that you got all the pieces right. But, at the end of the day, the Commodity Carry model is going to be 99% resonant to the FX Carry and to the Fixed Income Carry. And there's obviously going to be a little bit of like asset class specifics, that you have to understand and know.

But the, but once you're past that, the model building piece of it, and the signal generation, the risk calculation, the portfolio construction, the putting all the pieces together and like it should be, the expertise is in the model building as opposed to in the asset classes needed to capture that.

And there's a little bit of expertise that the asset classes required, but they, I think, quite a bit less. And you know, the systematic trader can capture all of those. In fact, I would say a small number of traders could probably capture all of those strategies all at once, pretty well.

And then you say like, a discretionary investor could probably go in and really clean up on the, around the edges and those two could be quite helpful together. But the, yeah, but like, say like, how do you collect all those things? You know, it's actually not as difficult as it sounds.

I mean, I think if you started to build these processes and models bit by bit, then the advantage of systematic investing is, once you've built a model and built it well, it just goes off and runs. It's like an annuity, and you can start to build the next one and build the next one. And, you know, you build 5, 10 models a year.

After two or three years, you've got a really interesting diversified suite of processes. And some of these can be built much quicker because, like I said, they rhyme in such significant and obvious ways. And, this is not a news story. I mean, there's been a number of very successful multi-strat risk premium collectors over the years. And like anything, they're going to have good years and bad years. But, and the space gets more or less crowded. As the space gets crowded, returns get driven down. But I'm a solid believer that the space will never get so crowded that it will never make any money, because like, on one side you've got people with actual demands who are always going to have the constrained investors.

You're always going to be investors who are in the spot. There's always going to be a flow of wealth. They're there and they're naturally there. You're going to have the demands for insurance. You're going to have the players like, like creating the risk premiums and if you've got other players collecting it, when too many people come in and collect, yeah.

For a while it can get driven very low or even negative. And then most players will leave, or the size will fix, or you know, like all that're normalized. And at the end of the day, because its natural demand is there, these players will, there will be an equilibrium where a correct equilibrium risk premium collection process will and can exist, on average, over time.

And the only question is what is the expected Sharpe ratio of that process, long-term? You know, it's never going to, we talked about this four or five years ago, it's never going to be as good as it was in the early 2000s because it was just too unknown at that point, and there just weren't enough people doing it.

It's never gonna go to zero because naturally, these players will leave if it does. And so there's, what is the Sharpe ratio that will keep players interested? And where does that balance to? And I, it comes down to the, everyone always throws out numbers.

Like, what's the Sharpe ratio per strategy? Is it going to be 0.25 or 0.35, or 0.4 or 0.5? And what is the Sharpe ratio at the aggregate process? Is it going to be 0.5 or 1.0 or 1.5? And, I don't know where that settles. Like, I would probably guess these things each come in at like a 0.25 and this thing comes in at a 1.0, but that's extraordinarily helpful, and I think people have been so spoiled by the equities over the last 10 or 15 years, and they go, 1.0, why?

Like, I can get that from equities. And it's like, yeah, the equities are a 0.5 long-term. And, you just have to be careful with equities because they make very, very high Sharpe ratios for a while, and they make very low Sharpe ratios for a while. If you could find a, like a proper one that you could put next to the 0.5 of equities in the 0.4 or whatever of bonds, you'd be so happy long-term.

[01:38:41] Adam Butler: Yeah.

[01:38:42] Chris Schindler: But it's just a, it is just one of those things where, and it, you have to, you have to buy into it. You have to understand it, and you have to trust over long term that it will be there, you know? And I find that that's probably the biggest challenge with systematic investing is because people don't intuitively, it doesn't resonate with many people, as intuitively.

Let's say I buy cheap companies, you know, something really, really obvious and simple sounding. It's like I buy things when they're cheap and they're on their way up, or I buy, exactly, and you have to, you're trying to explain a little bit more, something a little bit more complicated, that when it doesn't go well, people lose faith in it much quicker. And you can have a value investor who's just being crushed for a year, and they'll come back and say, it's worth even more. Just trust me. You know?

[01:39:31] Mike Philbrick: It's even better.

[01:39:32] Chris Schindler: It's, it's even better now, and like, if the S&P falls 20, 30%, people don't go, it's never gonna make money again. They say, we should pile in and buy it here. But there's a whole bunch of people who, you know, if this strategy has a bad run, think, ah, maybe it was never a thing, or maybe it never will be a thing. Or maybe it's, you know...

[01:39:54] Mike Philbrick: Well, it comes down to that, that decision.

[01:39:57] Chris Schindler: Like you can argue that yeah, the expected return of the S&P has been driven down by, until it finds the level at which it's expected return is positive. Like, that's what any risk premium is doing on any given day, is like the person lending to it is trying to find the marginal price where the, on expectation, their expected return is proper for the risk they're taking.

Like they, you know, the marginal price center is trying to determine the price at which their expected return meets some required return on risk. It should be the same for everything. And so there's no reason, except if you have too many people trying to sell at the same time, or too many people trying to buy at the same time, the price will adjust and move, and those players will come in and out.

That should be a natural expectation of what this process is going to be and it has a fairly long life to it. But that's fine. If your portfolio construction is in the long term, you should be totally fine with it.

[01:40:50] Mike Philbrick: Yeah. You hit on something that we struggle with, or like the intuition of the strategy, and the ability to stick to the intuition. So providing the extra underlying insights is incredibly useful, but sometimes still falls short when you know, and their friends aren't doing it, right? So you've got a little bit less intuition than you'd expect. You have a little less crowding from a cohort of those who you're maybe benchmarked against. It leads to some pretty, pretty significant...

[01:41:20] Chris Schindler: Well, why aren't you just buying Nvidia, I think is the, is to come full circle. So, and look, like, I think what you guys have done with your,, what do you call it, your, like when you're laying in your alpha and your beta together, your...

[01:41:40] Mike Philbrick: Oh, [Return Stacking](#), there ...

[01:41:41] Chris Schindler: Yeah. I think like, everything old is new again, but like *portable alpha*.

It makes a ton of sense, because there's an investor out there who goes like, I can't face the benchmark, loss, of this underperforming the benchmark. And it's like, that's great. Here's a process that gives you the benchmark return plus this alpha. It just seems really smart to me. So I think that's a great product, and I hope that it has some uptake.

[01:42:08] Mike Philbrick: Nice plug.

[01:42:09] Adam Butler: Yeah.

[01:42:10] Mike Philbrick: We'll take it. We'll take it. Now we are coming up on five o'clock, or we are coming up on the end. And so are there any thoughts that you had that we haven't covered, that you wanted to sort of put out there for investors to think about. Things that you're contemplating that are hot on your plate right now, that we haven't talked about?

[01:42:27] Chris Schindler: I mean it's, I think we've covered a lot. I mean, obviously I always have lots of to, to talk about. But, from the topics we've covered, I think we've covered them pretty well. And I feel like, I apologize to people because I know I say the same things that we've, two or three times in, I'm probably repeating myself quite a lot now, but look, I'm happy to do this. I love doing this. I love the conversation. I think you guys ask great questions, and I'd love to come back and do it again at some point.

[01:42:52] Mike Philbrick: Love it.

[01:42:54] Adam Butler: You're a great guy to bookend the beginning or the end of a season. I can tell you that there's, whenever we have you on, they're clamoring for more, man, so we've got to keep them starved for more Schindler.

[01:43:05] Chris Schindler: Exactly, exactly. Save some for the next time. Okay, listen, thanks a lot guys.