MILKEN INSTITUTE

2026 GLOBAL CONFERENCE

LEADING IN A NEW ERA

PUBLIC MARKET ALPHA IN VOLATILE MARKET CONDITIONS

Announcer 00:00

Please welcome the panel on “Public Market Alpha in Volatile Market Conditions,” moderated by Katie Greifeld, anchor, Bloomberg Television.

Katie Greifeld 00:18

Alright. Hello, everyone. Happy Tuesday. I am Katie Greifeld, as the voice told us, and really excited for this conversation here. Quick intros—joined by Eddie Fishman, he is executive committee member of the D. E. Shaw group, as well as Jonathan Glidden, CIO of Delta Air Lines. Joanna Welsh—she is chief risk officer and global head of risk and portfolio construction at Citadel. And Philip Seager—he's head of portfolio strategy at Capital Fund Management. I have this iPad because you can ask questions as well, so I encourage you to do so. And it's turning on, so that's a good sign as well. So, to kick things off, our panel is “Public Market Alpha in Volatile Market Conditions.” And certainly, it's been an embarrassment of riches when it comes to those volatile market conditions. So, just to set the scene here, let's talk a little bit about the past several months and also the past several years, because it does feel like the pandemic, in particular, and the market environment there was sort of a sea change for a lot of people. And, Jonathan, I think I'll start with you because if you just start with the past few months, I wonder how you're thinking about how correlations have changed, if at all, especially when you think about the different public asset classes of stocks and fixed income, which I've spent a lot of time talking about.

Jonathan Glidden 01:47

Sure. Thanks, Katie. It's great to be here. Maybe just a little bit of background. I'll try to go through this pretty quick. It's been a great run at Delta. We went from being the worst-funded pension plan in America by a lot to being pleasantly overfunded today. This panel is very near and dear, kind of personal to us. When your funded status is low, your spending rate's high, so you really can't allocate that much to private markets. So, you really need to maximize alpha generation in the public market. So, this has been a focus of ours, a focus of Delta's over the course of the last 12 or 15 years. So, we really do portable alpha or

separation of alpha and beta. We want to beat indexes by 300 basis points. We want to add 150 basis points of value from public market alpha to the overall Delta pension plan. These are not easy things to do. So, the way that we do it, and again, portable alpha, it's about half our portfolio. We've got some stocks. We've got some bonds. We trade derivatives, and we collateralize those derivatives 10 percent cash, call it 40 percent hedge funds. And I need my hedge funds to beat the borrowing cost. This has been very successful over the course of the last 12 years, but there are some bumps in the road. So, you talk about the last couple of months, we've seen some bumps. So, March of this year was actually the second-worst month that we've had. So, the hedge fund portfolio was down about 1.6 in the month of March. And markets, they always throw something at us that we've never seen before. So, the big thing that we saw in March was an unexpected correlation between our equity long-short managers—and our macro traders they tend to lean more fundamental than systematic, but we just saw this correlation that we had never seen. So, there's always something new. We tend to trade a portfolio of about 50 hedge funds. Again, it's half our portfolio, so it's pretty big. But we try to diversify the best that we can to protect against these things. But if you're just talking about the last few months, March was funny because the front end of the UK yield curve really got hurt, and that hurt a lot of people on the macro side. And then if you had any beta or if you had any momentum on the equity hedge side, you lost money there, too.

Katie Greifeld 04:07

And you said March was your second-worst month. Was that ever or over—

Jonathan Glidden 04:11

—Ever, yeah.

Katie Greifeld 04:12

Ever. Okay. So—

Jonathan Glidden 04:13

—Well, in the 15 years I've been at Delta.

Katie Greifeld 04:15

That's a lot.

Jonathan Glidden 04:16

Yeah.

Katie Greifeld 04:17

Joanna, come in here because March was unique in so many ways. And then April, what a violent snapback. How did that look from your seat when you think about risk management, when you think about portfolio construction, a moment such as that one? Tell us about it.

Joanna Welsh 04:36

For our hedge fund business, it's conceptually different to what Jon is trying to do, where we run five franchise businesses, so it's not like we have—sorry, this sound is awful.

Katie Greifeld 04:49

It's very loud.

Joanna Welsh 04:50

All I can hear is myself. We don't have a portfolio which is, let's say, core equity risk, and so, you are trying to find natural hedges around it. And it's been the case for some time. One of the most interesting things in macro—and my background is fixed income—is what's been happening at the short and long ends of some of the yield curves as people have started to ask very deep fiscal questions and questions about fiscal sustainability. So, this whole model of you have an equity-centric portfolio with equity-centric risk, and you're trying to hedge it with fixed-income type instruments, I think that model just doesn't work. And it doesn't work when the things that are supposed to be variance-reducing in your portfolio are producing a lot of the variance and when it's producing volatility in a regime that you don't understand. So, look—for us, I think it's equities is one of the most diversified parts of our portfolio—I'd say equities and quant. So, for us, we have a whole spectrum. If you think about the portfolios with the highest breadth and the highest diversification, this will be our quant allocation, and both Phil and Eddie can talk about that, too. Then our fundamental equity business, a large part of which is people betting on earnings. Throughout all of this, what's been interesting is our portfolio is showing one of its best-ever return quarters—in terms of return on GMV, and a large part of that has been driven by the short side. Which to me, that's a real vindication of our process and what we're doing. Then, as you go to the other end of our portfolio, you have things which have a lower breadth just because there's fewer risk factors to trade. This would be our commodities business, fixed income, and macro. But the role of those two businesses is to take large amounts of risk when they see the edge, and for us to be utterly paranoid about it all the time.

Katie Greifeld 07:05

Mm.

Joanna Welsh 07:07

That's what we do. So, in terms of shifting correlations—we don't really make a sort of top-down portfolio construction based on those, but you can see its impact through the modulation of our risk. Now, for us, one of the parts of our risk process is when we see that happen, we're not putting a counterweight to it. If

we believe in those positions, we're going to run them, and the risk is going to go up. And quite frankly, if you want to talk about volatility or trends, this diversification, actually, it's pretty difficult to generate vol in a multi-strat. That's the problem we have. To give Jon these superior returns, you know, we want that volatility. We want varying perception in the market. We want people to be having active debates about what the prices of these liquid assets are.

Katie Greifeld 08:01

Yeah. And giving Jon good returns, that's a tall order and something I'm sure that you take very seriously. Let's talk about it from the D. E. Shaw perspective a little bit. You think about the hedge fund strategies you run, you think particularly about the long-only side. How have the last two months been?

Eddie Fishman 08:21

Last few months have been fine. It's been a rocky road. You asked the first question about the kind of post-COVID period and the change in the market environment. And, just since six years ago, since the—

Katie Greifeld 08:37

—Yeah—

Eddie Fishman 08:37

—The depths of the COVID pandemic, equity market in the US is up two and a half times, and even in inflation-adjusted terms, that's 75 percent larger. So, just the size of the market, the scope of opportunities is larger than it ever was. And so, in some sense, the availability of alpha is larger than it ever was. That's just from market size. And when you add into that the fact that under the hood, it's not just stocks rising proportionally in size, but some of the largest, most liquid companies, the Mag Seven and others, by definition, the most liquid stocks are also super volatile. And you combine liquid instruments with volatile instruments, and that's just catnip for the sorts of businesses that we run. So, on the availability of alpha, you can get things wrong, and certainly in a market environment like the last few weeks or months, there are plenty of opportunities to do so. But positive or negative, there is a potential to add value. Last week alone, in earnings season, you saw one-day moves of some of the largest companies on earnings announcement days of hundreds of billions of dollars each. That's a lot of potential, negative or positive alpha.

Joanna Welsh 09:54

And really good dispersion, right, Eddie? I think that's, you know—

Eddie Fishman 09:57

For sure.

Joanna Welsh 09:58

People always talk about correlation like it's just a bad thing. When it engenders, as it waxes and wanes, and as it engenders more dispersion in the markets, or to go from a more to a less dispersed regime, that's a really good opportunity set.

Katie Greifeld 10:12

Mm-hmm. Well, Philip, I'd love to hear your perspective on the conversation we're having so far. When it comes to correlations, when it comes to dispersions, to Joanna's point, and you think about, again, the last few months, but also really the past six years, talk to us about that journey.

Philip Seager 10:29

So, yeah, we're a multi-strategy, multi-asset class, quant, very systematic hedge fund. The past few, I would say, well, probably getting on for about a year now, at least in equities, it's been a very interesting environment. We've had sort of episodes, episodic periods of seemingly with a seasonality to it, where certain equity factors, strategies, have actually sold off. So, you have to ask yourself, what is behind this and this sort of general underperformance that I think that we've seen. One thing is that the environment in this second Trump administration—the volatility has been there. Generally, we like volatility. We like markets to move. But when it's a volatility that's sort of generated by a policymaker tweeting or a policymaker that is making some sort of statement, and in between those statements, there's very little going on, our models, and I don't think anybody's models, are really suited to that type of environment. So, it's been quite a difficult environment. I think that these sort of sell-offs that we've seen, to some extent, it's like—I think it was Andrew Bailey, the governor of the Bank of England, that made the comment that the way that multi-manager platforms and pods are actually conducting risk control and actually taking down the risk on a particular pod that's employing a particular strategy, that that could be responsible for these types of sell-offs, and that could be contributing to the environment. That's something that maybe has changed in this environment. And then, over the last few years, I think that for us, what we've seen is that there's more and more data available, more and more compute available. The opportunities to sort of find new strategies, new directions for research have really grown, and I'm sure that we'll get onto the subject of AI—but that has contributed to a very rich environment for research, and that's been quite fruitful for us. I hope it's more than just coincidence that the good performance is on the back of that.

Katie Greifeld 13:25

Mm-hmm. I don't think you're allowed to go more than an hour without talking about AI, so it will absolutely come up. But since you put it in the words of Andrew Bailey—is his assessment something that you agree with? Does that theory hold water to you, that markets potentially are becoming more reflexive on the back of some of that degrossing?

Philip Seager 13:47

I think that that makes a lot of sense, yes. I mean, it's something that we try to factor in. When we're doing risk control, we do risk control in, firstly, a statistical manner. So, we're trying to learn and clean a correlation matrix of correlations between instruments. And then, we have forecasts of the volatility of instruments. And then, on top of that, we have a layer of risk control, which is looking out for directions or portfolios that have the potential to sell off. And these types of factors and directions, they would be included in that. But I think the way that we sort of think about the dangers of these types of sell-offs, it's very difficult to avoid if you are aligned with these directions. You find yourself in a situation with a spiraling feedback mechanism. People are selling off, and then someone else sells off, and then someone else sells off. The only way, really, to circumvent the problem and get around that problem is to do more research, such that you are not concentrated—your portfolio is not concentrated in a direction which is actually selling off. So, it's pointing in the direction of lots and lots of strategies. That's the only way that we found to get around the problem.

Joanna Welsh 15:20

So, Phil, do you find that, you know, when you go and look at these things post hoc, what you thought was idiosyncratic risk, there was actually something transient and structural in it? Because obviously, you train your models on things which have statistical significance, and they have persistence. You can't train it on everything that's passing through. You know—when you've gone back and done that, like we have, and some of the vectors we thought we were neutral to, it actually turned out that we weren't. Have you found that yourself?

Philip Seager 15:55

Yeah. To some extent. I mean, you can't neutralize your portfolio to everything, so what we do is try to pick out the directions that we think, or we measure to be those directions that will actually sell off. I think these days, the advantage that we have is that whenever there is a pod which is closed, it actually makes it into the media so you can read about it. So, anecdotally, that there'll be a pod that was running, I don't know, an index arb strategy. So, we have strategies that are related to index arb, and we can actually see a blip. We can see a bit of a sell-off. That's by far not the only thing that we do, but we can actually see it in the market. I think because we have lots and lots of directions that we're trading, you know, for us, it's a question of just being patient, so we will actually sit through it. We won't try and pull that portfolio or that direction down further. We'll just sit there and wait because it's not statistically significant.

Eddie Fishman 17:16

Yeah. On the question of how much of these moves are being driven by the pod shops, the multi-manager platforms, and “can you be patient,” “can you ride through these things?” I think one of the more pronounced changes in market structure in recent years is the rise of the multi-strategy firm, and that's particularly true if you include in the definition of multi-strategy firms, those that are structured as something other than a hedge fund. Maybe they started life as a high-frequency trading, proprietary trading shop, or a market maker quoting two-sided markets, including those represented on the dais. You know, all of those firms together doing multi-strategy things with different business models, sometimes trading investor capital, sometimes trading their own capital. This is quite pronounced, and I think the point that Philip raises, having the staying power, the duration of capital, the ability to withstand blips and liquidation periods in markets is super critical for long-term sustainability. So, it's a lot of what we spend time thinking about is, “How are we positioned? Is our business model resilient to investor flows and some of these systemic questions?”

Katie Greifeld 18:40

Well, Jon, I'm curious to know how you think about it over at Delta, because you mentioned you invest in 40 to 50 hedge funds, and multi-strats are a component of that—

Jonathan Glidden 18:52

—Yep—

Katie Greifeld 18:52

A category within that. So, as you're putting together that portfolio of 40 to 50 managers that you go with, how are you thinking through some of those different risks and some of those different styles?

Jonathan Glidden 19:03

Right. Let me go through a little bit on how we analyze the folks on the stage. So, we tilt about 60 percent quantitative, about 40 percent qualitative. For the 60 percent quantitative, we use, really, a pretty simple tool. It's a return style analysis. Specifically, it's a two-stage regression. We use the lasso method, if that means anything to anyone. So, we come up with a list of factors. The first stage of the regression throws out extraneous factors. The second stage of the regression then ascribes a factor loading to each one of the factors. Look, I don't like factors.

Katie Greifeld 19:39

Oh.

Jonathan Glidden 19:39

We do all of this, but I don't like factors. What I want to see is I want to see nothing, and by nothing, I mean a residual. So, if there's a factor loading, by and large, I could go out and replicate that return, and I could do it a lot cheaper. What I'm looking for is stuff that this fairly simple model cannot explain. I think that's a better definition of manager skill. That's what we're looking for. We're looking for residual return, we're looking for residual information ratio, and we're looking for a high signal-to-noise ratio. Call it a t-stat of two or higher. These things are very difficult to find, especially in the long-only space. You can find it a lot more commonly in the hedge fund space. So, to translate that a little bit into portfolio construction, we cut the world into five buckets, right? So, we've got equity hedge, we've got relative value, we've got multi-strat, we've got credit, and we've got trading. Trading's mostly fundamental macro, but there's commodity stuff, there's other strategies in there as well. But you can only trust this kind of quantitative analysis so much, right? Because the model loves multi-strat. The model loves relative value, the model loves credit. It gives them very high return efficiency scores. So, it gives it a lot of good stuff, but there tends to be a lot of bad stuff that comes along with it, so you tend to see higher autocorrelations in those strategies. You tend to—because of some of what we're talking about, you tend to see fatter tails than the other strategies, and you tend to see more negative skew than most strategies. So, you can't run an optimizer even on a residual because you end up with some of these non-normal risks. And I would say, and multi-strategies are great. What Joanna said is exactly right. A lot of our multi-strategies will give us a, you know, 8, 10, 12 percent return on a 3 percent realized volatility, a 4 percent realized volatility. I mean, that's great. I mean, that sounds fantastic. But you know that if there is a hiccup in correlations that is not in their model, there could be a bump in the road for a month or a quarter. When we're analyzing managers, that 40 percent qualitative side, you know, look, we want to see the right people, and we want to see the right processes. So, if something unusual happens, how do you respond? What does your risk management look like? What does your portfolio construction look like? But multi-strategy has been great for us for a long time. We will continue to do it. We do just pare it back and diversify it a little bit because of some of the non-normalities that we see.

Katie Greifeld 22:05

There's a lot to dig into when it comes to multi-strats, but I want to quickly talk a little bit about factors. Jon doesn't like them, and it's a—

Jonathan Glidden 22:16

—I don't like them in my hedge fund portfolio.

Katie Greifeld 22:17

Fair enough.

Jonathan Glidden 22:18

Yeah.

Katie Greifeld 22:18

Fair enough. But to use it as a segue, I have been wondering about whether or not factors have become less reliable, less relevant over the past few months, over the past few years, whether or not the better signal or—that has been shifting in favor to themes rather than factors. And, I don't know who necessarily wants to sound off on that, but, I keep making eye contact with you, Joanna, so—

Joanna Welsh 22:48

—Momentum's done pretty darn well. Tech momentum, if you didn't have any of that, you would sit there feeling pretty stupid right now, and no doubt underperforming. But I think it's—look, and there are also times when the emergence of a new, let's just call it investment theme, sometimes you will see it first in factors, or that's what people are choosing to, you know, as their vehicle for it. So, post-COVID, were you online or were you bricks and mortar, for example? And, that was firstly and foremostly a factor bet before you started saying, "Well, within bricks and mortar, I want to be..." "Who are winners, who are losers?" And you kind of go several levels down. So, look, we don't ask our investors to pay for beta or factor exposure, okay? But at the same time, we're not going to ask them to pay, or we're not going to pay ridiculous transaction costs or run giant GMV portfolios to say that we've neutralized everything away. Now, so for us, our focus is on liquidity-adjusted edge. That's really important. If it's a giant stock, is there enough varying perception in the market that we can say, "There's a gazillion people covering Meta or Netflix, but if we can have an edge, we're in it. If it's some tiny biotech stock, even if we get the thing right, will it make any difference?" So, liquidity-adjusted edge is really important to us, and that's what people are paying for. That's our stock-picking skill. There are a lot of things within this liquidity-adjusted edge that the market will allow you to hedge certain factors very cheaply. And when it does so, you should do that. And when a market, whether it's short-term momentum, for example, super difficult to hedge, super difficult to tell a PM, "Here's what you're meant to do about this." Obviously, you can't hedge crowding because that's your alpha. Some of the residual volatility factors themselves are super volatile, super noisy. You can generate a lot of transaction costs and GMV in trying to do that. So, I think, look, there's one thing, if you read the Claude Code best practices, this is my AI thing for the moment, that there's a statement in there and it says, "A piece of advice, just develop your intuition." And this is something that all the best people I've met in finance, they have enormous intuition for when our job is to decide when the numbers are helping us or lying to us. And developing that intuition around real-world things, this is a real problem when you've got a big portfolio. Transaction costs are important, drag is important, what you're supposed to hedge. I'd rather have a PM that had great commercial instinct about the right stock to pick or the right portfolio than somebody who checked all the boxes on a model.

Katie Greifeld 26:11

Mm.

Eddie Fishman 26:12

Earlier, Philip made the point that it's very difficult to hedge out every exposure. You wouldn't have much risk, and you wouldn't make much money. And everything Joanna says about having factor exposures is well taken. But there's a difference, I think, between a persistent exposure to a particular factor versus a transient one that maybe, you know, you'll flip around and have the opposite sign. And I think one will show up in Jonathan's lasso regression model, as having a persistent factor exposure that maybe is unwanted. And the other, if it's kind of two-sided and on average over time is neutral, you know, will show up as something more like alpha.

Katie Greifeld 26:52

Mm. And Philip, I would love to hear your thoughts just on factors in general, whether or not your thinking has changed around them in the past few years, and sort of how they do interact with themes. As Joanna said, I mean, in some cases, you do see that first in factors, but I mean, you think about geopolitics, you think about AI, it feels like in so many senses, they've been overwhelming.

Philip Seager 27:18

Yeah. It's interesting that one man's alpha is another man's risk direction, and generally, factors, you know, you can regard them as being a source of a signal, and you can regard them as being a risk as well. I mean, it’s true what Eddie's saying that we are considering these factors also in terms of timing. So, there are effects in the market. You know, you can identify times when you should be in a factor, and times when you should be out of a factor, and times when you should actually short the factor. Of course, all the while, you're trying to control the risk if it's a factor or a direction that you think has this chance of selling off, then you're going to do that carefully. But that is a genuine avenue of research that we have. I think one factor that we do actually quite like is trend following. It depends how you define factors, but, you know, similar to what Joanna was saying, that, you know, we have actually been long tech. That's a trend. Trend following, and it's an effect that we've shown in various papers that we've put out, that, you know, the autocorrelation of price returns is very weak, but it is very persistent—to taking advantage of a behavioral bias that exists, not just in markets, but generally, people are programmed to follow trends, and that leads to trends being in price returns. So, that is something that we don't want to leave that on the table. So, we do have a small exposure to it, along with everything else that we do. But that's something that unashamedly, we actually have in our flagship program.

Katie Greifeld 29:22

Mm. And speaking of trends, I remembered that I have an iPad in my lap, and that we've been getting audience questions this whole time. There's quite a few of them, and I think this one is somewhat relevant to the conversation we're having. It also touches on ETFs, which I like to talk about a lot. The question is, “ETFs, which are increasingly valuation insensitive, are becoming a greater percentage of equities market ownership. Does that trend make your ability to persistently generate alpha harder, or you don't care about that?” And I feel like that ties into a broader discussion of active versus passive, which is sort of an

evergreen debate. And I guess I would open it up to all four of you, if anyone has a strong opinion. Or, if you don't like this question, we can just pretend it never happened.

Eddie Fishman 30:11

Pass.

Katie Greifeld 30:12

Okay, great. Alright.

Joanna Welsh 30:15

Yeah. You're in a hedge fund because you want active management, and we're the people doing the work to make the price discovery. And, you know, if ETFs somewhere down the line want to package that up and participate in—I mean, look, what Ark did was a different type of thing. But largely—this is Team Active on the stage. And for us, long and short alpha, so it's not as if at Citadel you can come in and have all of these amazing ideas on the long side and then just buy some ETF or some index. Sure, that doesn't work.

Katie Greifeld 31:00

Eddie?

Eddie Fishman 31:00

I'll take it. I think one thing that ETFs speak to is increasing retail participation in markets. And over this time horizon that you've been referring to, the post-COVID period, you've had a pronounced move in beta, but also tremendous increase in retail interest. And it's not the case that ETFs are solely for the retail market, but there is an important retail participation. And so, part of the intuition behind the greater liquidity in markets in recent years is growth in participation by lots of investor classes. And so, the implications there are various, but it does give rise to more opportunities to trade the ETFs against the underlying and one ETF against another, and it's just, generally, contribute to increased market liquidity and hopefully that's been a tailwind for many of our businesses.

Jonathan Glidden 31:59

I like ETFs because they give me a greater ability to trade interesting swaps. If we want to have something in our synthetic overlay. But why do we run money the way that we do? We have no traditional long-only managers on the defined benefit side. None. Because we think it's too constrained of a way to make money. You've got to choose a strategy, and you're generally long-only, and you're generally somewhat benchmark sensitive, and it's just really hard to make money that way. So, the other three people that flank me on the stage here, the world is their oyster, right? They're long, they're short, they're every asset class, every market, every market cap. That's what I want. That's what active is. And ETFs might get there one day, but I don't think they're there today. I think maybe they actually add to the alpha pool that's available to the rest of us.

Philip Seager 32:49

I think it's a space that's growing. It's something that one should pay attention to. It's an interesting space in the sense that, again, one could consider that this is another source of sell-offs. You have a portfolio and they can all move together. So, you build an ETF, it's got a basket of stocks in it. They're all moving up and down at the same time, so that's another source of risk. One thing that we use the ETFs for—it gives me a chance to publicize a paper that we wrote—which is a perfect laboratory for testing the ideas of liquidity and illiquidity when you get a big ETF, which is trading very illiquid stocks. So, we had a paper that was called "Ponzi Funds." We're not accusing people of fraud in any way, but it's really the idea that the underlying mechanism is like a Ponzi scheme that you need support to keep the whole thing afloat. And the idea is that a big ETF that is trading stocks that are very illiquid, we actually modeled the returns of the ETFs with the price impact of trading the underlying stocks. So, what you see is that when you get a big flow into the ETF, the price rises, and then when people pull out of that same ETF, the price goes back down. You can actually model the price of the ETF with the impact on the underlying stock. So, it is a very interesting laboratory to test these ideas.

Katie Greifeld 34:33

Yeah, it is fun. I feel like we've seen that happen in the past few years with small-cap funds, for example. ETFs can't really turn away money, and you do get into a situation where, you know, if an ETF is big enough, it owns a pretty big percentage of some of these really tiny stocks, and all sorts of crazy things happen. But anyway, let's move on. Let's dive deeper into the world of multi-strategies, because it's been an interesting couple of weeks there. The big headline, of course, has to be Jain Global. You know, you think about Bobby Jain with the tenure of being co-CIO at Millennium, going out, starting out Jain Global. Now, the news breaking that he's basically going to return external cash and will exclusively manage money for Millennium, so a bit of a homecoming of sorts. But it's a really interesting sign of the times that it just feels like it's so difficult for newcomers to enter into the world of multi-strategy hedge funds. And there's the idea out there, if Bobby Jain can't do it, then what kind of resume do you possibly need to be successful here? But I just want to talk about that a little bit. I mean, why are the barriers to entry so high when it comes to multi-strategy hedge funds? And Joanna and Eddie, I'm particularly interested to hear from you on that.

Joanna Welsh 35:56

My view is to describe multi-strategy as an investing strategy is not correct. I think multi-strategy is more than that. I think it's an entire financial ecosystem, and it's an ecosystem that starts with research, which is then monetized. And if you can't monetize it effectively, then the research is just expensive research. Monetized in the hands of very skilled risk-takers, with a very dynamic capital allocation process, portfolio construction process, risk management process, a multitude of diverse counterparty relationships, big investment in central technology, so, you know, operationally scalable. They're talent aggregators in all of the areas you need for success at scale. And I think where one and two, the research and the trading or investing skill can be a source of competitive edge. I think all the rest of the ecosystem is now just the baseline for success. And so, if you think that you can go from zero to all of those things immediately with a pool of capital and some people to invest the capital, but you just don't have the—I went to a medical panel earlier on this week, and they were talking about disease breakthrough. And one of the things that the director of the National Institutes of Health said is, "You can't outrun your own history." And I think that's the case here. Citadel started with one strategy in convertible arbitrage. We added these things organically over time. We learned where we could get synergies, where it was really accretive if bits of the business talk to each other, talk to the same language. And so, to me, that whole ecosystem, that's what multi-strat is, not a collection of diverse risk-takers in strategies.

Katie Greifeld 38:07

Mm. And Eddie, would love to hear your perspective, because it feels like this is an area where the incumbency advantage is quite high.

Eddie Fishman 38:17

I think everything Joanna said is well taken. And I think it's true that it takes all sorts of skills and building on those skills over time, deepening them. So much of what we said on the panel so far has pertained to the availability of alpha in recent years, but it's also been the case that the demand for alpha is as aggressive as it's ever been, from all the people represented on the dais and many other firms in and outside the hedge fund industry as well, the whole ecosystem that Joanna refers to. On the question of whether the barriers to entry in the multi-strategy, the kind of platform business are low or high, I'm not sure whether the barriers to entry are high, but the barriers to stability are high, for all the reasons mentioned. And I'm actually not—I haven't spoken to the folks at Jain or Millennium about this transaction, so I'm not familiar at the moment with the particulars. But I would say that Jain is not the first firm in recent memory that has decided that it's better not to go it alone. And so, you know, it's just more grist for the mill that it's tough out there. It's competitive.

Katie Greifeld 39:42

Mm. And I can't remember which publication it was from, Jon, but I read a headline in the aftermath of that news that was something to the effect of burned investors will be cautious about multi-strat newcomers going forward. And I wonder how you sort of approach that space, given that you do invest in

multi-strategy managers. What's sort of the checklist that you look at, and would you ever invest in a newcomer?

Jonathan Glidden 40:12

We do. There are some managers out there, maybe including some managers on this stage, where it's very difficult to put additional capital to work with them. So, I think it's important that you're always out there looking for new talent. And, I mean, talent is a big issue, right? The price of talent has really, my impression is, has gone up quite a lot in the portfolio manager space for multi-strats. So, I mean, if you don't have the asset base to compete and you don't have the pay packets to compete, I mean, it's a pretty significant headwind. And what Joanna said, I can't add much to it. I thought what she said was great. There's a bit of an arms race, too, right? So, if you can't afford the infrastructure to run it, and now we're going to be—I'm sure we'll try to squeeze in AI here as well. You have to have both the management fees as well as the incentive fees on pretty significant assets to kind of stay ahead in the arms race. But again, you don't have to start everything overnight, right? So, I mean, if you've got a collection of, you know, 10 PMs, 15 PMs, 20 PMs running certain strategies that you like and that works for you, and you've got a focus there, and then you add a little and you add a little and you add a little. You know, we've seen firms like Alyeska, who I think has been quite successful in kind of getting off the ground. But yeah, I would say that I'm going to put a little bit more weight into—it is real—I think the deck is kind of stacked against new multi-strats trying to make a big bang on day one.

Katie Greifeld 41:42

Mm. And you mentioned talent, and I feel like the hedge fund talent war is something people love to talk about, and I am going to talk about it here. But—I'm going to talk about it in the context of AI since, again, we have that hour time limit here. You think about the talent wars. Now I feel like it's not just hedge fund versus hedge fund. I have to imagine, to some extent, you're also competing against some of these AI companies. And there's some high-profile examples of Meta just splashing hundreds of millions of dollars towards AI talent. But, you know, is that becoming more of a conversation for everyone on this stage? The idea that you're competing now also with an OpenAI, with an Anthropic, that sort of type of firm for basically new talent, especially as AI becomes more relevant.

Joanna Welsh 42:36

It's not new.

Katie Greifeld 42:38

It's not new.

Joanna Welsh 42:38

I don't feel it, Eddie. I don't think it's new. Like post the social media age, you were competing against Facebook, or then you're competing against Google. I think you just got to have a really strong sense of

the talent you want. So, if we're talking about portfolio construction and risk, the quants or engineers that work there, for me, they've got to be—passionate about finance. If they're passionate about engineering and they are not morning people, and just something simple, they don't like getting up at 7 a.m. And so, but the market's open, the markets are dictating what we're doing. And if you don't like to work in that way, then there's just going to be a fundamental mismatch. If you're not interested in finance or how finance and engineering interact, or how that problem-solving interacts, then it's okay if you go and work for an AI fund or AI place.

Philip Seager 43:44

I think it's not new, but it is somewhat new, again, with the advent of pods. My understanding of what happened with Jane was it's an issue of controlling costs. Their performance was actually—they were performing, it's just that the costs were too high to actually run the business. That is something that you see in the media, the talent war, the amounts of money involved are just phenomenal. That is a bit of a recent phenomenon. I mean, for us, we're not competing in that space. You know, my background is in particle physics. I didn't have any financial experience when I was recruited. And we recruit people, similar people to me. So are we—we are now, it's true that we're competing with AI companies. But on the whole, people want to come and work for us because of the fact that we have a scientific approach. We have scientific rigor. We're a hedge fund, but at the same time, we are run in a scientific manner. People appreciate that. People want to come and work for CFM. So, it's competitive, yes, but we are managing to compete.

Katie Greifeld 45:18

Give me the D. E. Shaw perspective.

Eddie Fishman 45:21

Yeah, I was going to say that the core observation here that much of this isn't new, although there are some recent nuances and new factors. I think Joanna's point that we've always competed for talent is the right one. We compete for alpha, we compete for capital in some of our businesses, and we compete for talent. And competition within the financial services industry, competition with various forms of the technology industry are something, you know, that we've had to manage since the '80s. I also agree with Philip, though, that the stakes are higher. And that is partly a statement of the talent wars and the fact that what you can do with talent, the size of the markets, the available opportunities is greater, and, therefore, remuneration is greater. Historically, this has been a business that's primarily about people, and, therefore, the expenses are disproportionately, overwhelmingly people, and that remains the case. But the stakes of the AI race are higher. And so, the CapEx on things like compute and data centers and all of the infrastructure that you need to stay at the forefront and develop the whole financial ecosystem that Joanna was talking about, those numbers are higher than they've ever been. And that is before you get to any discussion of tokens and use of the LLMs. Just to do core compute for research and trading is, you're talking about at least nine-figure numbers.

Katie Greifeld 47:04

For what it's worth, I'm waiting for the talent wars for financial news anchors to see whether—

Jonathan Glidden 47:10

—Or asset allocators.

Katie Greifeld 47:12

CNBC. Yeah. It's coming, but it's coming—

Eddie Fishman 47:13

You might have to start it yourself, Katie.

Katie Greifeld 47:16

Yeah.

Eddie Fishman 47:16

With that interview with will.i.am before, you're ready.

Katie Greifeld 47:20

There you go. I did want to talk a little bit, we're talking about recruiting, we're talking about talent. I want to talk a little bit about succession planning as well, because also in the world of hedge funds, it's been an interesting couple of weeks when you think about what's going on at Point72, what's going on at Sculptor, moving more towards the executive committee structure, which is an interesting one. And, Eddie, you have intimate experience with being on an executive committee. Of course, you've been a member of D. E. Shaw's for quite a while now. It's seven people. That's a lot of personalities. That's a lot of souls. How exactly does that work? Because, you know, co-CEOs, we're seeing that become more common, but how do you run a firm by committee?

Eddie Fishman 48:07

It's not one you see often, but it's not unique. I think the private equity industry has generally been ahead of the hedge fund industry in having to deal with succession. You have firms that have managed to migrate from the founding generation of leadership to subsequent ones. And sometimes that's with a sole CEO model, and sometimes it's with co-leadership. More common in co-leadership is two co-CEOs. It's pretty unusual to have seven people. I'm not sure I would recommend it. There's no magic to that seven number. At times it's been four and anywhere in between. But I think the key thing is, if you believe this concept of a whole cultural ecosystem, I mean, you want that ecosystem to persist over time, and in order for that to happen, you need to be able to outlive the career of any one person, as talented as they may be, as iconic as they may be. And so, I think it's important to think of succession not merely as one event, but as a process, something that gets prepared for over time, and that goes through phases. And I wouldn't claim that we have any monopoly on the ability to do this, but we have been through it a few times and hopefully learned a thing or two. And it helps to start with a common culture and a shared language that people can rely on, even when maybe the people in the room change over time.

Katie Greifeld 49:42

Joanna, I'd love to ask you about the Ken Griffin succession plan, but I'm going to restrain myself here.

Joanna Welsh 49:48

Well, at Citadel, we have co-CIOs.

Katie Greifeld 49:51

Yeah.

Joanna Welsh 49:52

So we have, obviously, Ken as the founder. He is tremendously involved and engaged in every aspect of the business, minutely so in some cases. But we do have a co-CIO, Pablo Salame. It's amazing for me because I get to work with two amazing people, three if you count the CEO of Citadel Securities. But I think between the two individuals on the hedge fund side and the CEO on Citadel Securities, this is something which still has a long way to run.

Katie Greifeld 50:28

Mm-hmm. Well, in the eight minutes and 40 seconds we have left, let's talk more directly about AI, because we have been dancing around it for the better part of an hour. And, you know, a lot of the conversations I've been having this week, but also really for the past year is, “How are you integrating AI?” And that's a question that cuts across industries, across firms. What does that integration process look like? And how is it actually paying off, if at all? And hopefully there is an "at all" there. And Philip, I'd love to start with you there about how you're approaching it at CFM. Is it mostly a productivity conversation?

Has it made its way into investments? How's it going?

Philip Seager 51:12

Yeah, I mean, it's obviously a big subject. When you say AI as well, it means so many things to so many people. I mean, if we just take a step back a bit, I think most recently, AI is like this agentic framework that's emerged, and we've put a lot of effort into having that sort of lift our research process. So, that's been quite a big thing. You know, Claude Code, et cetera. Others are available. But you can do some quite fantastic things with such technology. So, we're definitely big users of such technology. We are using AI and machine learning. What I would say the sort of difference, what's changed is the advent of nonlinear effects. We are still very big users of linear regression. Now we can actually do some deep learning. It depends on the environment. You're looking for an environment with a very high signal-to-noise ratio. So, we've been doing deep learning to build predictors for a long time, to build our execution algorithms, because there you can get very high levels of predictability over a very short timeframe, and that helps you to execute. Whereas if you look at the other end of the spectrum, to use such techniques for very long-term macro strategies, it doesn't make a lot of sense. But it is a space where we have many initiatives in-house. We're investing a lot in that space. So, yeah, it's really permeating through the firm.

Katie Greifeld 53:16

In some ways, it echoes the talent war conversation, in that it's not new. When you think about machine learning, for example, that's been around for decades. But perhaps there's some rebranding going on. Perhaps there's some truly new technologies. But Jon, in the position that you hold at Delta, how relevant is AI to your life? How are you using it?

Jonathan Glidden 53:43

Oh, I'm going to do a slightly different question here. It's definitely changing the due diligence that we have to do on managers, and my take, and hopefully this doesn't look too silly 10 years from now. On the top-down, I don't think AI is going to change a lot. On the bottom-up, I think AI changes an awful lot. So, what do I mean by that? I think there's going to continue to be successful fundamental managers in the future. I think there's going to continue to be successful quantitative managers in the future. I don't think the cumulative alpha on offer is going to be reduced by AI. I think manager success ratios, batting average hit ratios, I think all of that kind of stays about the same. But when you look on bottom-up, it's going to change the winners of those fundamental managers, and it's going to change the winners within the quantitative managers. So, I've got a lot to learn on my own kind of AI journey, but really understanding how managers are integrating it into their process. You know, what kind of data are we talking about? Talk about how you're training the data. How do you come up with kind of the nodal weightings? How are you thinking about inference? And I also don't think that the fundamental law of active management changes, right? You've got information coefficient, square root of breadth, and transaction costs, right? If AI is used well by the managers, they're going to have a high information coefficient, right? Their models are going to

have a significant amount of explanatory power, and I think that the successful managers are going to have to figure out how to use AI successfully.

Katie Greifeld 55:19

Mm-hmm. And Joanna, I was having this conversation with Jim Esposito of Citadel Securities yesterday, and 24 hours later, we're sitting together, and I wonder, you know, how it looks from the perch you hold over at Citadel proper. The conversation around AI, what use cases are there, tangible use cases for you at this point?

Joanna Welsh 55:43

So, I would go back to what Philip said. I think he put it really elegantly. The use of this technology in Citadel, look, we make these tools available to people as multipliers of what they're doing. But, you know, the onus is on them to use it safely and efficiently, and the multiplication effect will vary meaningfully by user. Okay? So, it really goes back to the talent question. If you are one of our most talented researchers either working on Citadel Securities or in Citadel, and there's 10 things you want to work on, and you're going to work through them sequentially, and you're writing the code and doing all of that work. Now it's the case, I spoke to one of our researchers, they said, "I haven't written any code for several months." But now, they have a different type of thing to optimize to, which is the number of things being presented to them that they have to filter, perform quality control, and say, "Of all of the things, this is the one I'm going to go after." And that is still, in our world at the moment, it's a uniquely human endeavor. And whether it is lots of things in finance are demonstrating concentration, nonlinearity, exponential type of processes, and the interaction of these very powerful tools with your very best people is one of them. We're not in the business of using this to make one standard deviation people do more things. That's not really the value proposition for us.

Katie Greifeld 57:23

And Eddie, I'm really curious to hear your perspective on this because it's not just how AI is being used; it's also how you integrate it into the culture of a firm. And I wonder what that process looks like over at D. E. Shaw.

Eddie Fishman 57:38

It's massive. I'm not saying it's, you know, embedding an AI agent in a teddy bear—the way will.i.am mentioned before.

Katie Greifeld 57:47

Did you see that interview?

Eddie Fishman 57:48

I did. It's a good idea.

Katie Greifeld 57:50

I was trying to keep up.

Eddie Fishman 57:51

I think I'm going to have to borrow that.

Katie Greifeld 57:52

Yeah.

Eddie Fishman 57:52

That's a tough one to keep up with. But for us, it's massive. As you said, in some ways, there's nothing new under the sun. We've been doing machine learning in quantitative research and trading for a long time. But there are many advances, theoretical advances, advances in compute, the availability of third-party tools in the ecosystem, what the market can offer you. And so it's massive. It affects systematic research and trading, discretionary research and trading throughout the value chain. Every aspect of the way we run our business and regulatory compliance, and tax, and HR and so forth, the way we communicate, use spreadsheets, messaging platforms, word processing, and so forth, and of course, software engineering. So, there's really no one single approach. It's massive. You have multiple technology teams, business transformation teams, and you try to encourage people to dedicate the time to experiment, to communicate what they learn. And you try to create a permission structure where people don't feel like they have to do their normal work, and then on top of that, dedicate time to AI. Try to carve out time for them to take up the tools. And it's an honor and a privilege to be participating in this moment in technological history in a place like D. E. Shaw, where you have so many people who know so many aspects of what's relevant to the technologies these days.

Katie Greifeld 59:19

The audience can't see this, but there's a big red sign telling me to please wrap up, which I absolutely love. Guys, great conversation. We covered a lot of ground. I really appreciate your time.

Katie Greifeld 59:31

Thank you all.

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