

Jason Buck Talks Shop with Benn Eifert on the Mutiny Podcast.

SUMMARY KEYWORDS

vix, market, trade, risk, volatility, big, buy, position, hedge, strategy, banks, s&p, dislocations, liquidity, structure, index, hedging, moving, portfolio, basis

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Taylor Pearson

In this episode, we talked with Ben Eifret, managing member and CIO of qvr, the co founder and Portfolio Manager of Mariner Korea in New York. And then before that, the Wells Fargo proprietary trading desk, which became overland advisors. He holds a PhD in economics from UC Berkeley. This was a really fun episode. You know, we **talked started off talking about the history of the derivatives market and the impact of Dodd Frank legislation** on the nervous market. **Why some derivatives buyers and sellers are price insensitive** and the opportunities that can create and then we really started to get into the weeds on three different trading strategies using the VIX dispersion trading. And of course, everyone's favorite topic, European dividend futures are beyond the details underlying all of this was Ben's unique and interesting way of looking at markets. So I hope you enjoyed this conversation as much as I did.

BG & Change in the market structure from the POV of Ben's career

Taylor_Pearson

So can you be involved in this market for quite a while it may be started be interesting to kind of have a history of this market to serve your loans for you. Give us some background of some people involved in the market change over that time?

Ben Eifert 02:44

Sure, absolutely. So my background, I'm an old emerging markets macro economist. Originally, I worked for the World Bank for a while I have a PhD from Berkeley. My first real job in finance and derivatives was on the Wells Fargo prop desk. Which isn't, you know, the most famous of of Prop desks. So they do the Goldman guys in the Morgan guys definitely has one up done on probably on brains too, but certainly on on PR.

But the key thing about wells back in those days, you know, we went through the credit crisis and a lot of the big banks in the world were under a lot of pressure from subprime and from, you know, synthetic credit derivatives and everything. And Wells Fargo's a very conservative backwards bank that had almost no exposure to any of the nasty creditor parts of the credit derivative universe at the time. So wells prop actually was in a very strong position. And we had a ton of support from the bank and a huge balance sheet to work with. So we were, you know, very aggressive and very large part of the market at the time, when a lot of the other prop desks were getting downsized some positions, were getting liquidated and everything you know, and we were heavily involved in convertible bond arbitrage and capital structure arbitrage and derivatives trading, you know, multi asset class, special situations, the whole the whole gamut. The we had an active center hedging book where we, you know, depending on what was going on in the world, I mean, we would use, currency volatility, commodity volatility, you know, interest rate volatility, all types of cross asset class structures to customize, you know, the exposures in the book and to overlay overlay, hedge risk exposure and so forth.

And I got involved in a lot of that kind of stuff. And then really, you know, we hired a guy named after after the after the desk spun out of Wells Fargo into a hedge fund called overland advisors. A little later, we hired a senior guy named **john Laughlin**, who would later become my partner but who had started and run the Blue Mountain equity alternatives fund and they were really the original pioneer of absolute return derivatives trading on the buy side in the world. There was a you know, a great formed, dating back to 04 05 (2004-2005) that had been involved in all kinds of things. Anyway, john had been had started that. And john

really became my mentor in the derivatives markets where, you know, he and I got along really well, I had I was, I had quants and ran the quantum team on the on the walls prop desk, I hired a replacement to run the quantum team and I went to work for John as his sidekick. And, you know, we hired a few traders and we kind of rebuilt a lot of what he had had done previously with a new angle and combining a lot of the stuff that I had been doing. And built a derivatives portfolio and derivatives trading efforts there at what was then called Overland Advisors. And, you know, John was a really really smart guy and a pioneer in the space and you know, taught me a time of you know, what I what I know now. But we we had with a few years later, we had had a lot of success. And we had left to start a fund together on the Mariner Investment Group platform called Mariner Korea, based out of New York, which John and I did for, for about three years, John did it a little bit longer. I was commuting out to New York at the time, every week back and forth from San Francisco. And when I had had kids that kind of had to shut down.

So I ended up coming back out here and starting starting QVR where we are now but I mean, to your point about, you know, thinking about the evolution of the derivatives markets over that, really over that window of time, you know, there have been a lot of very dramatic changes. I mean, back in **the pre crisis**, and through the credit crisis, and even the first year, a few years after that. The derivatives markets still had very active risk taking participants in the forms of the big banks, the big banks had a lot of risk tolerance, they were very actively involved in position taking and risk taking on their own and warehousing inventory. There were a lot of banks involved, and banks would facilitate, you know, pretty aggressive trading from relative value hedge funds, you know, a dozen banks would show up to make a tight market and big size, and almost anything that you wanted to trade. You know, there's a two way market and everything and big size, and, you know, the amount of risk being, you know, on bank balance sheets was quite large. That really, I think people think of the crisis as the catalyst for that starting to decline, that wasn't actually really true of him, thanks for taking an unbelievable amount of risk all the way through the crisis at the height of the crisis. And you know, for the first few years after, it was really, when **Dodd Frank** started the when the rules really started to be implemented into bind, starting closer to 2013, and 2014, where, you know, you started to have very tight stress test oversight on banks across, you know, very detailed stress tests, drilling way down into, you know, every sub portfolio in the bank, where you started to have, you know, **capital requirements tightened dramatically intraday liquidity coverage ratios, and all of the whole kind of array of post credit crisis reforms where, you know, regulators really looked at those big banks and thought about 2008 and, and said, this was a systemic banking crisis that happened because banks were taking crazy risks and derivatives markets, and we just want them to stop, right?** Because, you know, banks should be more like public utilities that, you know, there's huge negative externalities when banks are blowing themselves up on the rest of the economy. You know, and there's, there's certainly a lot of a lot of truth to that. Right. But I think they, to some extent, **the unintended consequences**, you know, which people were pointing out at the time, it certainly wasn't a secret, but was that that led to much less intermediation happening in markets in general, right, because really, the primary dealers are the, you know, the biggest source of ability to intermediate markets to take risks to warehouse inventory, when sellers show up in there, you know, there aren't a lot of buyers there immediately, you know, how to facilitate transmission and risk sharing and so forth. And so, you know, derivatives markets started to work much more, you know, to gravitate more to an agency only type of basis. I mean, that's an extreme view, but, you know, where, where hedge funds certainly couldn't show up and quote, the kinds of trade you know, trades that they used to and the kind of risk levels that they used to and get the pricing that they used to that I think caused you the space the overall space on the buy side of relative

value derivatives, trading firms to you know, to face a lot of issues that was a difficult transition for a lot of people to make, I think you saw returns in the space start to suffer after after 2013 2014. But at the same time, there was dramatic growth in some parts of the derivatives market, you know, driven by end users, but much more on exchanges right. So risk was migrating away from OTC exotic types of you know, trading by hedge funds into you know, equity index and you ETF option trading on exchanges were no bra, you started to see broader and broader participation in option markets, you know, by pension funds or fundamental equity managers for hedging or for customizing different exposures that they might want hedging out sector risk, overweight, you know, moving quickly to overweight or underweight.

You know, at the macro level, you started to see more recently, heavy growth of single name option trading among retail investors. And so if you look back over the last 10 years, you've had actually very spectacular growth in in liquidity and volumes on exchange in more vanilla securities, while you've at the same time had this kind of big fall off in in more of the exotic risk businesses and you know, those still exist, and there are there's risk recycling out of banks. And, you know, you saw a lot of blow ups in March related to that, but the fundamental nature of the of where the volume is, and I think where the opportunity is in the market has changed a lot over that time period. So, you know, where 10 years ago, we would have been trading 90% OTC securities, tons of volatility swaps and variance swaps and dividend swaps and correlation swaps. These days, we trade primarily on exchanges using a lot of technology to drive the ability to participate in volumes on exchange where we might run the same kinds of strategies and think about the world the same way. Understand from a systematic perspective, what risk exposures that we want, where we want to be short, where we want to be long where the dislocations are, but actually express those trades and the management of those trades, in terms of, you know, working into and out of a bunch of option positions liquidly on the on the exchange, as opposed to according banks on complex OTC structures¹.

Jason Buck 11:48

I think it's kind of analogous to when floor trading went away, and we went to, you know, to electronic trading and like you lost some, you may, you actually quoted that when you're with the banks, they were able to put pretty tight spreads my understanding, correct me if I'm wrong was like, the spreads may have been wider, you know, pre GFC, but we had more liquidity, you know, because he had the big banks balance sheets behind them. And now we might have tighter spreads. But you know, if the market makers withdraw those spreads, right at the most inopportune times, it's like, like you said, the perverse unintended consequences, but I'm wondering how you see the trade offs between both of them, you know, there's, there's pros and cons to before GFC with the banks, and then there's pros and cons now do have an even though it's liquid markets, you might still have more, you know, dealers or market makers affecting, you know, the movements of the markets.

Comment on changes in liquidity

Ben Eifert 12:32

Yeah, I think that's right. I mean, I think to some extent, the issues are that, you know, spreads tend to be tighter, certainly significantly tighter than like pre electronic markets, days, right? much tighter. liquidity tends to be more fragmented, and there are very large volumes in the markets. But if you show up into the

¹ Basically ETF products are cheap and easy to implement some strategies for big funds.

market with a very large order that you're trying to get done over a very short period of time, you might actually end up having more price impact than you would have earlier.

Right. So liquidity certainly is not just, you know, how big is the bid offer on the inside the for lot, but sitting on the inside market? It's, you know, depending on who you are, and what you need to get done. It's, you know, can you move big size over some, you know, moderate, moderately short period of time? And how much do you move markets in doing so. And I think that certainly in, in this environment, **I mean, our view is that, from that perspective, the ability to move large size over a very short period of time as a price taker is is much worse than it used to be.** I think we we very much try to never be in that position where we're having to needing to go execute a large trade over a short period of time as a forced buyer or forced seller, because it puts you in a very bad position. You know, these days where, you know, the if you're going if you're if you're trying to quote banks, just the markets are very wide for the you know, for the size, and if you're trying to work a very large order, very quickly, you know, on electronic markets, taking liquidity, market makers are going to very quickly understand what's happening, and very quickly widen those markets and scale those markets against you.

Jason Buck 14:08

It's interesting, we've had this ongoing discussion of, you know, like, is the liquidity less or is it, you know, algorithmic order execution that's happening, iceberg orders, etc. But you're saying in practically well, depending on if you're a taker, and depending on how badly you need to get out of that trade? That's, that's where you're finding the illiquidity.

Ben Eifert 14:25

Yeah, I mean, I think for for us, right, but what it means is, you what you want to avoid doing is being in a position where you feel like you need to execute a very large order over a very short period of time, right. And I think if you think about your objectives correctly, there's not that many circumstances or types of investors or situations they should be on where they actually need to, right? Very little, very few investors actually have views that are have very strong signals over the next five minutes. 10 minutes, half an hour, one Day, right? If you're an asset owner, and you're like, Okay, we want to, we want to move from neutral, you know, from from neutral energy to over 10%, overweight energy. You know, do you need to do that over half an hour? Do you need to do that over an hour? Can you do that over five days, generally speaking, price impact on intelligently structured algorithmic execution programs is pretty low. So like we work into and out of positions that we want to, you know, being best bid in the market for everything we want to buy and being best offer in the market for everything that we want to sell. And we have good systems around doing that. And, and generally speaking, you know, we don't incur any transaction costs trading that way. Man, you know, there's not they're obviously, you know, different different investors have different mandates and different needs. Right. But I think part of it is just a mentality shift, right? It's, you have a trade to put on? How do you think about the alpha from putting that trade off? Right, you know, the alpha from that paying transaction costs on that on that? And how should you be implementing that trade, spending a lot of time thinking about what your execution setup is, and being patient and being passive in your execution? Right, I think we see very large value in that.

Jason Buck 16:07

It's interesting to think about, though, like, as, as you think every every business on the planet now is in the digital age, and then the, you know, work from home, etc, is like, you're using fewer and fewer employees to do more and more things. So like, if you think about the pre GFC, the banks and all their different separate divisions, you guys are having to do that in house, very few employees, you've got to get very good at coding your execution algorithms, you know, things that it probably would have been dispersed across different segments of the bank previously. Yeah, I

Ben Eifert 16:34

mean, I think it takes a technical an emphasis on technology and your business. Right? And, you know, you don't, generally speaking, you know, if you're just trying to execute and, you know, a large equity order over time without too much price impact. You know, you can you don't need to start from scratch of like, how would I coded a low latency DMA algorithm? or whatever, right? I mean, you can, there are good businesses, technology businesses out there that you know, provide the core platform that you can kind of customize to your needs. But it doesn't mean you have to actually think about the problem that way and not just think it's an afterthought, how do I execute trades, here's the, you know, \$500 million of stock that I need to buy. So I'm just going to kind of send that to my outsource trader, a Jones, who's just going to kind of lift the market for that and make his his Niccolo commission or whatever not to pick on Jones. They're great.

Building QVR form the bottom up

Jason Buck 17:26

So let's go back, like you just you just spoke about how the markets have changed. And now we're, you know, all these, you know, cash settled futures and options markets. So tell us about like, the more about the impetus for starting QVR, and what your overall theme was with establishing QVR?

Taylor Pearson 17:40

Yeah, absolutely.

Ben Eifert 17:41

You know, we saw, I think, at Marin or Korea, which we were running, which we started, just as all of the changes in the liquidity environment, and, you know, bank regulations really, were starting to bind. And our, you know, certainly one of my takeaways from that experience was, you know, it was getting harder and harder to do business, the way that we always have running our strategies, the way that we had trading primarily OTC trading primarily, with banks trying to come banks out and get into the rest of the we wanted, right, there were fewer guys would make a few fewer traders who would would make the markets they'd be twice as wide or four times as wide for a quarter of the size. And it was just harder to get risk on harder to get, you know, trades on at a good price.

So really, when we were building QVR, what we wanted to do, was to really mitigate that problem. And, and still, you know, talk to banks and share ideas with banks, and you know, get color from banks and trade with banks, if there was a great x that we really wanted, but to primarily focus our, our restructure our strategies around just participating directly in exchange volume, and, you know, having the technology to do that, and the portfolio management infrastructure to do that. So it's a fairly heavy lift, it's, you know, it was something we were, we're able to do, and it's obviously a continuous improvement process, but it's

something we were able to do, because we were building the firm from scratch. And, you know, we could sit down and say, Okay, what do we need from day one? How are we going to configure this, as opposed to, you know, trying to troubleshoot when you have a big portfolio and you're trying to manage risk every day, and you're, you're already spending a lot of time on just, you know, keeping things moving?

So, you know, that was really what we what we wanted to achieve. And, you know, the other thing that, you know, that we tried to do was, take some of the complexity back, you know, back down from what we had done historically, where a lot of the portfolio's that we had run historically, might have had 50 sub strategy line items, and, you know, been that, to some extent, culturally felt a little bit like, you know, investors will look at the portfolios and just think this is really complicated, and I kind of just have to trust that you guys are really good. And, you know, there's some there's something to be said for trust, of course, but I think that there's a lot of value, especially these days, the way that you know, institutional asset owners. Think about that. They're, you know, think about their businesses, they really want to understand what you're doing and how it fits into their portfolio, how they can expect the different things that you're doing to behave in different environments and how they might complement or you know, anti complement things that they're that they're already doing. And so, you know, we really opted to start with a QvR with our highest conviction, much smaller subset of strategy themes that we thought make a lot of sense in this environment.

And then to, you know, very slowly build that out with, you know, with new research efforts where, where it made sense, rather than running a very, very diversified portfolio across a lot of different, you know, smaller opportunities. It's part of that the idea of like, simplicity is the ultimate sophistication, you know, might look cool to put on 50 exotic trades. But if you can do it in the cash settled liquid markets, and in a much more efficient trade, that's actually a better implementation, it's kind of taking your ego out of it, or how do you think about it? I think it's simplicity, you should always do everything and as maximally simple as a way overweight that you can that kind of meets the types of objectives and needs that you have, right.

So you know, there are times when you know, there are good, the good things about a volatility swap, for example, is that you just, you know, if you have a clear, let's say, relative value, you know, view, you just buy this volatility at 20. And if it realizes, 21, you make \$1. And that's all and that's really that, that has a nice simplicity to it, at first, but like, what if it's a single name, voll swap, and then it actually comes with a cap, and then in a month, it's an aged voll swap with an age double swap cap, which is actually like a really weird, exotic thing. And if you want to unwind that, and assign it, you know, to another bank, you have to like get somebody to price this Bizarro thing and argue over the cash flows and stuff. versus if you're trading listed options, you what the complexity is around the portfolio management aspects of it. So the path dependence of listed options, right, the fact that, you know, you're rallying away from strikes, and therefore the risk is risk dynamics of your portfolio is changing, you have to be able to manage that. But the products are very simple, very liquid, you can, you know, if you if you don't like your portfolio, you can just take the whole dang thing off in a, you know, a day or two, which with a large copier, OTC portfolio, it's just a different world. Right? So there's a lot of advantages ²to, you know, to that. So going back when you blank sheet of paper, you're building QVR, what do you decide? What are the core pieces of the portfolio that you wanted to build around?

Yeah, you know, the core pieces of the portfolio that we really started with, were all, you know, things that we had been doing for a long time in one form or another. And in some of them that had to be reimaged a little bit for for the current environment or for the current implementation in tech strike. But I mean, the,

² Good point and something to consider if you are a capital allocator. It's a pretty interesting advantage a new fund has over an old fund.

the investment process that we that we run, and the the thought process behind it has always really been the same. And that's, you know, thinking about an understanding how dislocations arise in the derivatives market, typically driven by, you know, market by the the marginal market participants, or the dominant market participant in derivatives markets, who is an end user of derivatives, who isn't some sophisticated arbitrage or is just a pension fund trying to do some risk hedging, or a retail investor trying to buy a structured note, right? The derivatives markets are a little bit different than, you know, long short equity, for example, where in long short equity, you're trying to be the guy who's smarter than the other guy and buys the right stocks, and, you know, shorts, the bad stocks, and you know, it's kind of a zero sum game, like, I got it, right, you got it wrong, right. **Whereas in derivatives markets, really these markets exist because of end users of derivatives. And in some sense, the the all the market impact and transaction costs at the end users of derivatives are incurring, as you know, in exchange for doing what they need to do that sort of becomes a pool of alpha for for relative value managers, right.**

And so our strategies are really organized around understanding some of those types of thematic dislocations in specific markets and specific trading relationships. And then, you know, building a set of quantitative research around those understanding their properties. How do you know if there's a big dislocation or not, what are the signals you'd look at? How do you understand the expected returns and and the risk properties of that? And so, you know, some of the areas that we focused on early with with QVR, for example, you know, a strategy focused around identifying dislocations and In short, dated VIX futures, right?

the VIX complex is a huge and highly liquid and very heavily trafficked area where most of the big transactions in the VIX market are not sort of sophisticated arbitrage errs right it's it's huge real money investors using VIX calls or VIX call spreads to do some portfolio hedging overlays, or, you know, huge hedge funds, putting on directional views on volatility just buying a bunch of you know, puts or put spreads or something an index and it's really those directional flows in the option That drive the drive the VIX term structure. And, you know, the futures in the shape of the futures term structure is more of a reflection of that, you know, and used for, for delta hedging options than anything else. And so, you know, we run and have run for a long time, you know, strategy that's systematically oriented around understanding how to, you know, **when something's wrong at the short end of the VIX term structure when it's way too expensive and way too cheap.** And then how do you take a position there and then neutralize the market beta of that position in some other markets, so that you have, you know, hedges trades that aren't going aren't making or losing money based on whether the markets going up or down, but are really identifying and exploiting those dislocations? That's an example.

Why are some buyers price insensitive?

Taylor Pearson 25:45

Yes, I've heard you use the phrase like price insensitive, and usually derivatives you mentioned for like structure products or pension funds, as everybody can unpack that. Could you hear that? **So why would someone be price insensitive?** That doesn't make sense, but I see people have different jobs and construction. So he added a couple examples or just I used to think of that.

Ben Eifert 26:06

Sure. Yeah, absolutely. So you know, you think in in the VIX market, for example, the **biggest player in in the VIX market for the last many years, is a large UK asset manager that people refer to as 50 cent.** Right? And,

you know, they're, they're smart guys, but their job, they run mutual funds, they run equity, long, only mutual funds, right. And they did some work. And they decided that they like, they like hedging, systematically In short, dated VIX calls, right? So they just buy the front month fix calls, and they buy whatever from the VIX call trades roughly around 50 cents of premium, which is why the nickname is 50 cents, right? And it's not that they wouldn't like to pay a lower price or that they don't look and see what strike they're buying or whatever. But like, what they do is they just have a simple systematic rule of thumb strategy where they're long this you know, they they go by every month, some new four month, six calls made by the ones that are around 50 cents. And if those are the 23 strike, or 26 strike, or whatever, what's the shape of the term structure or what exactly is like the vol of vol, they don't care about that stuff? Right? They're humongous, they have to buy, you know, they have to buy, you know, more VIX calls than God to kind of do their do their heads, right. So like they can't they can't be picky about this stuff.

Jason Buck 27:18

And part of that, too, is when you think about in our space as well, you have risk transfer services, right? If you're a large Canadian pension or a superannuation fund, and the consultants have been telling you for years, this is you should be selling volatility and here's a back test. And then they start coming in at large size and they're systematically selling volatility. It's a lot of times you have non economic hedgers none, not even just price insensitive, but hedgers who may have a non economic purpose because their book is really \$200 billion. And so you're looking at those flows as well, right?

Ben Eifert 27:50

Yeah, no, that's absolutely right. And that's a great example, right, where, you know, call over, right, and cash secured, put, sell strategies are very popular among really large institutions that are very slow moving, it took them, you know, four or five years of consultant presentations and research and everything for them to kind of get organized to put on those programs. They generally don't have, you know, sophisticated analysis of the decomposition of the performance of those strategies. And how much risk premium Are they really capturing, right? A typical traditional call over rate program, on a day to day basis is going to be dominated by the Delta, right? Because you're, you're still you're long stocks, and you're selling, you're selling some options. And you know, it, there's no and so you'll hear more academically minded people say things like, Well, I mean, but, you know, people aren't dumb, like they wouldn't if it wasn't a good trade, they wouldn't do it. If there wasn't a risk premium. They wouldn't sell it. But like, how do they know if it's a risk premium? They look at a 30 year back test, right? And when do they update that view? 10 years later, when it's a 40 year back test, right? And it's not, it's just a realistic property of the world. So there so every Friday, or every every expiration, couple days before expiration, they come and they do they roll all these puts, and they sell a bunch of new ones. And that's just what they do. Right.

Structured Products from Europe ³and Asia

Jason Buck 29:06

³ Very popular with pension fund products. Example Tak 23 insurance linked products in Belgium. Very popular because there is a tax incentive attached to it in the form of tax deduction. People that own these usually only care about the tax reduction part. Returns have been horrible because a large part of these funds has to be in negative yielding EU bonds. The reason people buy this is to "save for their pension" and get the tax reduction.

And so we talked about price insensitive or like non economic hedgers, what phrase would you use for agent structure products? And can you kind of tell a little bit about what **agent structure products are?**

Ben Eifert 29:16

Sure. Yeah, absolutely. I mean, so, in the US we have this this culture of retail investors owning stocks and you know, picking stocks and having IRAs where they you know, buy ETFs or stocks. That's somewhat idiosyncratically American, **in a lot of European and Asian countries, you have much less of a culture of stock ownership, a lot of Asian countries, barring Japan much less developed to like local equity markets in the first place**⁴. Right. So you know, there's not really stocks to buy, what you have had over, you know, develop over the last 20 or 30 years. Among other things are very big market, local local markets in structured products that are, you know, notes that have different kinds of payoffs linked to different global equity indices or basket So of equities, and particularly in the last 15 years, since the earth, you know, 13 years since the great financial crisis, we've been living in a zero interest rates world, right? So a lot of those products have really focused on, you know, generating yield, right. So the typical product that a retail investor might buy, you know, would be a three year note or a five year note, and it would have a 7% annual coupon, which sounds awesome, right? Because like, what the heck can you do to get a 7% yield. But the trick is, the way you get it is, you know, you get it unless or until any one of five different big global indices was to go down 35% from initial level, and if that happens, you're just hosed. And you lose 35%. And the milk terminates in your gut, right? So those kind of products are pure play selling of long term crash risk, in exchange for yield. And, you know, these are typically super complicated products from like a derivative pricing perspective, like, you know, way, way more complicated than volatility swaps and variance swaps, because you're talking about, it's like, there's a basket of underlyings. And it's gonna knock out if the worst thing in the basket is down a bunch. But also, by the way, it can be called back, if it's up 10%, after a year, and whatever. So there are these extraordinarily complex notes about obviously, I mean, you know, I would have to do a ton of work to like, feel like I had done a good job evaluating and pricing, and I still wouldn't really know and like the people who are buying them obviously have no idea, right? So how are you supposed to be price sensitive to like, is the is the skew of kurtosis pricing in this note? Correct? You have no idea, right? You just these, you know, they look at kind of, alright, I got a 7% coupon and like, I don't know, 40% down, that sounds pretty good. Right? So that but that, though, that trading, right? The banks go out and hedge those trades, because banks aren't just owning the other side of the payoff, when they issue those securities, right? banks immediately are gonna go out and sell that downside crash risk out in a basket of indices to, you know, to hedge the other side. And so it creates these large impacts on derivatives markets, because these investors are coming in and effectively doing that trade. And then the question is, you know, how is it priced and where should it be priced? And that's certainly not a question that the investor is buying those notes are really thinking about⁵.

Managing the Gap Risk

Jason Buck 32:19

⁴ Westons view of the Japanese Retailer.
for more info on these products google the oddlots episode on the Korean Lizzard called "Here's What's Happening With Those Korean Structured Notes That Bet Against Market Volatility" also Ben Eifert Commenting

⁵ I can confirm this for Belgian Buyer of Tak 23 products.

So going back to the, you know, you started with one of your core strategies being the hedge volatility, a lot of times you call like a intermarket spread between SMP and VIX. You know, we have some managers that look at that, especially just implementing that in the futures and like a short, short or long, long trade, but I think you guys look at it a little differently. And sometimes you're using the, you know, the up and up basket of options or strips to maybe replicate, you know, that SNP or VIX futures position. Can you talk a little bit about how your intra market spreads a little bit different?

Ben Eifert 32:46

Sure. I mean, we're in many situations, we're happy to just use the futures but, you know, the options give you the ability to customize the payoff somewhat, right. So, you know, a classic example would be, you know, you can imagine a quiet but high risk premium market environment where the VIX term structure is really, really steep. There's a very large amount of carry available being kind of short, the VIX term structure in the front, you know, but but things are quiet and vol is pretty low, and there's potentially outsized, you know, **gap risk**, where if something just totally crazy comes out of the blue and happens and whatever the s&p is down 10% like that VIX future could move you know, massively and really outperform, you know, the beta hedge. So we'll certainly think about things like that and say, **Well, in that kind of a scenario, do you want to own your you know, your VIX downside risk, you know, express the short vol view inputs or put spreads where you have limited loss and you know, how much you're risking, and then, and then have the short futures position against it in the s&p.** You know, on **the long side**, on the long side, usually you're not as worried about, you know, the kind of the big negative asymmetry usually a long VIX futures position, of course, you can lose money, but it's usually more of a positively symmetric, you know, payoff profile in terms of, you know, returns over a short period of time. So, you might just hold, you know, hold the long long position in futures versus futures.⁶

Jason Buck 34:07

Okay, there sorry, did you have a question about that, like short short trade historically, or?

Taylor Pearson 34:12

No, I was gonna ask you to unpack but check out summarizing, thinking. short, short, typically, you're going short, s&p short VIX futures, because we can move relative value trades together or long s&p long VIX futures. And so just to clarify,

Ben Eifert 34:32

yeah, and the reason that's, you know, short, short and long long, obviously, unlike if you had you know, two stocks presumably belong one In short, the other one, but there's a strong inverse relationship, of course, between implied volatility and equities, right, if equities are falling fast, you know, you better believe the VIX is probably going up and vice versa.

Taylor Pearson 34:50

I'm thinking about, you know, trading strategies come in and out of Vogue, right, depending on what markets were in and part of that short, short trade, some people thought it was starting to break down in 18 to 19.

⁶ Sounded so complicated. Even after reading it. Don't try this at home I guess.

And then just did incredible. Well, in March, I'm curious how you think about that, as far as what's a, an opportune market environment? And, you know, are you toggling? You know, based on what you view the market, you know, target rich opportunities are whether your short, short, long, long or?

Ben Explains his Dynamic Strategy, when he plays what

Ben Eifert 35:13

Yeah, I mean that. So that strategy, like all of our strategies for us, right. Much of the time, we have no position because there's no particular dislocation in that market. And there's nothing interesting to do. It's it's not the kind of strategy where, you know, we have, **we don't believe in general and derivatives markets that there's ever a trade you should just have on all the time, right**⁷. The world changes over time. And certainly, and that usually dislocations in you know, large dislocations in the front end of the VIX curve, you know, are pretty regime specific. Usually on the long, long side, usually, that VIX future only gets way too cheap on a dislocated basis, you know, for brief periods of time, you know, might be days or weeks or something, but usually not for, you know, months and months on end. You know, very way too expensive. VIX futures sometimes can last a little bit longer, you can have, you know, runs of months, because there's just been huge inflows, from retail into Dixie tea exchange traded products, for example, like VX x. So back in 2012, you think of, you know, we had a regime for a good six, six plus months, where the VIX complex was incredibly expensive, because there just been huge inflows into from our areas and retail into T VIX and into VX x. But, you know, generally speaking, it's a very dynamic strategy, if there's a if there's a dislocation, we like to understand where it's coming from, and we'll put on, you know, some risk. If it's a smallish moderate sized dislocation, we'll put on a smallish moderate position, if it's a huge dislocation, we'll put on it. And we understand that we'll put on a big position. If there's no dislocation, we'll have no position. And so you know, generally speaking, all of our strategies work like that, where, you know, we're running, we have a suite of, you know, strategy themes where we understand that particular type of dislocation and how to identify whether it's there or not, and how big is it? And, you know, we'll be allocating risk across those different strategy themes in proportion to what the opportunity set is, at a given time, we might only have, you know, meaningful positions in two or three strategy themes out of seven or eight, for example,

The VIX Curve strategy / Calendar spread

Jason Buck 37:18

right. Another one of your core Vic strategies, you called VIX curve, sometimes, okay, like a calendar spread on the VIX term structure. Can you talk a little bit more about the VIX curve strategy?

Ben Eifert 37:28

Sure. So, you know, we run a term structure strategy, again, relatively systematic there, you know, we're looking for, you know, significant differences in relative value in the shorter end versus the longer end of the of the VIX term structure, you know, which you can get because of big inflows into, you know, short or long positions at the front end of the VIX curve, you know, so, you know, the, the front end getting very expensive in 2012 and 2016 with retail inflows and then getting really cheap in 2017, with with, you know, changes in, in theme of a lot of those retail flows to trying to short VIX and buy, you know, XIV and so forth. You know,

⁷ Sounds pretty Wise, don't just be passive in the dynamic market of derivatives products.

the longer end often will be, you know, more driven by there are etps out there, but they're smaller, like pick VFC for example, a lot of the longer end will be driven by hedging flows in the VIX options. So, you know, big asset managers periodically will come in and do very large trades in, you know, six month VIX calls or call spreads, tail funds will come in and lift upside calls, and push the back end of the VIX term structure around. And, you know, our whole modeling and thought process there is really you know, what, how do you assess the various quantitative factors that are highlighting two potential dislocations between the front and the back? And then how do you pick a hedge ratio? So, that's not a one to one, you know, Vega trade, right? Because the back end of the VIX term structure is less volatile than the front right? Typically, when the vol is moving short data involves moving the most longer data vols moving less, you have to kind of think carefully about how to hedge that kind of position.

Jason Buck 39:03

As you're putting those trades on, I'm sure that's part of your in house you know, algos, in the way you look at the markets is like, are you constantly adjusting those ratios? Like there's no set ratios? It's more about what the market is giving you and then you're thinking about how do I hedge those in a market neutral fashion, and those ratios are going to change over time?

Ben Eifert 39:18

So I would say, you know, hedge ratios usually don't change too much for us. I would say if it was. So the way you're thinking about the world really is you know a hedge ratio is really about risk reduction. So you want to say what is the kind of the market neutral trade package where tomorrow if the s&p is up a percent or down a percent, doesn't really tell me anything about whether my trade is going to make money or lose money. And generally speaking, you know, you'll certainly get, you know, shifts in market relationships over time and term structure dynamics, but usually, usually they're longer term shifts if you if you try to estimate some very high frequency hedge ratio, that's That's, you know, changing a lot, I'm very overly sensitive on recent data, it just tends to not do very well out of sample. So you'll be like, Oh, I gotta like cut my Hedge ratio. And then, but it was really just a short period of time and some random noise, right? So it tends to be that the positions that we'll have on will be very dynamic. But, you know, generally speaking, the way we construct those trades, and the hedge ratios don't tend to, you know, be highly, highly dynamic, at least over shorter periods of time.

Jason Buck 40:27

And when you think about that VIX curve, and you're seeing the front end of that curve being moved a lot by the etps, and retail buyers, you know, at some of these etps have cycled out of existence, are you just cheering for new etps to come back on the market? Like, are you just you're desperate for more flows into ETP grows? It's just more target rich environment?

Ben Eifert 40:45

Yeah, I mean, you know, certainly our strategies benefit from the existence of dislocations, right. And then I think we don't cheer for people to do dumb things in markets, you know, and then lose money by by any means, but, but certainly, you know, some of the great, some of the great opportunities in, in some of our VIX strategies historically have, you know, been associated with very large flip positions, and etps, both in 2012

and 2016, where ETP flows drove the VIX complex to be very expensive. And then again, you know, 2017 and early 2018, where they did the opposite, and, you know, drove that complex to be way too cheap.

The VIX Basis Trade

Jason Buck 41:23

And so rounding out, like these VIX core strategies, you know, we've seen before intra market spreads and calendar spreads. But what's very unique is your VIX basis trade. So can you kind of talk about the VIX basis trade and what that is and how you implement it?

Ben Eifert 41:35

Sure. So you know, we run? Well, if you think about what a VIX future is, you know, the VIX itself is the level effectively of a one month variance swap. That's kind of what the calculation does. And the VIX futures, give you a forward curve, in some sense market implied levels for the for the VIX in the future, right? Now, those things are all very closely related to, to the s&p volatility surface into s&p options. And you can, if you think pretty carefully about it, you know, you can measure the relative value in, in s&p options and volatility in the forward volatility over the same kind of maturity buckets and time range as the VIX futures. And you can look at how is that basis trading is how expensive or cheap are is the VIX complex to the s&p complex. And those are, again, two very closely related markets conceptually, but just from a, you know, fundamental markets point of view, they're two different markets with different sets of participants and different flows. And, you know, at a point in time in those different markets, right, I mean, 57 might be over here lifting tons of x calls, and, you know, pulling the front end of the term structure up index and flattening it, and Bridgewater, might be over here rolling their puts out from, you know, March to June, and, you know, steepening that part of the term structure. And, you know, these are just two big flows that are disconnected and idiosyncratic, and that'll be it, you know, widening that that basis relationship, right. And so that basis relationship is, you know, generally speaking, pretty well behaved, you know, what range that pricing lives in, you know, March certainly expanded view of the range that that pricing can live in, of course, when things are really crazy, market, you know, relationships break down and get really wide. But so we can, you know, we range trade that basis, very much the way that a fixed income arbitrage manager might range trade, you know, cash, synthetic basis relationships or something, right, where there's two closely related things that should trade within some range to each other, when they get really stretched, you want to put on a compression trade on that basis, and we're going to warehouse that, that basis risk. And really, it sort of, it just highlights, again, what, you know, the role of absolute return and relative value arbitrage managers isn't the space, right? I mean, at the end, you know, those big boys are the end users of derivatives, there are people doing stuff, you know, from their perspective they need to do to protect their portfolio. And, you know, but they're not thinking about or just can't think about, it's too, you know, they're too big, those relative pricing relationships. And so they create these dislocations when they come in and trade and big size and the market needs, you know, participants that can identify that and warehouse that basis risk and try to, you know, compress those those relationships back into place,

Vision fund Flows of march

Jason Buck 44:19

as part of that longer term flow would like to be the example of, you know, whether it's a whale of like a vision fund buying longer term equity replacement with calls and call spreads. Is that a good example of that?

44:30

Yeah, that's absolutely another example of that, you know, so no big, big, big buying flows in long dated Vega in the s&p. You know, that was obviously they weren't buying VIX products. They were buying SNP products. You know, there were other people buying VIX products at the same time, but all else equal that would tend to, you know, raise the price of s&p options Vega, you know, further out the curve, you know, relative to the VIX complex, for sure. And yeah, I mean, those flows in August, that was, you know, a very, very large end user who was very aggressive. In markets and was a new participant and was, you know, moving prices quite a lot, right? You know, that touches a little bit on, you know, our dispersion strategy, which is newer, a newer strategy for us. Because we, we didn't think it was interesting really, until March, then it got really interesting. And we spent a long time really building a great technology infrastructure to manage it. But you think of you know, **dispersion is really all about the relative pricing of index volatility, versus the components of the index and their volatility.** And, you know, when the vision fund was in buying huge size, and Microsoft and Google and Amazon and Netflix, it was raising the price of single name volatility very dramatically relative to index to levels that we hadn't seen in a very, very long time, and it got extremely stretched. And, you know, at that point, you know, the, the risk warehousing, you know, job of relative value arbitrage years was actually to get long correlation, right? Because the effectively implied correlation had fallen to extremely low levels, because index vol was extremely high relative to single bond volatility.

Jason Buck 46:03

Okay, well, and I want to put a pin in dispersion, we'll come back to it. But just thinking about all the big trades in the VIX trading sleeves, you know, part of those trades that you alluded to, is their relative value or stat Arbor pears trade. And, you know, as you as you allude to in March, those, those can kind of blow out on you more than you expected them to, or maybe historically they have is like, how do you think about managing that risk over an entire book?

Moar on Risk Management

Ben Eifert 46:23

Yeah, absolutely. So, you know, generally speaking, you know, our approach to risk. So first of all, you know, we're at on a strategy by strategy basis, we're trying to construct market neutral trades. But then we're very much thinking about, you know, the book together from a top down risk perspective. And, you know, running a bunch of extreme stress test scenarios across all kinds of risk factors, right, to make sure we understand how we think the book, as a whole might behave in different environments. Now, the first, you know, the first and foremost thing, I think that, you know, you got to do, in when you run a portfolio like this, **to to make sure you'll survive really extreme periods.** It's not to, like have the, you know, we think we have great risk models, it's not to have like, the slightly better, you know, risks, stochastic volatility model that tells you exactly the right way that these things are going to behave relative to each other, because you have no idea. Right? When March happens, like, you know, even if you kind of had some inkling of how bad things could get, you had no idea of like, exactly what path it was gonna take exactly how different things were gonna move, right? **So what you what you want to make sure is that one way or another, you have some type, you know, enough convexity in some dimension in the book that if things get, you know, really crazy that you're**

gonna have sources of strength, that can offset, you know, any other potential sources of weakness that, you know, you didn't see coming, right. So that's, that's certainly one thing, right⁸?

And if you run, you know, **stress tests**, where the s&p goes down 20% in a day, you know, or week or whatever, oh, with a bunch of different assumptions about what happens to the volatility surface, you'll suss out, you know, do I really have big holes of like, if things go bad, go sideways, you know, go upside down the wrong way, like, Am I gonna get smoked? Right? So that's, that's one important thing. You know, another important thing is really to understand positioning and you know, the behavior of market participants kind of in the regime that you're in. So, you know, a great example in that, taking that basis trade as an example, in the environment. pre-march oddly enough, when the market started to sell off, and volatility started to spike, you know, every time every time, most of the time and the prior few years, that basis between the VIX complex and the s&p complex would compress VIX products would get cheaper relative to the s&p. And the reason for that is, you know, we were in a world where, especially post 2016-17 you know, retail have discovered shorting VIX products, hedge funds, love shorting VIX products, lots of people like shorting vol and they short and they were specially like shorting vol spikes, right. And so, every time you had a little bit of a vol and VIX products are the easiest way to do that. Right? I mean, you can you can sell vol by selling SNP options. You can sell straddles, you can sell puts. But it's but you know, selling some VX x or buying some XIV is way easier. Right?

And, and and way simpler from a portfolio management perspective. So we would always see that basis cheapened because you'd have big inflows into trying to sell VIX products, you know, when you had a risk off of them. And March actually went the same way initially, were in late February. The VIX complex actually got extraordinarily cheap and at the front end of the curve, it got just totally ridiculous. And that triggered actually our hedge volatility strategy to get very long VIX products at the front of the curve. But that so understand That positioning aspect were really the, you know, the positioning risk in the market. On the first leg down was, you know, was market participants coming in to sell VIX and that spread compressing. So we actually that spread was relatively wide. You know, in the pre March environment, we had a big basis trade on, it came in a lot in the towards the end of February and we got out of that trade, because the everybody was kind of coming in providing us the liquidity. We wanted to get out in a hurry. And then in March, eventually then, you know, at that point, we understood the positioning, which was, you know, hugely levered, you know, tail risk selling across the board, including as in VIX products coming in in early March as you know, VIX was up above 40 and you had you had a variety of you know, funds we don't need to name but coming in to you know, sell upside VIX crash risk and in huge size thinking, Okay, this is it right? VIX is 40 versus 45. It's gone straight back to 10. And so at that point, the risk was okay, this market takes another leg down and that stuff's gonna explode. Right? And, mmm, that is, in fact, you know, what happened. The market did take another leg down. And, and you ended up seeing that VIX basis explode to an extraordinarily expensive level, because you had so much about short VIX call risk that had to get covered at auction with when portfolios were getting liquidated, right? So really, you know, understanding which way positioning is and, and in a bad event, which direction those basis relationships are likely to move in. Is is really important. Like, you know, their basis relationships over long periods of time. They're, you know, typically not directional. But at a point in time, they might behave directionally because of the nature of you know, who

⁸ For smaller accounts I guess it's easier to just hold more cash for those types of moments (market regimes as some say, lol).

the buyers are, who are the sellers are who, oh, who's on one side of that basis or the other, and who's going to get blown out⁹.

Jason Buck 51:48

It's one thing to kind of manage that basis risk and a massive sell off like March. I'm curious how you think about it almost on the other side of September, October, when vol is crashing back down and those relationships are starting to break a little bit. They're kind of wonky and moving all over the place. How do you actually manage that that kind of risk?

Ben Eifert 52:03

Yeah, so actually, you know, VIX basis, that particular basis risk, you know, it hasn't been it has been it's remained pretty elevated. It's coming down some from the winds. But you know, really the way to think about it is you know, that basis is all about relative supply and demand in the VIX complex and in the s&p complex right. And most of the types of funds or you know traders who likes to sell upside VIX you know crash risk and be short VIX futures. They didn't make it right. March March was rough they're not they're not here with us anymore. And and so the market lost a lot of supply of you know, VIX VIX crash risk of VIX upside calls and short VIX futures positions. You know, and there's been and VIX, VIX products have always been popular from a hedging perspective, right? I mean, you'll see investors like to go buy call spreads or calls in decent size as sort of easy to manage hedge portfolios, you know, so that that basis, it's, it's definitely been volatile, but in general, it's kind of been high and, you know, started to come in even even when volatility started to get crushed. You know, that basis has come in, but it's been a kind of a slow and steady trend. And, you know, managing those, you know, managing those portfolios.

A lot of the work is really around, you know, again, in the old days, you know, OTC Markets, we would have been able to trade forward vol structures in the s&p that really replicated very closely the structure of VIX, VIX contracts, but were based on the s&p and that didn't require dynamic management. And it was this kind of, as long as you could do that trade, you could just put it in the portfolio and watch it and you know, take it off when you wanted to. Now we're synthetically replicating that type of risk and s&p with a very large number of options. And a lot of the Mad the problem of or question of management is, is really managing the path dependence on the higher and higher order risks of that portfolio, making sure that as markets are moving, we're moving strikes, we're moving maturities to stay to keep that risk exposure really well balanced.

Jason Buck 54:07

Yeah. And you alluded to it earlier. what's what's fascinating to us about the VIX relative value or VIX absolute return is that you can structure the portfolio market neutral, but then you're also buying cheap tail protection. And so you can still have almost like a long vol or tail risk bias when you have a market neutral book. Can you talk just a little bit how you think about buying cheap tails? Because I've even heard you say before that, you know, it's not the same as directional, long volatility, like what do you mean by that?

⁹ Sounds like a meta game comment, basically know who the other players are and what they might be forced to do next. (something Ben knows after being 20 years inside this particular market not something you pick up quickly).

Comment on Long and Short vol

Ben Eifert 54:32

Yeah, absolutely. I think, you know, often you'll hear people say things like short vol or long vol and like the, there's a very, very broad spectrum of things that could, you know, fit into that bucket, right. You know, the, here's an example of the distinction between, you know, long, long vol and, and long tails and an absolute return context. So, you know, one type of we talked about Asian structured products, you know, one type of position that we had on Coming into to march on the back of that flow, right. So that agent structure product flow led to a very large dislocation, where long term index skew was way too low. And by skew, we just mean the relative price of the far out of the money puts, was much cheaper than you would have expected. Usually those those puts should trade at a pretty steep premium to you know, at the Money vol because the because tails are fat, right, and they should be fat, the left tail is fat, there should be a lot of skew in the market that you know, deep out of the money puts should should cost you some money. The the trade that way, and that just came again, from this one way selling and those deep out of the money long dated puts, right¹⁰?

Dispersion Trade

Jason Buck 55:39

So you you brought it up earlier. And so you also look at very opportunistic trades, as well, as far as different trading strategies in your sleep that you're always tracking and seeing, you know, is it coming back into vogue, where you want to trade that strategy, when you just brought up earlier was dispersion trading? So can you start with just a definition of what the dispersion trade is? And then why do you think it maybe in the last few years hasn't been good for dispersion? And now you think that that may be coming back around?

Ben Eifert 56:04

Sure. Yeah. So you know, correlation. And dispersion, generally speaking, refers to the relationship between single name volatility and index volatility, and in particular to like, you know, the, the you can figure, okay, the index has a bunch of components, and each one has a weight in the index. Okay, so apple is a really big weight. And you know, GE is a really small way, you can kind of buy the the weighted basket of single name volatility, and sell the index, for example, that would be a short correlation, or short correlation trade. And the reason is, right, the general, the volatility of the weighted basket of names will always be higher than the volatility index, right, because there's a diversification effect in the index, where some names are going up, some names are going down. And so that washes out at the index level. But if you own all those individual name options, you're benefiting benefiting from that, right? As correlation approaches, one, that weighted average single name volatility will start to look almost the same as the index volatility, if everything is just moving, moving together, right. And a dispersion strategy, at least to us.

So again, we're dynamic managers where, you know, we think that there can be dislocations on either side, you might want no trade, it might be that index vol is too cheap, it might be that single vol is too cheap, and you're, you know, you're gonna, over time have different trades on depending on what's going on in the world. Now, we didn't think it was historically we've been very, very involved in that space. I would say in the you know, the, **in the old days**:, it tended to be the case was, let's say, the five years after the credit crisis,

¹⁰ Didn't really understand what was said here 😊 I guess he sold deep out of the money puts because skew was to low, ie those puts were to cheap. Again not really something a retail person should try at home 😊

index volatility, especially in the s&p did tend to be pretty expensive. And that was because, you know, everybody remembered how bad the credit crisis was, and how bad it was to get short caught convexity or without a hedge. And s&p was the really easy obvious go to liquid hedge, right. So there was a lot of hedging flow going into the s&p. And it tended to be attractive to be long those component names and short the index.

Now, it's, you know, short volatility became kind of a super popular en-Vogue trade across, you know, lots of segments of the market, call it after 2016, through and then through into 2017. And, you know, there was a huge collapse in, you know, term premium in the level of s&p implied volatility, not just at the front of the curve, but even kind of six months out a year out. And, you know, our view was that there wasn't really any interesting risk premium left on that side of the trade at all. And if anything, you probably wanted to have the trade on the other way, where you were long the index and short the single names. We, but in general, we just thought it wasn't that interesting. I was over trafficked and no risk premium in 2017 2018 2019. You know, you saw most dispersion strategies, struggle through that period, depending depended on on that there's a lot of different choices you get to make when you're setting up a dispersion strategy and how you run it. Some people that okay, some people didn't do too well. But in general, it wasn't a super opportunity.

So I think the thing that changed that in **March** was a couple things. So first of all, you know, in the, the **the prevalence of concentrated short volatility and index went up, you know, got blown up and, and went away.** Right, there was a lot of hedging in flows. And, and at least from time to time, there's, you know, much more expensive index Vol. And then on the other side, **single name volatility, single name realized volatility has exploded for a couple reasons.** I mean, one is, you think of like the huge factor in Sector rotations that we've had over the last six to eight months post COVID. Right. I mean, **COVID was a huge fundamental shock, that affected different markets, different companies, different sectors in different ways.** I think about like, the stay at home basket versus the you know, the vaccine basket, and you no longer locked down so zoom is rallying 20% because we're all using zoom, and then it's like, oh, we're gonna go back to work and Airbus, and we're gonna start flying again and Airbus is up 20% but zooms down 20 so you have this huge realized volatility under the surface and factor rotations. And that's very beneficial for long positions and single lane volatility.

And then the other thing that you've had has been, you know, large non traditional market participants in volatility and in single name volatility so we talked about the vision fund earlier, you know, causing huge price swings in in the relative pricing of single lane vol and index Vol. You know, retail has also been involved more on the shorter end of the curve putting Wall Street into big concentrated short, short option positions that they have to hedge which creates some squeezey, you know, squeezey, you know, gamma dynamics. And so, in general, the, the real realized volatility environment, single names has been, has been super. So now we think it's a, you know, it's a very interesting opportunity. So it's still a dynamic one, there, it doesn't make sense to have a dispersion trade all the time, sometimes you want to be long correlation, because, you know, because the vision fund has just taken it to some crazy price. But what we've spent a lot of the last, you know, six months doing was building a technology infrastructure that could, you know, apply our approach to the markets to dispersion and to be able to, you know, be simultaneously out there working, you know, many, many 1000s of, of option orders in low latency, effectively making markets and the direction that we're trying to get into or get out of.

European Dividends Trade¹¹

Jason Buck 1:01:24

I'm gonna come back to that, that making markets but one of the other opportunistic trades is that you've had on his European dividends, what did you see this year in European dividend trade?

Ben Eifert 1:01:33

Yep. So you know, dividends are a really fun market. And that's a market I think not a lot of people know about unless you're specialized in the space, right. So there is a markets globally, although historically, there were biggest in Europe, where you can buy, buy or sell dividend futures, which effectively pay you. They pay you out, they settle at maturity, based on the amount of dividends paid in the underlying index by all the stocks in the underlying index over the prior calendar year. So if you buy, you know, 2021, Euro stocks, dividend future, you just count up all the dividends that got paid in 2021, by euro stocks company is a map of the subtle price, right? And it's like, oh, why would you trade that? What Why does that market even exist? That's weird.

The reason it exists, comes back to those **structured products** that we were talking about, where almost all of the time, when you buy a structured product that say pays you that 7%, coupon less, you know, one of the underlying indices goes down a lot. The the reference is always to the index price level, not to the total return series of the index, right? So effectively, there's no dividends in that product that you're buying. But the when the dealers go out, and they hedge the Delta on the other side of that they're, you know, buying stocks that have that have dividends on them. And so effectively, that creates this risk to dividend exposure, that banks then need to recycle back into the market. And that's what gave rise to dividend futures.

And so a lot of the, you know, they're they're, so it's, they settle in a very fundamental way, right? How many dividends got paid, you know, we count them up. And that sounds like a thing that, you know, for guys who know, balance sheets, and how many dividends are these guys gonna pay, but dividend futures trade in a way that's very heavily driven by the hedging of those structured product portfolios, and the complicated, you know, stuff that goes on there. So in March, what you know, you had huge blow ups in the space where effectively, you know, the French banks got long, a tremendous amount of dividend risk exposure all the way across the term structure because of how fast those markets went down, and how the structured products weighted average lives extend when markets go down. And the result of that was that, you know, the risk managers eventually forced the traders to hedge those positions. They sold short dated dividends primarily which are more liquid to hedge their entire portfolio. So effectively putting the bank positions kind of net short at the front end of the dividend term structure one or two years and then keep holding on to those net long positions at the back because they're just too illiquid to sell and the size that they had. And we saw them in a lot of hedge fund portfolios, were taking a lot of pain and getting liquidated on the back of those moves. So you know, we know those markets very well. Again, we haven't been involved the last few years because we didn't think there was anything interesting to do but all of a sudden now there were these massive dislocations and a triggered by this exotic desk hedging under stress

Jason Buck 1:04:28

¹¹ One of those exotic strategies you don't try at home.

get made my first question and you touched on it would have actually been the liquidity obviously, this is a function of the the futures indexes are not having, you know, stripping out the dividend. So that's why the all the hedging comes in. And so the index futures have a lot of liquidity but what what kind of liquidity Do you see, especially like the Euro stocks, dividend market, but I guess as a smaller player, you can be more nimble in that space. And so it's also nice that it's a capacity constrained environment or

Ben Eifert 1:04:51

Yeah, exactly. So you know, they're they are big markets. I mean, there's, you know, billions and billions of dollars of open interest but That said, if you it's better, if you are as active as we are in that market, you can't be huge. So, you know, we we might be moving, you know, millions or 10s of millions of dollars a day, you know, in in dividends, futures contracts. But if you're trying to move hundreds of millions of dollars a day in dividends, futures contracts, you're gonna move, you're gonna move those markets a lot. And, you know, that which, of course, is what the French banks did when, when they when they had to unwind there. So you do see bigger players involved in that space, but they're typically involved in a much more static way where they work their way into a position, and they just wear that position for a very long period of time. And, in our view, you know, that was part of what, you know, part of what amplified the risk and the dividends market was that there were a lot of tourists in the space before, you know, March 2020, there were, you know, big asset managers and big hedge funds that just viewed dividends as an alternative beta, and just bought a bunch of them, and then, you know, panicked and tried to sell some of them when, when things were going down, at the same time, the French banks were trying to sell them. So yeah, our view, you know, in general, in this space is that being, you know, running a capacity constrained strategy where you are nimble enough to move risk around and to be able to be in when you want to be in to get out when you want to get out. And to be able to provide liquidity in a meaningful way, when there's, you know, tons on the other side, and, you know, air pockets and liquidity, I think is, is the right way to be, you don't want to be so big that, you know, you end up just putting on positions and being totally stuck in them.

Alpha because of trade execution

Jason Buck 1:06:38

You know, you've touched on throughout this conversation from the beginning, middle, and all the way through this idea of, you know, part of your alphas in your trade construction execution. And you've said before this idea of being a one sided market maker, can you talk a little bit, what does that actually mean, in reality, trying to be a one sided market maker?

Ben Eifert 1:06:54

Yeah, absolutely. So if you think about the traditional way, that hedge funds would have executed trades, and you know, we would have executed trades five or 10 years ago, you know, you're a liquidity taker in the sense that you have a trade you want to do, maybe you want to buy a vol swap, or whatever it is. So you quote eight banks, you say, Hey, can I see, can I see a market in this vol swap, and then they all come back with bids and offers, and you hope there's a good enough offer, and if there's a good enough offer, you lift it, right. And you know, how, you know, hopefully, you measured where you thought mid market was, and how much transaction cost, you could be removing mark, you know, liquidity from the market. In our case, again, where we see you know, this, this growth in exchange volume and liquidity and participation, what we're trying to do is effectively put on the positions that we want and you know, get into and get out of risk. But, but

providing liquidity and we're in effectively participating in that exchange volume until we built the position that we want. And then as we manage those positions, you know, participating in, in the exchange volumes to do it, right.

So what that looks like is, we're not going into a broker and saying, Hey, this is the trade I want to do, you know, what's the price, what it looks like, is we are continually, you know, we're sending out a set of orders into the market, right, which say, here's what I want to buy, here's what I want to sell, for the things that I want to buy, I want to be bid to continuously no more than, you know, point oh, five volatility points below theoretical mid market on a real time basis in you know, randomized trade, you know, batch sizes between, you know, one and 10 lots, I want to, which is effectively what a market maker is doing, right?

They're saying, here's where I'm bid, here's where I'm offered, and but uh, but a pure market maker is trying their whole business model is that spread, right, and is trying to get hit on their bid, which is by buying below, below mid, and then getting out of it, you know, closer to the offer side, right? We can be better bid, you know, then Citadel or Susquehanna on the things that we want to buy, because we want to buy them, right, because we're trying to work into a position and we want that risk. And we're in principle willing to pay up to a theoretical mid market to get it on. Whereas, you know, they need to get paid enough edge to make it worthwhile to take take on the inventory, right?

And what that, you know, that the drawback of that, or what, why a lot of people don't do that? Well, obviously, it's a lot of work to build the systems. But also, it means you don't just quote the trade that you want to do exactly how you want to do it, and then put on the whole trade all at once. Right? There's uncertainty, how long is it going to take me to get into this position? How am I going to manage the legging risk getting into this position? To make sure I'm not, you know, just getting filled on all my long vol side and that my short vol side and so forth? Right?

But the advantage of that is, you know, when we do our transaction cost amount, you know, transaction cost analysis, looking at it, you know, everything that we do, we we, you know, earn a small amount of money on transaction cost attribution, right. So we don't pay transaction costs, we collect them. Not a time that's not the business. That's not how we make our returns. It's, you know, but, but if it was zero, we'd be happy, right? Because that means in a world where It's expensive to transact, we're getting into and getting out of the positions that we want to in the sizes that we want to without paying transaction costs. And we're able to do that, again, by just sourcing liquidity where it's available being bid, they're not saying I have to lift the offer, but being bid there and waiting for somebody to come.

Jason Buck 1:10:17

Hey trickling out and pinging the market like that, you gotta be getting a an interesting feedback of information, do you ever put that back in your models, as far as maybe we should, or shouldn't be putting this position on in size.

Ben Eifert 1:10:28

I mean, it You certainly can identify quickly, when, you know, there's a big seller in the market, for example, for something that you want to buy, right, because you'll go out into the market. And sometimes there'll be a slow trickle of fills, and sometimes there'll be, you know, flooded fills, because somebody has identified that there's a source of liquidity, and they're trying to, to get done. You know, a lot of times we expect that to be the case, right? Because, you know, we're, we see a dislocation, we might not totally know where it's coming from, but we might have some idea of the type of thing that's going on. And there's a dislocation there, because somebody's selling it, right. I mean, that's why it's there. That's what we expect. And so when we go out in the market to buy, and we see kind of aggressive flow coming in, you know, for sure, one, one area where it does become relevant, like, think about dividends, for example, you know, when we were starting to put on those positions in March, you know, when obviously, the world was very hairy. And the French banks are just liquidating those positions, fire sale and hedge funds to, you know, those are within markets in that environment. And so you're very much relying on market feedback in terms of how aggressive you want to be as a buyer, right? Because, you know, if we, you know, the day that we decided to start doing those trades, if we were just really aggressive, and we said, well buy everything that somebody's willing to buy right here, we would have bought it all, and then they would have dropped another 10 points, right, what you're trying to feel for is how aggressive are these sellers, how much more is coming, you know, you could put a five or 10 lot out, and then they immediately hit that bid and crush it down another 50 cents, that means you want to really piece into that slowly, you want to chisel into the size, you want to see how far people are willing to sell it down, how desperate are they, and then you want to get really aggressive. As soon as it feels like that's actually stabilizing, and then the massive wave of selling isn't coming anymore. And now it's like, okay, the this is a huge liquidation, it went way too far. But now it feels like it might actually be done. Like, let's get aggressive. And even if then you end up coming out and, and pushing the market a little bit to get into your big size. From that point, it's better than kind of being the guy who raises his hand and says, I'll take that trade, like 20 points, you know, 20 points earlier.

Jason Buck 1:12:33

Right. Exactly. We'll I get this question often from retail traders are looking to be, you know, maybe newbie options traders. They're always like, you know, how does somebody like somebody like Ben know, where these, you know, structural flows are coming in and everything? What are they looking at what's on their screen. And like, I don't mean to be coy, but it's like, from building to decades of experience and relationships with other traders in the markets at major banks and, and major institutions. Right. I mean, there's just no other way to really get a good feel for that.

Ben Eifert 1:13:01

Yeah, for sure. I mean, I think a lot of that type of stuff. You know, one is just understanding who the big participants ¹²in the particular market that you're looking at are. And that just comes with time and experience. And, you know, the, and it's not, you know, rocket science typically, because, you know, there are very large organizations, you think back over the last, you know, three years and some of the really big trades that were happening, you know, you know, you know, who's doing it very quickly, because there are certain

¹² Again a comment on "know who else is playing this game".

flow patterns and signatures and flow that all of the dealers obviously know and all the brokers obviously know, and there's no anonymity when you're big, right? It's interesting, people think, oh, maybe trading OTC makes it anonymous or trading with a broker makes it anonymous or whatever. It's ridiculous to me. Because, you know, when harvest volatility management, you know, back in 2018 is rolling its iron condors. It's like, well, there's one, you know, and UBS yes was Well, I mean, there's only one guy who rolls 20,000 lots of eight legged iron condors. That's UBS. And then the guy that rolls 10,000 laps, that's harvest and like, you know, so you know, exactly what's happening. Right. And I think the same is true, even in the more you know, the more niche your spaces when some of those exotic risk transfer trades are going up, and who's positioned how those are just things that you know, you understand in the market based on you know, knowing all the the senior people in the market and knowing what, you know what everybody's doing. Taylor,

Jason Buck 1:14:26

do you have any other questions or something you want to touch on before I ask my final question?

Taylor Pearson 1:14:31

Take it away.

Ben's so Quant thinks in Option Greeks when asked about his kids water usage bills

Jason Buck 1:14:32

So I have a very difficult exotic hedge question for you. So people, if people follow you on Twitter, they'll understand this maybe this is like your, your Friday, you know, trader question. Alright. So my question is a bit different, though, is how do you hedge your exceedingly complex water bill, if your son keeps hosing down your neighborhood to protect the rest of the neighborhood from wildfires, you just that's just Theta man,

Ben Eifert 1:14:55

you just pay the theta and sometimes it feels like a lot of fade up, but like you got to On the convexity and it's just worth it and that's it. I actually just I wrote that. In my, in my head I have a, a mental accounting bucket for childcare costs. And that number is astronomical and I wall that off I have a I have no emotion about that because if I think about it, it's like, you know, it's it's, you know, mind numbing. So if you just think about it as \$1,000 a month for extra childcare costs that's a little easier to bear.

Jason Buck 1:15:30

So it's just a, it's just a pure upside call on entertainment then,

Ben Eifert 1:15:33

exactly. That's what this works out. Okay.

Jason Buck 1:15:36

Got it. Ben, thank you so much for coming on. We appreciate it.

Ben Eifert 1:15:39

All right, guys. There's a lot of fun. Thanks for having

Taylor Pearson 1:15:45

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