Adam: **00:01:49** All right. What if inflation runs hot, you know?

Rodrigo: **00:01:51** What if.

Adam: **00:01:52** That's such a good question, what if? Welcome, everybody. Thanks for joining us today. We've got my co-host and co-conspirator Rodrigo Gordillo and none other than Cem Karsan, who I've really been looking forward to having on the show for some time. Cheers, everybody.

Rodrigo: **00:02:10** Cheers to risk management and risk managers. Finally coming to the rescue, hopefully.

Adam: **00:02:18** … first though, the margin clerks haven't yet had their day. I think you know, we're a long way away from the margin clerks having their fun. So, before we get going, just to let everyone know that this is for entertainment purposes only, and nothing that we talked about today should be considered advice in any way. So, with that out of the way, Cem, let's start with the softball. What is the dollar gamma neutral price for June quarterly SPX expiry?

Backgrounder

Cem: **00:02:53** Don't make me -- You know, I've already turned off for the day, please. Yeah. No, I'll start off by kind of giving you guys a little background on me. How about we start there, and we dive in. So, I ran a market making firm, I'll start there, starting in 2006, became one of the biggest equity index of all market making groups. Here domestically, we were 13% of the S&P 500 volume at our peak during the GFC. Got out of that business in 2010. I kind of had the majority of my net worth in it and decided it was time to step away, but couldn't stay away for long.

Ultimately started my own family office and ultimately a set of hedge funds. And these are -- we have three now non-correlated hedge funds here at *Kai Volatility*. That's the name of our asset management firm. One is long-vol, which I'm pretty happy about today. You know, a vol-neutral relative value, which is again non-correlated, so not a bad environment for that. And then dealer flow, which is something that I've gotten to be very well-known for which is really tracking dealer positioning broadly and equity vol, and using that for predictive distribution of outcomes and directionally trading vol and market direction based on that dealer positioning.

Long-Vol Strategies

Adam: **00:04:21** Yeah, that's a great background. And we chatted just briefly before the show and I mentioned that I was personally very curious about what someone in your capacity, that runs money the way you do. What does a day like today look like activity wise? What are you watching? What kind of trades are you hoping to be able to place on are you looking at more closely than usual? Would this be a better than average day expectancy wise for you? Just a little bit of color on your day to day activities and what a day like today might look like?

Cem: **00:04:56** Yeah, so we're very quantitative and you know, fairly algorithmic in our approach, I would say; 60 to 70% algorithmic and the rest discretionary. That's kind of a random number I'm throwing at you. But primarily algorithmic in our approach. Three different strategies. I'll start with a long-vol and vol-neutral. Those two are relative vol arb strategies. The difference between the two is vol-neutral is neutral, vol-skew, delta, all the first order Greeks, very much looking for relative value opportunity. Whereas the long-vol is really biased to a range of long convexity, long-vol, but still relative value. And that relative value pays for kind of your risk premia over time, and you get the benefit of that on days like today, as we have an expected historically a positive expectancy and our long-vol, which is very hard to do.

You know, historically, we've had great success with that. But again, it comes more in bunches and this has been a great environment for that, obviously, even though long-vol has underperformed as an asset class, relative to market move. The short bias nature has definitely been helpful for us. And then relative value is completely non-correlated. And historically, that does on the first big move, spreads blow out, and it's correlated with liquidity. So, you might have less positive performance on a big move down, at first. But broadly secularly, on an annual basis, those strategies do very well, when spreads blow out, and when there's more opportunity. I kind of explain it as it's akin to a market making type of operation, right? It's counter- cyclical. That doesn't mean you're going to make money on a big down move, per se. But relative spread opportunities increase secularly, and that's what the role that really plays. It's a non-correlated relative value type of vol trading strategy.

And then we have, those are both relative values. So, the capacity is low, they're high gross, low net leverage strategies, whereas the dealer flow is a much more directional, net position, strategy, lower gross, and that's much more dynamic, predictive looking at distributions of outcomes. Generally, our distributions are drawn weekly, with daily path. And rebalance happens every … with predetermined rebalance points, rebalancing happens about every three days or so. But we are intraday, on bigger moves like today, rebalancing much more often, de-leveraging, leveraging, and re-hedging. And there's logic embedded for a lot of that to the distributions that we model. So, as you might imagine, there's a lot of trades going on in the background, a lot of models, kind of rebalancing things happening.

But there's also some discretionary elements where myself and the other portfolio managers are deciding when another strategy overcomes in terms of profitability. We have the discretion to say, okay, look, we've hit a point where there's a better opportunity set, and we take our profit and roll in the new strategy, or maybe rebalance. And there's also a timing element to execution. Some of our execution is not automated, because in a liquid market, you don't want to just be firing everything into the market. So, there's some execution discretion that happens there as well. So, we're definitely hands on in there especially on days like today, very active, quite a bit of trading going on.

But in terms of full rebalancing strategies, and rebalance points a lot, most of that is predetermined, so that makes the decision making often much easier. You get to kind of just sit back and let things work to a great extent. You know, especially when things are a bit calmer, that tends to be the case.

Adam: **00:08:43** I would imagine that the dealer flow strategy would be more active at different times of the month and the quarter, just as we approach expiries. I guess, the gammas light up, the vegas begin to decay more quickly, things all kind of get more sort of in tighter ranges and more explosive. Is there some kind of weekly and monthly and quarterly kind of seasonality to activity in that strategy would you say?

Cem: **00:09:16** Yeah, absolutely. So, there's two factors to when dealer flow is more important. Broadly, just backing up from 30,000 feet, if you've been in a trend of some kind, and a trend doesn't mean up or down, could be vol compression trend, right? Some activity that's been happening in some way or another for some time that leads to profitability in that area and more speculation in that area. That profitability leads to more investment in those types of strategies, right? There's a natural momentum factor to these things, and that's part of what leads to trend. So, from 30,000 feet there's more dealer positioning when there's more kind of trend, and a great easy example of that would have been March 2020 to the peak in Jan of this year.

One way uptrend, what do we get? Massive call speculation in tech names and meme names, a lot of index put hedging, because people are making money. And there's a lot more concern. And so yet record skews, so you get really concentrated positioning that builds, builds and builds. And it's -- our dealer flow is by no means a trend following strategy. It's completely non-correlated. If you look at the two years of track record, when the market was rallying, we did very well, but non-correlated. And the key there is you have just much more of a predictive edge, when that dealer positioning is bigger, it has a bigger play. So, more active, more bigger bets, more leverage, when that dealer positioning is more meaningful, and has more predictive value. That's from 30,000 foot, feet.

Now, if you kind of zoom back in on a day to day basis, absolutely, as we're approaching periods where dealer positioning matters more broadly, near big expirations, or when positioning is important, event vols, approaching the Fed or some type of election or something important, matters a lot more, much more opportunity in those environments, and much bigger percentage of the flows during those types of periods. So, we definitely have a tendency to be more active, and to be more leveraged. And when we know more of the equation, right, and we have higher conviction that the wave is big, and we can hop on that wave and kind of ride it. So, there's definitely a time element. It's not as easy as I know during certain times of the month, or certain days of the week. It really is a function of activity and dealer positioning. And those things are correlated with more important activities, or when people are afraid, or there's bigger positioning based on simply callables or over the counter trades or things that we know that are structured in a certain way.

Adam: **00:11:45** So, a few people have posted and I don't track this super closely. But a few people have posted that the outstanding deltas are particularly large coming into the June quarterly expiry at the moment, both at the index level and the individual stock level. I just wonder, like, can you share any insights that, for what people might expect?

Rodrigo: **00:12:07** And before you, can you just describe what we mean by outstanding deltas, for those that are starting to get into the world of options?

Cem: **00:12:16** Yeah. So, when we talk about dealer positioning in the vol space, we're talking about how broadly you know, the dealers or the banks, or the market makers, right, the individuals who are taking on liquidity and hedging it. They're asking for some level of relative value edge. And they're holding that relative to other positions. But broadly, most of the street is positioned the same way because they are ultimately absorbing that liquidity. That positioning leads to certain effects as time passes.

For example, if, as a simple example, if you know, in the June expiration, everybody was -- all the dealers were short the 36 half put, 3650 put in the S&P 500, they would need to be short stock against that, right. And let's say it was a 10 delta, I'm just making all of this up, but just the for example. And so all that stock that they're short against this decaying option will eventually go to zero at June expiration, and not just a June expiration, as vol compresses dramatically, right, and those options go to very small options in one form or another, that delta disappears, right? And they will need to buy back that delta, right. Those are broadly what we call *vana and charm effects*, which charm is the change in time and its effect on options, right? Vana is the change in vol and its effect on options in the delta buyback.

Gamma effects, which people are more familiar with, is if you get towards that 3650 put, it becomes a bigger and bigger delta. It may go from a 10 delta, if you go to 3650 to a 50 delta. And as the market moves, dealers also have to balance accordingly. So, that's this reflexive game and it's not if the market goes nowhere reflexively, they have stock to buy, so it supports the market. But if the market then starts to decline, and goes quickly to the strike, especially towards expiration, it becomes more volatile. So, during these times, when dealer positioning is big, it changes the distribution of outcome. Everybody always turns to me and asks me, "So what does that mean? Is the market going up or down? What's going…" The answer is not that we're going to go up or down, it's simply that the distribution changes, becomes, if people are short, the 3650 put you get a much fatter tail, right?

You know, the gamma effects are much bigger, and it can be reflexively very dangerous. But in the absence of that, you have decay, which is a natural kind of buyback of stock that happens over time. So, it makes things much more right biased. So, the distribution changes based on … positioning and so it's not always about being long or short. It's about being both maybe long and short, but in the right places, in the right part of the distribution and I think that's an important thing to understand.

Rodrigo: **00:15:00** Yeah, it's the difference between outcome and distribution. You know, what's been working for me, talking about Dr. Strange in that last scene of the Avengers when he goes in time and sees all the possibilities, right? You just have to kind of position yourself for all possibilities. He, of course, decided on one possibility, but you need to understand that there's many outcomes. And you need to be long and short and different ways to maximize the opportunity set and the change of possible outcomes across that distribution is what you want to actually do.

Cem: **00:15:35** That's exactly right, it's actually way harder to predict up or down, just broadly. It's easier to predict distribution or certain information, informational pieces of that distribution. And it's actually even more valuable, in a sense. Most of the asset managers in this world come to it from a place of cash flows and fundamentals, long stocks or long bonds, right, that's just naturally kind of how this world has come to be. But our argument broadly, and people even, call options, the derivative, right? They're a derivative of the underlying. But we very much believe that derivatives represent the full distribution, options represent the full distribution, are much more representative of the actual entity and its potential outcomes, right? I mean, you can have two stocks from the same industry, same market cap, you have no name. And from a stock perspective, you'd say all these are the same stock. But one could have a very fat left tail, and very right bias, and the other one could have just a normal distribution, and they can be completely different stocks.

Ultimately, they have the same expected value, which is what the stock value is, what the market cap is. And so stocks, in our opinion, are actually the derivative of the distribution. They are the expected value of a much more complex and rich set of information, which is the distribution of the underlying asset. And I think that's -- a lot of people are waking up to this, even if though they don't fully understand it, the fact that they can bet on with leverage on an outsize outcome to the upside or downside is, in a sense, that realization that you can bet on the relative value opportunity of a tail outcome and get the more precise small price bet that pays off in a big way. And so there's a non-linear …

Rodrigo: **00:17:19** And you're going to lose most of the time.

Cem: **00:01:21** Correct.

Rodrigo: **00:17:22** But if you make that bet over and over and over again, with the right price, you're going to make a positive P&L, right, a positive expectancy, right.

Cem: **00:17:29** And I think this is why we're seeing a big -- people will argue with me, but why we're seeing a secular increase in options trading, it's a superior product. I think it's hard to debate that. There's less liquidity, and that liquidity is increasing. But I think of it as a better technology, right? If we're hitting a tipping point, there's more liquidity, there's more products, there's more education, there's more access broadly. All of this is leading to, again, we've had a linear factor exposure ETF for every factor exposure, every style that's almost comical to me in the sense that people are still playing in two dimensions on everything, when we have the ability to bet on a full distribution of all outcomes, which is much more precise.

And again, I think people are broadly waking up to this. We've seen secular increases in options trading, that's been not just secularly increasing, but increasing in adoption for 25 years now. And it's only accelerating. And I think moving into a period where we're more likely to get nonlinear outcomes is also helping get us past that tipping point, and adopting even more volume. So, I wouldn't be surprised if -- we've already seen periods now where notional trading volume is bigger in options than actual stocks. I wouldn't be surprised if that continues secularly, and at some point 20 years from now, or so, options trading is something that every RIA and every kind of wealth advisor is doing structurally?

Adam: **00:18:59** Well, that would certainly require a pretty substantial increase in general depth and competency at the, you know, just across all investors to be able to maximize that opportunity set.

Cem: **00:19:13** Or more tools, right, or more tools that allow them to think of it in their terms. I mean, I think if you think about stocks and bonds, we are all born understanding what a stock is. It seems like it because it's second nature to all of us now, right? But the reality is you learn. And we all think probabilistically whether we think about probability itself or not, we all make decisions every day by weighing benefits and costs, right? And thinking, what those odds are. And I think, the more you allow people that framework and tools to do it, people will naturally -- it's just like a language, right?

I mean, we speak this language, it comes naturally at this point. But that's because we were taught that and it was part of our kind of cultural awareness. I think options are entering that zeitgeist and that broad education, I think. Again, it's hard to imagine coming from our perspective now. But as somebody who's on the other side and has been for 25 years, just seeing the adoption, understanding that's happened broadly, it's pretty remarkable relative to where we were 20 some years ago.

Rodrigo: **00:20:12** Cem, God love you, man. But I think eventually, you're going to have to develop a chip that you implant in the vast majority of the human population to think in probabilistic terms.

Cem: **00:20:24** We're working on it.

Rodrigo: **00:20:24** … have a built chip that can actually help us out, but I just don't see that happening.

Cem: **00:20:31** I know people were skeptical 15 years ago, and here we are …

Rodrigo: **00:20:35** I don't know. There's going to plenty of opportunity for you to capture your alpha for the next couple of decades, I think.

Adam: **00:20:39** Well, it's demonstrable that most people think in probability space in terms of *yes, no, or maybe*. That's the level of granularity, right. But I hear you with the right tools, then you can certainly distill the relevant information and probability space enough to provide context for people for better decision making, absolutely. So, I want to -- that was really good context.

Current Positioning

And I kind of want to circle back, if you don't mind, and if you're not comfortable kind of addressing this, that's okay too. We can kind of move on. But is there anything you can kind of share about current positioning and dealer positioning? And this is kind of where you typically derive your commentary for when you do chime in, on Twitter, for example, which I've always loved that I think you've been doing that less frequently, maybe you're getting more busy, or maybe you're just finding that there's too much toxicity or you know, it's not worth it for whatever reason, but I think a lot of this, the flows discussion is kind of what motivates some of your really great Twitter threads. So, maybe what I'm asking is, can you kind of like on the spot put together kind of a short Twitter thread on what is current positioning? And what does it kind of say about what we might expect coming into the end of the quarter?

Rodrigo: **00:21:54** Cem will have to share his screen to do a meme and a gif …

Adam: **00:21:59** Yeah, that's right.

Cem: **00:22:01** Put some emojis up as I talk -- … some emojis up on the screen as I talk. Yeah, absolutely, no problem. Yeah. I mean, why have I not been doing this on Twitter as much? Because the more -- When I had 5,000 followers, it was fine. But with kind of 85,000 traders, a lot of these are heads of PMs at Citadel and Susquehanna. And there's again, I know who's following me, and it does have reflexive effects. So, I'm better off not saying the bigger the funds get, and the more important this is. So, that's a big part of it, quite frankly. But to speak more directly, we only have I think 150-200 people on here or whatever it is, so I can be a little more candid. The reality is right now is very important for dealer positioning. There are several major, major structural trades that have been quite unique during this period. And this is also just a broad unique period in terms of market move, right?

You know, one of them is this *JP Morgan trade*, which you guys have heard me talk about. But there's a JP Morgan hedged equity product that puts on a massive structured put spread collar, right. It buys a put spread and sells a call over its equity. And it does that quarterly, it actually does it monthly now as well. But the quarterly one is by far, it's the oldest and the biggest. And it overwhelms the size of any other trade that's in the equity indexes at least. And it's not the whole story, but this is a good example of some of what's happening. There's also a lot of structured products that are tied to these quarterly expirations. And so there's a lot of again, click-add options and auto callables and a lot of these other exotic instruments that ultimately also affect the June's. But not all of them, but most of them have similarities and they tend to have similar effects.

And what we've seen in the recent decline is immediately under the market, a lot of based on the June … mortgage rates and other trades, dealers have been massively long-vol. They have been long 3,600s, 3,650s, 3,700 area in the market in the June expiration. So, that has led to an oversupply of vol, has led to an -- we've all seen an underperformance of vol, because ultimately, that's actually the expiration practically you want, because it's the Fed, because it's a lot of other things that can give you a hedge for events and other stuff. So, people have been able to sell other things against it ultimately, because they have this massive amount of vol, and kind of where they want it.

And that supply has led to massive vol compression and has led to some of this delta buyback that we've talked about along the way, which has led to these massive balances. We saw one in March last quarter. You know, there was a 10% … right before March quarter expiration, and it's led to a lot of buy back, as vol has compressed in other products.

But as you approach that expiration that you've been long, right, dealers are about to decay now. They went from decaying longer and longer and longer vol because they were moving towards our longs and the stuff they sold in front of it, or whatever that was expensive, has gone away, or is going away. But as you approach that June expiration, now, those massive vol supply starts to dissipate. They're all trying to roll their expiration, the vol, or maybe they're not hedging as much, right?

And on the customer side, because vol has dramatically underperformed, you had a lot of puts in portfolios be liquidated, into the decline. People are like, well, this hedge does not really work that well. I'd better take the money while I can, or I'm not going to have -- or I'm going to be worse off than I would have been without the hedge, right? And in the equity vol space, a lot of people who are at the top or thought this would be something that would hedge them and have been, unfortunately, the outcome has been very poor, and they've been very disappointed. So, that's led to even more vol supply. So, it's kind of a reflexive loop where there's been vol selling, there's been vol supply. But it's all been concentrated around this June expiration. So, it's very important as we get to this point to take a look at that and understand that, as this rolls off, there's some fragility.

Now, there are some other things going on here. There's another JP Morgan trade coming. It'll be here in a couple weeks, just over two weeks, two and half weeks. And that will provide more vol supply and it'll provide it further out in different places, in different things. And people are starting to also prepare for those things. And moving around. Again, I'm just focusing on the JPMorgan trade because it's easier and there's a lot of other details that correlate. But broadly, vol is dramatically over supplied. There's also a broad fear in the market and an unwillingness because of all the macro things going on, you know, by dealers, for dealers to take more risk than they normally may. This is not a time of necessarily complacency yet.

So, we continue to see, I mean, today is a great example. Fixed rate vol was dramatically down today. You saw headlines on CNBC, about how you know, *VIX Pops, Explosion, Fear Index.* The reality is vol dramatically, dramatically underperformed, especially given the size of the move today. And again, that's because everybody's dropping into these kind of June options. So, our view is, again, to give more specific commentary, that vol supply is likely to continue here. We'll have a time of volatility and a realized basis during this window. And it could be very choppy, and especially with the Fed coming up, you could get some real back and forth movement.

But broadly, vega or implied vol, will continue to underperform in this window. We believe that as you get past kind of this period, June-July, you're going to start getting more and more people liquidating, and less and less hedged. And eventually, there'll be a fade here from the hedges, right? And again, maybe this fall, maybe a little sooner in August or so. But this underperformance of vol lasts for a while and eventually, the losses and the pain, it's too hard for people to hedge, to hold that vol and the vol selling strategies. You know, I'm starting to hear marketing stories, you know, people coming to me showing, look at this fund. Cem, what do you think about this vol fund? Look how well it's done. And people are like this is a great edge. I'm like that's a short-vol fund. They sell stocks. Like, yes, it's up 25% this year. Like, please, please don't put your money in this fund.

Rodrigo: **00:28:57** So, Cem, can I just go back to the *Hedge Equity Fund* because I want to understand what the value that I guess the original portfolio managers that created the fund were after, and what investors think they're after. Because when I look at what that hedge is doing, I mean, I've done analysis on this and I'm going to share my screen just quick, as I just recreated it. But it basically turns out that you can replicate the fund by being 60% in SPY, and 40% in cash. That's the yellow line. In fact it outperforms it, right? And the correlation is astoundingly high. So, was there a different attempt to do something very different than 60% equity, 40% cash and they're hindered by it now because there's so big, or was it always meant to do this thing? In a way that's like adding options complexity, when cash would have done the job?

Cem: **00:29:58** Yeah. I mean, look, it's a structured product. There's no real discretion or logic, other than they buy the 5% out of the money put, and they sell the 20% out of the money put, and they sell the call that makes that collar premium neutral. That is the definition of what they do. They do that every time. So, people know this. And so people kind of front run it and kind of take whatever out of it. But at the end of the day, they're long 1X stock against that, it's about a $20 billion fund. And at the end of the day they're going to lose money on their stock, the first 5%, right? And then they're going to be fine for the next 15%. And then they're going to start losing money again. That's the hedge, and there's no extra premium.

And then for that, they're going to have only the upside up until whatever call they write, right. And so they have, it's a pretty easy breakeven graph to draw. And you can approximate it with other strategies, but it's a pretty straightforward strategy. And they've, in a slow grinding up market that does very well, and it protects you from catastrophic losses, probably to the downside. And some people prefer that type of exposure, but it's nothing more than just giving yourself access to certain parts of the distribution, as we talked about earlier, and wanting certain types of exposure. It's not long stock, short stock, it is a funny looking graph that kind of gives you protection in certain windows and not others.

And historically that has been based on history, which the track record, they usually probably pick those points because it looks good, historically, right? But environments change, and they may not want that exposure during this -- if this market goes down, 5% every quarter, for the next 20 quarters, you're going to perform like stock performed, which is not very well. So, it just depends what kind of exposure you want. And broadly, up until relatively recently, you've gotten quick quarterly drawdowns of something big with some big rally back. And then other periods of grinding. So, look, it's protected you in those big drawdowns and then gotten you right back on track with certain reasonable gains the rest of the way. And people look at that historical performance, and they don't understand options, and they say, yeah, that's for me. But that's about it. I don't think that you could read way more into it, but that's about it.

Adam: **00:32:43** History is rife with these funds that grow to many billions of dollars, with promises of these types of nonlinear payoffs. And somehow, especially when they broadcast their rules so transparently, the market is reflexive and it's amazing how often the market finds a way to engineer a path that is precisely the kryptonite to the path that would maximize pain for those products. I don't want to mention any names…

Rodrigo: **00:33:16** So, the problem is what do you do with a fund that big, as if you're the issuer, right? If you're a hedge fund, you can always say, listen, I'm going to give your money back. This is the amount of money I can trade, or I can do the best I can do. When you're a public fund. This is the same thing with Cathy Wood, right? When you're a public fund, when you're an exchange traded fund, a mutual fund, you have no control over the flows. You have two options. You either take flows, or you close the fund. Right? I guess you could rewrite the prospectus to do something different. But again, it's just such a -- it's a problem for a lot of these public funds. I don't know if they have any other options than what they have, you know, what I mean?

Cem: **00:33:55** I did a long-vol webinar yesterday for prospective customers. And one of the questions I got was exactly this. It's like, wow, this performance is great. Like, why don't you just launch an ETF? And you could get raise a billion dollars. Why aren't you doing this? It's exactly what you said, right? The second everybody's trading our strategy, right, and has a sense of what we're doing, you have to deal with the people trading your strategy. You also have to provide daily liquidity and there's a massive disadvantage to being an ETF and it reflects in the performance of these products. But people want easy, people don't want to think and people are scared of private funds because they seem opaque and all these other things. But the reality is there's more edge, there's more flexibility. There's immense benefit to not having to worry about all those problems like you mentioned that cause a lot of stress, as we've seen in different periods. Just look at XIV right?

Rodrigo: **00:35:00** Adam's muted.

Adam: **00:35:02** Yeah. We had a long chat about that exact challenge in last week's riffs where for so long, we published most of our best research because it was all kind of derivative, right? It was based on either consolidating research from a few other transparent sources, or it was describing an effect that had what we assumed to be, effectively infinite capacity, right? And as soon as we actually began to run genuine alpha strategies that hadn't been published before, and where there are no rules that others can follow, then our publishing dropped off dramatically, and we have a lot less talk about it. It's also impacted the types of products that we want to launch, right? Like, we constantly have people saying, why don't you launch an ETF? The reality is, we have to make so many compromises to how we would run the strategy, if we were to publish it, run it in ETF, that we can't hold our heads up and run it properly. So, I totally, totally understand that trade off.

Cem: **00:36:08** That's a moral hazard, right? I mean, people like JP Morgan doesn't care. They don't care. They don't care about the performance, they don't care they're getting their 1%.

Rodrigo: **00:36:15** JP Morgan is not going to take that off the table.

Cem: **00:36:19** We're just providing a product because there's demand. But you kind of get what you pay for.

Rodrigo: **00:36:23** And there's comfort as an advisor in giving money to an $18 billion fund. Right? If everybody's doing it …

Cem: **00:36:31** It's an ETF. It's easy, right? Just get in, get out.

Macro Frameworks

Adam: **00:36:35** That's right. Okay. That was super interesting on the volatility side. I know you are passionate, also about macro. And we do spend quite a lot of time on this broadcast on macro. So, I did want to make sure that we had a chance to spend some time on your macro framework and what you're observing and kind of the trajectory that you are anticipating over the next little while. So, maybe to kind of start us off. You know, where do you think we are in this cycle? Right? And just, and how prepared do you think that the sort of kind of asset weighted average market participants are for the environment that we're likely to see over the next five to 10 years? So, that's a broad enough kind of question to allow you to go in a few different directions.

Cem: **00:37:34** Yeah. I mean, I like to start at the beginning. I have a broad thesis, right, of where we are in a big macro cycle. And I've been talking about this for a year and a half or two years now very publicly, and you know, things have definitely gone in that direction. But I think people are starting to listen a bit more. But this almost starts with philosophy at its core. Right? I think it's important to start there and have a grounding. It's human nature, animals, natural selection, right? We have free market economics, is essentially natural selection. It's the right, it's competitive drive that gets things ultimately to an optimal place. That is the natural state of things, right.

And free markets have, generally are dominant and get us wealthy, get more money and successful corporations get more money, and eventually that drives advancement. When you give due monetary policy, right, that's essentially, you're stoking the flames of free market economics on steroids. It's free money, right? Think of it as -- I've used this analogy on Twitter, but think of it as the Mesozoic era for dinosaurs and unlimited oxygen, right? Create really big dinosaurs, right? If you give unlimited resources, which is capital to corporations, you create a technological revolution. You also create immense growth, right? At least maybe not in dollars, profit measurement, but definitely in terms of advancement. And that's what we've seen. Yeah, innovation. Exactly. So, that's what we've seen. Really, it's accelerated over the last 40 years.

So, monetary policy became dominant, because if you think about it, the US government was created not to move fast, was made to not let absolute power corrupt absolutely. It has checks and balances, and to make it difficult to pass laws. And that created a lot of crisis over many years that people weren't okay with. And eventually they said, we need to be able to react more quickly. We need somebody to manage this economy a little bit more dynamically. So, they created the Federal Reserve, right? And the Federal Reserve became more and more dominant, and particularly once we went off, moved to fiat, went off the gold standard, and more and more leverage and more power. Right?

And so what's happened is, the Fed has been the only game in town. They have solved all financial problems as we've gone, been very reactive and been completely dominant, and particularly in the last 20-some years. As that's happened, right, that's created this benevolence cycle. It's created again, it's a natural selection competitive world where money flows to the top, and the best ideas win. And ultimately, they get bigger and bigger, and they get more and more profit. We've had 1.75% GDP growth in real terms over the last 40 years.

Of that, 0.75% of that has gone to the median person. So, 1%, think about that, 1%, more than half of the benefits have gone to the top 1%. One percent for the whole economy going to the top 1%, means 100% growth for that 1% compounded every year for 40 years. It's kind of mind-blowing. I mean, if you think about the compounding effect.

So, just like in nature, it's caused inequality, and all the benefits have gone to the top. And it's also created a technological revolution, as I mentioned. I mean, if you think about it, as a kid, I don't know how old you guys are, I'm 45. But as a kid, I watched the Jetson's and read the book 1984, and then read the book 2000 Space Odyssey, and the future was always science fiction. It never came nearly quick enough. People nowadays, it comes quicker than you could ever possibly imagine or cloning and mapping the DNA and going to the moon, going to Mars and creating all kinds of incredible inventions. And I think people have lost sight. People just think that's the natural Moore's law, things are just doubling and doubling and doubling, they're going to go, that's a function of oxygen, we've been providing so much oxygen, so much resources, and money, right, to the system.

Anyway, so the point is, that could go on forever and it's … because that's deflationary, right? And that allows the Fed to do more. You send money to Planet Palo Alto, as I call it, you send money off to this sophisticated planet, where they make incredible new goods, all these corporations. And that money doesn't go to individuals for the most part, right? That goes to creating new technologies, Amazons, and Ubers, and Tesla's and all kinds of things that then are sent back to our little planet here. And that is not inflation. That's deflation at the end of the day, and also promotes globalization, the more money goes to corporations, the more they're going to want to reduce their costs. And so we've had a massive push for globalization and global profits. So, it's been a 40 year cycle of this. And I could go on forever. And it'd be wonderful, right? Except for one problem. There's human beings in the system.

And human beings believe in some concepts that are actually not natural concepts if you think about them. Justice, liberty, equality and an idea that when I look at you, and you look at me, we have some commonality. And there should be some level of fairness, right? You can't just let us starve here in the streets while you create immense technological things. And so these two, and they're essentially the left and right, right? They're populism versus free market economics, right. The story's as old as time, right? You know, libertarianism versus communism, however you want to put it, but at the end of the day, natural selection, and this thing has a life of its own. It eventually takes hold again. But along the way, people say it's not fair. And then there has to be a rebalance that happens. This is not 100 years of history. This is 100,000 years of human history and goes on beyond that. So, I know we started at the very beginning in philosophy but I think it's very important to understand this dynamic and we just went too far. We went too far. Right? And that's what always happens. It always goes too far. Somebody says let them eat cake.

And at some point populism rears its head and populism started rearing its head about eight, nine years ago. You heard a lot of books written about inequality, people started talking about it globally, populist leaders globally started to come more to power, whether you're like Donald Trump or Bernie Sanders, they both move left. They both are incredibly populous. One is talking to poor white people in West Virginia, and the other one's talking about, to poor urban people in Chicago, right? You know, it is but there's still the poor working class that has underperformed for 40 years that feels, and the young, who feel that the system hasn't worked for them, and it's not fair. And your mom is saying to you, you know, life isn't fair. That's fine.

But at some point, you're only going to put up with it for so long. And so there's populism built and built and built and built. Donald Trump brought the right left, left one even more left, and then COVID happened and that was the spark, right? And that spark led to $12 trillion of fiscal policy. That's a populist revolution by any other name. That's 10 times an order of magnitude bigger in real terms and the new deal, adjusted for the size of the economy, it's about the same. But this is not the Great Depression. The new deal plugged a decade-long hole called the Great Depression. And that response is not monetary policy, That money doesn't go to Planet Palo Alto. That money goes to people and has a velocity of one.

And not surprisingly, that's created inflation. It always does. Populism always creates inflation. That's a rebalancing to people, people are getting money. They haven't had money, what do they do with money? They spend it. They don't buy investments on the bottom, they buy goods. They go from eating less than enough to enough, or maybe just eating a little better, spending a little bit more, right? And so that populist impulse is the key here to the macro view. Here we are. And once that populism starts, historically, it doesn't just stop. And the reason is, populism leads to inflation, and inflation leads to more populism. At the end of the day, inflation is a flat, flat tax.

All of a sudden, people thought they were doing better. Everybody was celebrating during COVID. Look at how much money I have in my bank. And then all of a sudden, everything in a bank got worth 10% or less, right, or whatever it is, right. And that makes people even more angry and more frustrated, right? The system is broken, it's not working for me. And that's true globally. So, during times like that, you get more geopolitical stress, you get an unwind of globalization, you go from a collaboration game to a competition game, broadly. People are scrambling for resources.

And importantly, the more that starts, the more long term expectations of inflation get rooted, the more people start moving forward, you know, buying inventories and you know, all kinds of demand. On top of that, if interest rates are now expected to be 6%, for the next two years, or whatever it is, right? People, well, you can't keep interest rates low. Because at the end of the day, institutions will borrow at 3%, leverage everything that they can pin down and that they know is going to appreciate to 6%. And then they're going to push that. What does that do? That pushes inflation even higher. We're seeing these cycles, right?

This is a -- we're in a benevolent cycle, for markets and a bad for, for the average person, right from the lower working class. And now labor is starting to, and populism is starting to raise its head. And I think that's the core concept that we have to look at and understand. And again, we were very vocal about this starting about two years ago when COVID happened. So, this is all very much played out this way. And I think this concept of, the Fed is trying to convince, that's what the whole transitory thing was about. People are like, the Fed's an idiot, how do they think it was transitory? They're not idiots. They're trying to convince the market that it's transitory so that the market doesn't set expectations, run ahead of it. And they couldn't. I'm not surprised that they couldn't, because these things have much bigger and more powerful underlying effects that are hard to avoid.

And now the Fed is stuck. The Fed's in a box. We were in this benevolent cycle and now the Fed has no choice. They have their hands tied behind their back. They cannot not -- they had a dual mandate and for the longest time. Doing monetary policy was good for both. It was deflationary, and stimulated to maximum employment. But now that was all deflationary. Now, we're asking the Fed to remove liquidity, and somehow go from what they call deflation, to also cause deflation, right? You're taking money away from Planet Palo Alto and supply, right, to somehow reduce inflation, which is people -- the money that people have. And the only real way they can do that is with a major lag A and B, it's essentially dropping, like blowing up the economy. You can clear the underbrush by dropping a nuclear bomb on the forest.

I'm not saying the Fed can't stop inflation. But that's essentially what they have to do, they have to blow up the economy, blow up supply and demand via a channel that is not optimal. And really the, particularly in this time, day and age in the 70s, we talked about Volcker and whatnot. In the 70s, labor was an intrinsic important input to corporate activity. Technology and globalization has created much less connection there. So, if you take money away from corporations, yeah, they'll fire some people, right? But that has less to do with the inputs of those corporations than it used to. So, they really have their hands tied behind their back.

And if you think about valuation, particularly price to sales, I mean, get into the difference between earnings and sales and why margins are records and it all ties into this, right. You know, that's a problem. The Fed is not here to save us anymore. Bonds are not here to save you anymore. Right? Both those things are actually going the other way. And so we're kind of, I've used the analogy of you know, you're on a jet and the liquidity has been firing and we've been going higher and higher and higher and we're at 30,000 feet, and being at 30,000 feet on that plane, you feel fine. It doesn't really matter, because liquidity's firing. But we're at 30,000 feet and the engines are going pu-pu-pu-pu. And so, you know.

The Fed and Inflation

Rodrigo: **00:50:15** Yeah, it's just an interesting thing because you probably don't know this about me. But I'm Peruvian and we emigrated out of Peru in 89, because of a hyperinflationary period, 7,200% in six months. And what you saw was, in the beginning of it in the mid-80s, you saw two things, right? Number one is the realization that the government can print money when there's a deflationary situation, and you want to bump up the right assets, which is kind of investment assets. But when you start giving money to the people, which is what the President started doing. He started handing out wads of money to people like literally both in their bank accounts, but you'd see videos of him going to towns and handing out wads of money.

You put that money into people's pockets, it leads to too much -- that's when it leads too much money chasing too few goods, right? Versus what has been happening in the last 30 years, 40 years, which is any liquidity that the Fed injected went to the wealth effect and asset prices for the very wealthy, right. That's a good type of inflation. That's the inflation that helped them deal with when they only had to think about growth dynamics. High growth, let's ease up. Low growth, let's print as much money and add liquidity to the system to get that wealth effect going. And as you said, when the moment you give money in people's pockets, now we have, and too much money chasing goods that the Fed can't produce, right? The Fed can't create more food, more grains, more copper. That's not in their purview. The economy needs to do that. Right?

So, it is -- that's the first …. What ended up happening in 89 is that people started anticipating that. And so you would see in the storefronts, people change. They'd have little -- they'd have that eraser that -- what's it called, the marker, erase marker, and they update their prices on an hourly basis, like the soup would cost something different in the morning than it would in the afternoon. Right? So, that's the second, that's what the Fed was trying to do by saying, oh, it's transitory. We'll get there. Don't worry about it. Right? Don't get ahead of me, I'm going to fix this, right.

And the question really, is, how fixable this is? What would the Fed need to do today to get ahead of inflation? And what would the consequence of getting ahead of inflation be? And now that inflation for 40 years, inflation has not been a hindrance, it has not been a limiting factor for the Fed, right, true inflation. Now that it is, where can we expect the Fed to be? Will they get ahead of inflation? Will they cause that bomb? Or like do you have a view of a range here where rates can go?

Cem: **00:52:54** Yeah. I mean, look, I get this all the time from people. And again, I've been talking about this for a couple years and it's obviously, now people are saying, well, look fiscal happened, but at least people realize that fiscal caused this. So, they're not going to do any more, is what people argue. And I think people are missing the complete -- the forest from the trees. Politically, this is only making populism worse. And people aren't going to call -- they're not going to call them price controls, they're not going to call it fiscal stimulus. But you better believe they're going to want to help their constituents with the price increases. And inevitably price controls of some kind happened. This is just what happens.

When people want help on the bottom, they're being hurt they're going to come, you know, with pitchforks in the street, if not, and they end up giving money to these people. And you can -- you'll get first time homebuyer tax credits, watch. You're going to get gas tax holidays, watch. All these things sound really nice to the public, but they're fiscal stimulus, and they actually make inflation worse. They're a little band aids that make people worse. And so the Fed not only has to deal with what's in front of them now, they have to deal with this continued impulse, which is almost inevitable. And it's not going to be the same, it's not going to be sending $100-1,000 checks to people, it's not going to be and there'll be mixes of supply side responses as well.

But once this -- this is not something that you can solve in months, or even a year or two. And it's almost inevitable that these expectations take hold. The alternative is a depression. You know, the alternative is not feasible or possible, politically. It's completely politically unpalatable. And I think that's the key. I mean, you touched on it and I kind of mentioned it as the difference between monetary and fiscal policy is dramatically misunderstood by policymakers, by individuals. And I think that's what led people to completely miss this. Like, we've already done $25 trillion of stimulus, right? It's not inflationary, we're never going to see inflation again, right? But the difference is if you print $25 trillion, put it in a little lockbox over here, right, or a little machine that makes goods, and then you …

Adam: **00:55:14** … Jeff Bezos bank account and Elon Musk's bank account where their marginal propensity to spend is zero, …

Cem:	**00:55:21**	Correct. And even worse than that, they are not willing to spend. Same thing, right? But even worse than that spending, they're going to keep producing things that put big box stores out of business, that put cab drivers out of business, that make things more efficient, and need less inputs, and send jobs overseas, and do all the things that makes the system much more efficient, great technological revolution, right? But at the end of the day, not only is that money not entering the market, going into their bank accounts, but they're reinvesting it in things that are ultimately hurting labor or at least sending less money to labor, ultimately.
Adam:	**00:56:00**	Well, the problem is, or a problem is that the Neo-Keynesian argument for globalization was always that, yeah, you're going to have 10 or 15, maybe 20 years of mercantilism, where we're going to offshore labor, and we're going to redistribute the types of jobs that are done onshore versus offshore, and companies are going to get more efficient. But then those mercantilist economies are going to turn into first world consumer driven economies. And we're going to have a virtuous cycle where, yeah, labor is going to suffer for 10 or 15 years, but eventually, we are going to specialize in higher value. We, being the first world, will specialize in higher value production. And we will sell that higher value production to a new first world middle class that has emerged as a function of sort of climbing out of mercantilism into a normal kind of developed consumer-led western economy, right? And I guess one of the big challenges is that China, especially, never outgrew its mercantilist roots, right? And so they put a cap on their exchange rate, they have never introduced policies that incentivize consumption, they've always run their economy, as you know, a managed economy largely built on investment, government-led investment in infrastructure and production. And so that virtuous cycle never took hold, right. And so now we're left with a hollowed out manufacturing base in many western democracies, and the other side of the equation has not materialized. And in the middle of this recognition, we've got what all points alert, that maybe we aren't globally as friendly as we all thought we were. That maybe we can't depend on Russia to export the commodities that we need for this globalization cycle to persist. Maybe we can't count on China to produce the goods that we need. Maybe it's strategic goods, or maybe just regular everyday goods, if they're going to go into lockdowns to prevent -- to implement a zero COVID type policy, right? So, you're now shifting from this vision of maximizing efficiency to a vision to maximize resiliency. And that requires a complete revisioning of the operation of the global economy, which is also highly inflationary, I think.
Cem:	**00:58:46**	Yeah. And that's not a coincidence. Those things are not independent factors, right? The unwind of globalization is very much correlated with inflation, right?

When inflation happens, the populace are unhappy, they want more. And the wealthy in a country are not willing to give up more. So, generally the solution is, well, let's take it from our competitors, the people outside the system. And it ends up being and this is what started with Donald Trump, right, the counter-China, the tariffs, etc.. That was a populist impulse. Right? And that's naturally what happens. The xenophobia that develops and the blaming of others, it becomes a, everybody's scrambling over limited, what's perceived as limited supply.

And that forces less globalization, which forces even more inflation, right? But these are all a rebalancing, right? The people who -- the have nots wanting to have again, and not willing to settle without it, and that rebalancing means the people in China who were working for less and getting better wages, right? They're going to have to see some of that unwind, and those people aren't willing to go backwards. And so there's this push and pull that leads to and eventually, it becomes, if a country or an entity is in a point of weakness, it makes them existentially scared and generally causes them to lash out. That's why Germany lashed out after Weimar, Germany, right? Inflation drove World War Two. People forget what drove it.

You know, if you look at Russia, if you look at China, they have massive demographic problems. China is going to go from 1.2 billion to 700 million people in the next 25 years. They're going to lose 500 million people in population. They have unsecured means of technology and the inputs that they need in terms of microprocessors. They have not enough commodities for the consumption, even that they need, even at 700 million. They are completely commodity insecure and they have great aspirations, right? And so you pair this proud country with great aspirations with vulnerability and a ton of inflation and stress, and you get what we're getting now.

Same with Russia. Russia is a massive demographic decline. Yes, they have commodities, right. But they've been hemmed in and they've been -- they have been in significant demographic decline. Not just demographic but decline otherwise. And again, I would argue that if China wasn't willing to back Russia, Russia never would have done this. Right? And so that general fear and angst that comes from these two entities that are actually the kind of countries that are in the most demographic decline as a group, most at risk by the west trying to reassure their middle class and deal with populism, where also as the US dollar, we're going to be able to export a significant amount of inflation. Right?

Now we'll be able to control inflation by a stronger dollar, ultimately making things cheaper to import, and we're going to export that inflation. Historically, during these … times, look at 97-98, right, when we were raising interest rates and dollar strength happens, what happens? You get emerging market crises.

You get the Chinese, the Asian crisis, you get the Russian ruble crisis, dollar denominated debt blows up. And not to mention these autocracies generally aren't as flexible as the democracies in the West. And they lead to real people with pitchforks in the streets, as opposed to people … major regime changes.

So, I mean, it's not a surprise. During times of inflation, these things happen. They're not just correlated, they're structurally connected. And so you should expect that in the next five to 10 years, next 10 years, there'll be a lot of new lines on maps. I wouldn't be shocked if -- we are in World War Three going forward. And that's scary. And that means something different than what World War Two is. We're in a very different time, they'll be very different effects. But there's real competition happening in the world right now. And a need to preserve long-term existential angst that is driving a lot of these. So, these all -- it's a negative feedback loop, like I mentioned, and it works in so many ways. But you can't go 40 years in a benevolent cycle and deviate that far from an equilibrium and not expect what we're about to kind of experience.

Rodrigo: **01:03:05** And look, the way I see it, it's a cycle, right? It's a secular cycle. And it's lasted 40 years and it only lasts 40 to 70 years, if you look at the Kondratiev waves and all that fun stuff. But it's also rebalancing, as you mentioned. Not all is bad for everybody. I mean, certainly developed nations that have, when you think about the growth of GDP in the United States for example, it actually has gone up because of globalization, except that most of it has gone to a 1%, right? And so you've hollowed out the middle class. Now, we're going into a situation where manufacturing is coming back to the US, where there's going to be a lower gap and between the haves and the have nots, and we're going to move towards a more equitable society, and other excesses, right? The idea that people my age and younger can afford to buy a house. And so prices have become so excessive that there's this distain for the rich.

You know, as we rebalance back to a normal environment where you can finally afford, yes, at higher interest rates, but finally afford a home, be able to buy stocks at a reasonable price and so on and so forth. There's a lot of good that will come through this painful period. You know, we always tend to focus too much on look how terrible this all is. Let me tell you, as a Latin American, as an immigrant coming into Canada, I remember one of my first memories coming into the supermarket was my mom having a panic attack, because of the amount of choice that existed in that grocery store. Right? When she went to a grocery store in Peru, she knew what she needed to get. You get what you need and you get out.

Today, there's 50 brands of everything. 50 options of everything. There's no need for that. In fact, I think it creates a level of anxiety right? When we start focusing on these luxury beliefs, right, when I see people complain in developed nations about microaggressions, that if you actually look at any other country are real aggressions. But they're looking within. All of a sudden those luxury beliefs go away, and you start focusing on working the real problems that you now have in common with the rest of the world.

So, I think ultimately, it is a cycle. And it is a cycle of excesses and haves and have nots, and this might be painful. We're going to have to -- we're going to go from a 40-year period of creating growth, to maybe a 10 to 15 year period of replacing growth that is going away. And that's okay. Recognizing our limits, and recognizing our growth limits, understanding being appreciative of what we have is, I think, from a psychological perspective going to be a massive boon for my children. I feel like I -- they're going to be lucky that they're going to struggle through this in a way. So, I do want to put that out there as something of value.

Cem: **01:05:58** I completely agree from a 30,000 foot view, right. Fifteen years seems like forever, and it's going to be a difficult rebalancing. I mean, you'll have creative destruction, you'll have all the malinvestment will have to go. I mean, it's not going to be a pretty 15 years.

Adam: **01:06:10** There's a lot of malinvestment too.

Cem: **01:06:14** Yeah, I mean, that's what happens in 40 years, right, and free money. But to your point, we would not have had the 40 years of peace and growth and technological innovation if interest rates -- if we didn't get the 68 to 82 period where the market went nowhere in nominal terms, and lost 70% of its value and interest rates went to 20. Right? Because what that did was that created potential energy to do supply side economics for 40 years. And so, and it built a middle class, right, to drive the demand that we could slowly hollow out again, right? But like, the reality is, that's the way these things go. So, it is a rebalancing.

I'll go take it one step further. Here in the US, at least, I would say this is a blessing in disguise. I think if we went any further, if these, you know, this inequality and the cracks in the system had gone further, it could be much worse. If you look at World War Two, America wouldn't be where it is if it hadn't gone through that period. The strength and importance of and the benefits of America, which is security from a commodities perspective, of energy, and food security, an island on the other side of the world, with the biggest military and the best innovative, innovative technologies of the world, all of that is now being more appreciated, right, where Europe didn't like us so much a couple years ago, right? All of a sudden Europe's very, very kind of friendly. Dollar strength is a benefit that we gained during periods of these times like this.

So, I think what we're about to go through is actually a time of rebalancing here in the US as well. A chance to again, our founding fathers created a system that needed crises in order for the system to heal itself, right, to pass laws, to pass --

		you know, when's the last time we had a constitutional amendment, right? When's the last time we passed something incredibly meaningful in terms of revitalizing our… and it seems like we're furthest from the case now. But the stress and the pressure that we will be under in the next 15 years will cause demand and populism will cause a rejuvenation, if you will. It's either going to blow it up, or it's going to help fix the system for the future. And I'm optimistic, because this hasn't gone another 20-30 years, that this will cause a revitalization of what America is, and what we stand for. And the importance of that in opposition to everything that's -- …
Rodrigo:	**01:08:41**	Focusing on real issues. I sound like a politician. Isn't that what they say, the real issues of America. But I think generally, this will force them to actually consider the real issues.
Cem:	**01:08:50**	Correct. Because the populist and populism means people care, and actually demand change.
Rodrigo:	**01:08:54**	On both sides.
Cem:	**01:08:55**	But with the Fed in control the whole time, you weren't going to get crisis and you never got real change, because you didn't -- there was no impetus to force that change. And so this is a period of crisis. But crisis …
Adam:	**01:09:08**	Yeah, we always say nobody goes to God on prom night, right? Crisis necessitates change and we need crises in order to --
Cem:	**01:09:17**	Yeah, we started with philosophy for this reason, and this is a big picture, right? This is not, this is much more, you know, macro is not just what's happening with housing or whatever. You know, there's a bigger picture at play here. And I think, particularly at times when we're at the turning point in regime change, which I really do believe we're at, inflation is the key. It's important to see the big picture.
Adam:	**01:09:41**	Yeah, … in another world.
Rodrigo:	**01:09:41**	Do, we have a question from the audience. Sorry, Adam…
Adam:	**01:09:43**	Okay, go for it. Yeah.
Rodrigo:	**01:09:44**	Yeah, just what about the counter-argument that inflation is driven by under-investment in energy?
Cem:	**01:09:51**	Under-investment? Well, that's I mean, commodity inflation definitely has. ESG and you know, the investment in that type of, you know, the worrying about global warming, right, essentially, which is legitimate. But our ability to worry about those things at the cost of our existential kind of energy demands, has

definitely been a major, major driver of energy inflation. So, I'm not I'm not disregarding that. That's not -- that's part of the story. But our willingness to do those things is based on malinvestment, right? It's based on us pursuing things that are not necessarily practical.

Rodrigo: **01:09:30** Luxury beliefs, right?

Cem: **01:09:32** Exactly, exactly. So, these things are connected. I 100% agree that, and again, I believe in ESG, and I agree with the importance of it. Global warming is an existential threat to us longer term. But there are other solutions, and I'll point to nuclear, and this is why I think nuclear is a major, major area of growth investment in the next 20-15 years plus. But investing in wind farms and solar, which are very, very inefficient, even with the advancements that we've seen, and that we're likely to see, has led to a massive underinvestment, which is only going to exacerbate the problems in the short term.

Rodrigo: **01:11:14** Yeah, I think the -- I don't know, if it's a counter argument. It has been a malinvestment in energies. And we know that the cycle for reinvestment for having CapEx to that space doesn't take six months, it takes years. And so whatever the malinvestment was, and now we got yes, we're going to start ramping that up, well, we ain't going to see it for a while. And that's just one aspect, right? The energy aspect is one part of this very broad story that I think you've covered. So, regardless, it is going to take a while. If the only thing that's causing this, which I disagree with, the only thing that's causing this is the lack of investment in energy.

Cem: **01:11:52** Yeah. And again, talking about how things are connected geopolitically, it's not a surprise that Russia is doing what it's doing. It has very much seen this coming, it made Europe more dependent on it. It has seen the commodity edge that they have, and the ability to create a massively inflationary environment that ultimately creates more revenues for them in a situation where it would have enough strength to capitalize here, when the rest of the world is unwilling to maybe move, because they're dealing with other populist internal problems. So, no, again, you see geopolitical stress when people are -- when there's an opening opportunistically, yeah. So, these are all connected. And I think it's important to see the bigger picture.

Nuclear

Rodrigo: **01:12:40** I do wonder how Germany is -- how quickly Germany is going to move back to nuclear. It doesn't seem like they're doing much at all, which is shocking.

Cem: **01:12:48** I mean, that's got to go on the list of like, most historically, stupid blunders. You know, again, I've always been -- my dad is a PhD structural engineer, designs offshore oil platforms, so I grew up in the energy space. And he's been telling me that since I was five years old that nuclear is the promise of the future. And it's crazy that people don't invest more in nuclear, right? I mean, it's based on probably because big events happen, and they'll stick in people's memories. But if you actually look at the impact of nuclear versus even solar and even wind farms, like it's actually the impact, environmentally is way less, they just -- there's much more emotional kind of fear tied to when an event or thing happens. And that's such an unfortunate thing. I mean, when we finally commit to investing fully in nuclear, the efficiency, *EOEI*, energy on energy investment is 30 to one. It will cause a broad revolution in output, right, and lower cost input. And it's a shame that it takes so long to invest, and we've been so under-investing in it for as long as we have.

Fed Options

Rodrigo: **01:14:04** Yeah. You know, there's one other question here, does the Fed have any other option to control inflation besides creating or leading us into a recession? I have thoughts here. But do you have --

Cem: **01:14:15** I mean, how do they reduce demand or increase supply, right? And that's for goods. How do they reduce demand? You could argue and increasing interest rates reduces some demand for real estate and for some other maybe credit card debt, but it's relatively small compared to sending people cheques, right? And so, that will have some effect. The wealth effect, reducing assets' prices will go to people. But again, who owns assets? Is it the bottom 50% or is it the top? And so how do you take money away from the 20th, the 30th, the 40th, the 50th percentile? It's hard with interest rates. It's hard if they don't own assets, they don't own assets. How do you do that with monetary policy? So, the only real answer is to increase demand, not demand. I mean, to increase supply, to do a supply side answer, and that's what monetary policy is good for.

Ironically, increasing supply, they should be doing more monetary policy, not less. You know, they should be giving the energy patch unlimited zero interest loans, right. Nuclear, like, here you go, free money. Build a nuclear plant tomorrow. You know, that's really the answer. Now, that's completely the antithesis of what the Fed is doing, or what they would ever consider doing. And they would be seen as you know, completely lax in their duties by doing it. But ironically you can argue that that's actually the answer. We need a supply side response. And if they're not willing to do it, government needs to do it. And I'm not sure that we're going to get that because people and populism is the name of the game.

Adam: **01:16:09** Well, the challenge is that you've got a government that has demonstrated an inability to act. Right? And so, I mean, you can lower interest rates generally, and incentivize supply in certain industries. And while simultaneously penalizing demand in other industries by, for example, setting different rates on credit or setting different collateral thresholds on asset backed loans, etc. But all of that requires policy intervention, and in many cases, acts of Congress. And I mean, sadly, we're just not in a place politically, where we're able to take the actions that are required to sort of more with more agility, and more strategically, provide incentives and credit and money, where we need supply to increase, while simultaneously managing supply and demand in other sectors that are clearly way out of equilibrium, right?

Cem: **01:17:28** I think -- I mean, I agree that up until recently, right, there has been an inability for Congress and for government to act. We did pass $12 trillion of fiscal stimulus. I wouldn't say it's the right, you know, it was too much and too quick, No, no, I agree. But what drove it was the pressure that had already built. And I think, there's way more pressure in the system, which is going to force more. Now, that doesn't mean they're going to pass the right things. They're going to do everything wrong until they eventually get it right. But that pressure will build and build and build until they do the right thing.

Rodrigo: **01:18:09** Yeah. Well, things are -- the words that are coming out are like subsidizing oil prices, or having a plunge protection program where it gets too high, they're going to sell. It's just so -- the things I'm hearing are just things I've heard in South America over and over in Brazil, in Argentina. Over and over again, that didn't work just makes things worse. I just think from the perspective of what the Fed can do, it almost doesn't matter. Right? Talking about the distribution of outcomes, again, what people need to understand is that it was almost bimodal before. It was, are we going to -- is there liquidity? Is there going to be excess liquidity in the market or is there going to be a lack of liquidity? And you're either all in on risk assets, or out.

Now this other dimensionality of inflation, and populism, everything that we've discussed, creates a broader array of outcomes that we need to prepare for, that we haven't needed to prepare for, for 40 years. Right? The Fed, yes, will need to thread that needle of they do want to inflate, they do want to be below the inflation rate, so they can inflate away certain assets, right? They want to help those indebted people to not have as much debt. And so there is going to be a -- they want to let it run hot. Okay. Well, can't let it run too hot. We talked about the reflexivity of that. We talked about that people start anticipating inflation, that's a problem. So, they need to manage that.

But there's more room for error in that as you do that, you're also going to possibly cause a recession. You don't want it to cause a depression, right? So, it just means that there's more opportunities to make mistakes. And it requires investors to think differently about their portfolios. Just going back to like protecting oneself, right? How do you diversify a portfolio to deal with all of those outcomes? Well, now you have to deal with commodities. You have to deal with option contracts that can provide protection and in case it really, somebody really fucks up and there's a massive liquidity gap down, right? So, long volatility strategies, you know, commodities trading strategies. That needs to be part of the portfolio. 60/40 ain't going to do it for you anymore.

Active Management

Cem: **01:20:11** Yeah. No, I think we talked about supply and demand as it relates to goods and inflation, right? But important to think about the financial market, and supply and demand, in terms of how it's developed. When you have 40 years of a massive monetary policy and bonds, interest rates going down secularly for 40 years, while stocks go up, obviously, that leads to a certain outcome. It's very easy for wealth advisors to not learn anything else, or not sell anything else, but collect more and more assets by selling some 60/40, 70/30 process because that's all that matters, right? It worked, because we were in a secular time when that was dominant.

But it's completely hollowed out active management. You know, if 68 to 82, like I said, markets nominally went nowhere. Do you think passive investment was a thing from 68 to 82? People think it's like some technological revolution that we've found passive investment. Passive investment never worked until 40 years ago, and it worked because of the Fed, because of monetary policy. And why would you do active management, what's the point? It's expensive, it's not easy. It's hard to scale, why would you do any of that? Right? So …

Rodrigo: **01:21:26** Back to everything becoming easy, everything was easy. The 60/40 portfolio.

Cem: **01:21:33** Yeah. And I talked to my investors all the time. And it's funny, to a person, that, no matter who you are, people think they are investors. Everybody thinks they're an investor. Everybody thinks that they know how markets work. You just buy it when it goes down, and your dollar cost average, and over the long run, you make money. And you buy bonds too and you do some asset diversification, and that balances out. That's probably what everybody's been taught. And people get really confused when you all of a sudden say, wait a second, it's a little more complicated than that.

And so guess what, they're lawyers and they're -- you're not going to go defend yourself in a court of law, you're not going to go do surgery on yourself. There's a certain expertise and certain people are better at certain things because they have experience, than others. Active management matters. Having an edge matters. But all that stuff has been hollowed out. There's almost very few entities that do that anymore. And that do it with meaningful edge. And the value of that, all of a sudden is coming to light again. And I think we're going to have really a bull market in active management, and broadly different non-correlated strategies and, and different types of products. And I think most wealth advisors and most people are woefully underprepared for what, what we're going to see, in the next 10-15 years.

Rodrigo: **01:22:52** I will say this, I think you're right. I think there has been a hollowing out of active management. But what there has been is advancement in certain regulatory laws that allow for like liquid alternatives, active ETFs. Like the infrastructure has actually evolved, and improved over the last 10-15 years, in a way that once active management comes into vogue, you will have a plug and play approach in many respects to do the right things for investors, I think, advisors today have more tools at their disposal to do better than they certainly did 20 years ago, right? Like 20-30 years ago, you couldn't get a passive exposure to commodities in an easy way. You couldn't get the kind of stacked return fund managers that we have been talking about in this podcast for the last six to nine months, right, where you get a beta, you put $1 in, you get $1 beta, and then another dollar of alpha, right? So, you got capital efficiency within mutual funds, exchange, traded funds, and so on.

And funds, then include actually proper option overlays that might make sense in this environment. So, while indeed, the options available are small currently, the infrastructure is great. And those options available are much better and much broader than what existed 20 years ago. So, if you know, if advisors and investors want to do better, they want to thrive, not just kind of barely hold on, but survive. You just need to like buckle down, act as if you didn't invest in the last 40 years. Find out what people were doing in the 70s and start doing more of that. We just said there needs to be more of these podcasts, there needs to be some wake up calls here.

Adam: **01:24:33** We probably have three or four times as many advisors as the markets will support 10 years from now, right? I mean, it's just been, well, just like real estate agents, right? I mean, it's just been the most incredible ride, right? As you've got all these tailwinds, your income grows 8% a year sitting on your hands. And if you decide to build a business as well, and it grows at an even more rapid clip, right. But it's, yeah, it's been an easy ride. And I think the next 10 or 15 years are going to drive a lot of those advisors who came into the market, maybe in the early 80s, and early 90s, maybe into retirement with really nice nest eggs. And they'll just generally be fewer, and maybe advisors with a different skill set who are better equipped to maybe navigate the more challenging years ahead.

Cem: **01:25:37** Yeah. But it's been all about low cost, right? Low cost investment, right, because it's easy, right? You know, making money is easy. I just think that -- I think we're going to see a significant move away from that.

Rodrigo: **01:25:50** Well, it's funny, because people call that index investing though. Right? And it wasn't ever index investing. It was low cost investing in a very big concentrated bet, right? It's a very active bet that investors, especially in the United States have made in their portfolios, which is a concentrated equity portfolio, it's not even 60/40 anymore. And like, who does that? And really is more like 80/20, I would say now. And then the other 20 is like private equity and all these other like, equity-like income products. So, it's just been this view that passive investing is the way to go. And in fact, what's worked is a concentrated domestic equity portfolio that is very low cost, right. It's just a bet that's really worked, an incredibly risky bet that's work. And now diversification is back, active management is back. And like Adam said, I think there's going to be a concentrated group of professionals in the space that are going to, advisors or even outsourced CIOs and the like, that are going to reap the benefits here. And some that are going to get hurt really badly. It'll be interesting to see.

Positioning for the Future

Adam: **01:27:03** Cem, just before we leave, because we are running up against 90 minutes here, any broad statements on how investors might position their portfolios for the next five to 10 years? Aside from buying well run options strategies?

Cem: **01:27:22** Yeah. I have three funds I'd like you to look at. No. Seriously, though, look, we are in a, this is not fear mongering just the truth is we are in a leveraged environment. And with leverage comes potential energy and fragility. I've been talking about this for some time, this idea of kind of *leptokurtic distribution*, fat tails. Very few days go by, and this has been true for about two years, where there's not some new, greatest ever or biggest thing ever. And it's not just moves in the underlying indexes, it's rotations, it's moves in bonds, it's moves in either different outcomes. And so it's a combustible fragile environment.

And so in that world, you want nonlinear things in the portfolio. It doesn't just mean down in the market, you know, up in certain different products, and the ability to bet not just linearly. So, I do think broadly, options and vol allow that opportunity, particularly long-vol products. And that's kind of my long-vol plug, which I think is, again, there's a reason why this is kind of that vol compression, which we've seen with infinite liquidity, massive leverage, when that liquidity comes off the table really creates from -- it's like water sitting behind the dam, right. You know, it can only kind of hold so far, there's like a potential energy there. So, I think that's an important thing to have in a portfolio.

Also again, just highlighting 68 to 82 again, in nominal terms, I think it's in policymaker's best interest to allow for the overvaluations and the malinvestment to come out of the market in a way that doesn't cause massive nominal losses. And for more gradual real losses to be kind of the way we get through this. So, I would expect, much like 68 to 82 is when you look back over that, over the next 14 years, 10-14 years from now, you see asset values broadly where they are now in nominal terms. But in real terms, dramatically less. So, volatility you're going to get a lot of activity and volatility in between, a lot of that crazy outcomes that you want to be able to use to improve your geometric returns and rebalance along the way. So, important to watch your tails, and hedge.

But I do think there's a reflexive nature over the long term of us trying to manage, you know, policymakers and populism, all these things, to try and manage to stability. And ultimately, I think we will make it through this period. But you need to manage inflation, you need to have commodities in the portfolio, have real discounted cash flows and entities that have access, not only access to markets, but create their own liquidity, so they can buy back their own stock. And then buy when things -- malinvestment happens. I mean, sorry, when creative destruction happens, they can buy the technologies and things. So, big boats.

Beyond that big cash flow entity, and the value of money is going up. You know, the value of cash flows in the short term are going up. Sit next to government. Government is going to be, and you're going to enter a period between populism where government is the fountain of money. We go through ebbs and flows historically of people believing in free market economics and capital markets as the best, most efficient allocator of capital. And we go through periods when people say, well, that wasn't fair. You know, that didn't -- wasn't the best way to allocate capital. Government step in and make it more fair.

And so government is going to sit, and what does government spend money on? Government spends money on health care? Government spends money on energy, government spends money on defense. What does government -- on infrastructure, right? So, what does government spend money on? Sit by the fountain of money. Where is it coming from? So, sit there, and I think you'll do a lot better historically, that's been the case. So, mind inflation, sit by that where the money's coming from and mind your tails.

Adam: 01:31:29 Love it.

Rodrigo: 01:31:30 Amazing.

Adam: 01:31:31 All right. Cem, where can people find you? Not that they need a reminder, but where can they find you on social media and at your day job?

Cem: 01:31:40 Yeah. So, on Twitter, I'm @jam, J-A-M, _croissant. It's a play on my name. I'm fairly active, a little bit less so than before, but I still try and get out there and give some free tips now and again. We're also, you know, really, like I mentioned, long-volatility is a great product for us and something that we've been definitely putting out there. So, you can go to our -- we did our long-vol seminar, which I mentioned, just recently. We're doing more and more of those to kind of educate people and get people aware of the importance of it. You can

		go look at that webinar that we did yesterday, actually at kaivolatility.com/resolve, or just go find us on our website, kaivolatility.com. Anytime you can schedule a meeting with me or our team, via the website as well.
Adam:	**01:32:27**	Fantastic. All right. Well, yeah, as expected. This has been just incredible.
Rodrigo:	**01:32:33**	Just great. Great way to start the weekend.
Cem:	**01:32:35**	Absolutely, enjoyed it. Happy to be back whenever. Thanks for having me, guys.
Rodrigo:	**01:32:38**	Thanks, Cem. Really appreciate it.
Adam:	**01:32:40**	Everyone, have a great weekend. Thanks for tuning in, and we'll see you next week.
Cem:	**01:32:43**	Have a great weekend. Take care.