Transcript: Markets Exposed to Complacency Test

Featuring: Dean Curnutt, Tom Thornton

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Synopsis: Dean Curnutt, of Macro Risk Advisors, joins Tom Thornton to discuss the intricacies involved in trading volatility at the end of credit cycles. Suggesting that markets aren't as safe as they appear to be, Dean surveys the economic landscape and identifies the risks, including the unsettled geopolitical environment and the liquidity in credit markets. Filmed in New York, on September 21, 2017.

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Tom Thornton: Hi. It's Tom Thornton. I'm with Hedge Fund Telemetry, and today at Real Vision we've got Dean Curnutt. Dean is the CEO of Macro Risk Advisors, and we're going to get right at it. Looking at the markets, talking about stocks, bonds, volatility, the ECB, the Fed, everything. Really going to be good. So let's go.

Hi. I'm Tom Thornton with Hedge Fund Telemetry, and today we have Dean Curnutt of Macro Risk Advisors. Dean, welcome.

Dean Curnutt: Great to be here.

TT: So Dean, we have a lot to talk about today, and I want to get into a lot of stuff in the markets that are happening right now, some real important stuff. But tell us a little about your background.

DC: Sure. So Macro Risk Advisors is a firm I started in 2008 when the VIX was at 80, not nine. So a very, very different time period. I founded it as an independent boutique focused on covering institutional clients from a top down basis, macro strategy with a very heavy dosage of derivatives. That was after a pretty lengthy career on the sell side at Lehman for five years in the late 90s, and then at Bank of America from 2000 to 2008.

TT: So you started right at the worst period for the market. And we've seen this like long move higher in the equity markets, as well in the bond markets. Tell us a little about what your current thoughts are with today's markets, some of the interesting attributes that are happening.

DC: Yes. So a lot of my current thoughts are juxtaposed against some of the historical periods of market stress that I've experienced along with folks that have been in seats for a long period of time, 2008, of course, being the biggest stress event that we've ever encountered. Just, 2008 was really unique in the sense that it was the culmination of a very long period of buildup from a credit market and leverage standpoint.

If you go back roughly four years into 2008, you'll see that there wasn't a single day in the S&P 500 where there was a 2% move, either up or down. So there was this long, long period of quiet leading into this catastrophic meltdown in asset prices. So as I look at today, while I'm not predicting crisis, I'm in the camp of concerned that the volatility in the S&P 500, as quiet as it has been, is probably a mistaken signal of safety.

I think that we observe the daily moves in the S&P each day, or the lack of them, and markets feel safer than they really are, as we see the inability for markets to react to what are likely important events. I think that's something that we're very focused on.

TT: Right. We've seen how many different catalysts that would typically knock the market down? And we're now in a period that we haven't seen more than a 3% decline in the S&P. And since 2010, I think Barron's was talking about it this weekend, the lack of decline is just unprecedented. Do you think that this is a recipe for disaster? Or are we going to be more of the same?

DC: Yeah. I think it– so what is the cause of low vol, number one, and then two, what does low volatility cause? From I think a psychology standpoint, I think it's important to consider. And then from a trading strategy standpoint, how do you make money in a low vol environment? The causes of low vol, there's a bunch of them. One would be you can link stability in the global economy, the business cycle, corporate earnings, that stability translates directly into a low and stable VIX.

A second cause of low vol is the selling of volatility. I think this is actually one of the things that's almost a little paradoxical in markets. The selling of options, itself, causes the VIX to go down. There's more options being sold into the market. And when the market doesn't react, the folks that are buying those options lose money, and so they're less inclined to buy them the next time. So there's sort of an economic reason for low volatility, and then there's a trading reason for low volatility.

The second part, and this is just sort of tying back to what are the implications, selling volatility has been a fantastic trade. The Sharpe Ratios for selling volatility, depending how you measure it, could be anywhere from four to eight. These are just fantastic results for a pretty basic passive strategy of just selling options into the marketplace and then hedging them. Those are probably unsustainable. And then the positioning of markets, whether it's short VIX futures, things like that those are things that we look at. And we're concerned. I wouldn't say we're predicting disaster, but certainly concerned that the market's positioning leaves it vulnerable to a strong reaction to the next event.

TT: Right. I think a lot of people have almost made it comical that it's just so easy to sell vol. And whenever I see that, it's so easy to do whatever, it really concerns me. And now you've seen this trade where people are buying technology names the FANG names, and then selling vol.

DC: Yeah.

TT: And this is something that people are just doing until it doesn't work anymore, is that what you see?

DC: Yeah. I think that Wall Street being Wall Street, they're in the packaging business, and so pre-crisis, there was all this innovation in the mortgage business, structuring and securitization of mortgage products, CLOs, and CDOs, and so forth. The equity options side, the equity derivatives side, has experienced a similar boom in innovation. They've made the packaging and selling of volatility to be as easy as really flipping a switch. It's as if you could call your broker and say, I want to buy IBM, you can do the same and say I just want to be short volatility.

In the old days, you had to have a lot of technology to do this. You had to be able to implement the short trade and hedge it yourself. It required quite a bit of back office resources. And now, you can just call up any one of the large banks and say I want to face your short volatility index, and they're obviously happy to do it. Like anything, a good deal or one that works, is going to attract attention, and it's going to attract capital.

We've seen a couple of articles in the Wall Street Journal in the last couple of months where the cab driver was touting his or her success on being short the VIX, short volatility. Sort of reminds me of the houseflippingdot.com website that emerged in 2003, 2004, which we all looked at and said, you know that's kind of unnerving to see people doing this. Right? And of course it did end in disaster, but these websites popped up three or four years early. So these things can keep going.

In fact they think the best guess is that they will keep going, that we will continue to grind sideways. And the profitability of short volatility in a sideways type market is going to continue.

TT: Now one more thing on there. CNBC, everybody's watching it all the Wisdom Tree has an ETF that sells puts.

DC: Yep.

TT: It's a put selling strategy. So whenever I see something that comes on that looks so easy and you're selling puts, which is inherently a risky proposition, it causes a bit of concern on my end. What do you think of the way participants are right now? Are they overly confident? Are they cautious with what they're saying, but they're trading in a much more aggressive way? How do you see it with your clients?

DC: So a couple of things. One is, if you think about selling puts, when you sell a put, you've got two exposures that result. First is you're long the market, right? You're hoping and betting that the market will go up, or at least won't go down. So that's a long exposure to, let's just say, the S&P 500. And then the second is slightly more complicated part of it is that you're short volatility. You've sold an option, which leaves you exposed to a situation where volatility rises. So those two fundamental exposures are pretty good exposures.

The market does generally tend to go up, and over time, the price at which you can sell options, the price at which you can sell volatility, tends to be higher than that which is ultimately realized in the market. So there's an equity risk premium, that's the first part, being long stocks over the long term. And then the second part is this thing called the volatility risk premium, which can go against you epically, as it did in 2008. But on balance, over long periods of time, there is a premium of the VIX to the actual behavior of the S&P 500, of the actual volatility of the S&P 500.

So those trades aren't bad. The concern I have is the success of the trade. Things that are successful for a long period of time attract a lot of capital. What I've heard anecdotally is that, for the big banks that cover the high net worth individuals, put selling programs have been one of the biggest growth areas. So think about the wealthy individual who's trying to manage money and essentially not lose the wealth, but also doesn't want to sit idly in cash, which has been the hallmark of the Bernanke, Yellen, FED era.

So they come up with strategies to try to earn some money, earn some excess return. And this put selling strategy has been one, very, very successful, and two, it's attracted a lot of capital. And I think people, they react to what they see. And what they haven't seen is any sort of financial volatility. And I do think it leaves people relatively complacent.

TT: Don't you think that towards the end of the market cycle, the most risky types of investments come to the fray or come to the fold, and everybody is like oh I got to get in on selling volatility? That, to me, is something that I'm quite worried about. Tell us a little about how you're seeing things as far as correlation between stocks and bonds?

DC: Right. Well, the first thing is, there's a quote that I love from a risk officer from CALSTRS, and he said you'll never see a bad back test, ever. Right? Because if it's a bad back test, you just don't present it.

Right. All we see are the beautiful back tests, the ones that suggest that this is going to work ad infinitum. And then as you see the back to us versus how it performs on a going forward basis, the results are much less impressive. The back test of a simple strategy of let's just say a 50-50 portfolio, so half S&P and half bonds, half just treasury bonds. That's a beautiful back test, especially post the crisis.

Let's think about 2008 or 2009. You have obviously stocks are way, way up, and bond yields are actually down quite a bit, as well. But on a day to day basis, stock and bond prices are negatively correlated. So remember we live in this risk on, risk off world, where oh the stock market ripped today, just today, and the bond market has sold off. Or in a risk off, stocks are down, but bond prices are up, bond yields are down.

So the negative correlation between stock and bond prices has been an incredible result for portfolio diversification. If you go way back– not even way back, but if you go back 25 years, the risk on, risk off of stock and bond prices doesn't seem as much a certainty. In fact, you had long periods where stock and bond prices were positively correlated. That's not really the era in which we have come to think of reality, right? We think about duration, owning just rates as a good hedge. And again, a concern I would have from a correlation standpoint is that when people see something worked for long periods of time, they just get used to it, and they just can't help but extrapolate forward.

There's no guarantee that stock and bond prices will diversify each other from a correlation standpoint on a going forward basis, even though that's what we've experienced.

TT: Right. Some people have said that people are investing in the stock market for yield, and they're investing in the bond market for growth, or some sort of positive move in that, because you're not getting anything in the 10 year yield right now at 2.21% I think today.

DC: Yeah.

TT: 2.1. So for me, I think that a lot of people I'm hearing from are saying, look yields have to go up. They have to go up. And its going to help the banks. That seems like very much of a hope trade that hasn't worked, and the yield curve is not doing what banks are really wanting it to do. I think that the steepening is not– it's not there.

DC: Right. Yeah.

TT: Do you have any thoughts on the bond market and what's currently happening?

DC: I think the value, at least for me, the value proposition of the sovereign bond market is pretty awful. You know looking at the treasury bond markets, the 10 years, call it 2.2%, we've got inflation at 150 to 170, depending on how you measure it. So that leaves a pretty skinny real yield component to it. On the shorter end, you've had negative real yields in the US, and certainly most every other developed market for years now. So the US may be the most appetizing of the bunch. Doesn't really leave a lot of margin for error.

And if we think about what makes yields go up, well there's the credit risk component of a sovereign bond. Maybe Greece is an example in that. The US doesn't have that, but there should be an inflation risk premium, because inflation has been so hard to come by. There's the last couple of months of some soft prints in the US inflation market. It's left people pretty skeptical as to one if Fed policy can actually reinvigorate inflation. There's so many arguments for, whether it's globalization, or technology, but the fact is that eight years with the most dramatic and extraordinary policy measures we've ever seen, they just can't get inflation to go back up. And people have just discounted any potential for an inflation shock.

And so what it leaves is– and this is the paradox, is that they can't get inflation higher, rates are really low, they are unappetizing from a value proposition. So people say well I have to do something to earn some money, and so the stock market becomes cheap by proxy. People will say– Warren Buffett just said the other day, well, stocks are still cheap relative to bonds. I think that's a dangerous– it may be true, but I think it's a dangerous proposition to find yourself investing in.

TT: So this week we have the CPI across the board, all over the world, especially in the US. Do you think there's a chance that they're going to still raise rates this year? Because the odds through the Fed funds rate, it's dropped a lot over the last two weeks.

DC: I think that it's data dependent, as she and the Fed always like to say, and I that's a reasonable thing to suggest. I think December is a go. But I think the bigger question is, or what's the longer term path of the federal funds rate? I think that there's a shift in terms of ultimately stepping back and taking an honest assessment of the impact of QE on two things. One, the real economy and inflation, and then two asset prices.

I do think that the realization that the asset price side of things is very real, and as we've been talking about just with the notion of financial stability concerns, are you forcing folks to sell volatility at increasingly skinny levels? Are you forcing people to

reach for yield in the credit markets? I think there is more concern there. One of the things that we do at Macro Risk Advisors is we look at this entirety of this macro risk landscape, and then we assess it versus option prices, option trades and prices.

You can do trades, for example in 2018, that bet on the Fed moving a little faster than market prices currently implies. So you suggested that these probabilities have come down. You can buy one Fed hike in 2018 at less than 100% probability. It's about 70 to 75% probability. That's pretty interesting. If you asked me to bet on it, and I'd say, yeah, I would bet that the Fed moves more than once, and at least once, in 2018. And again, I think that there's good reason for this trade. The CPI prints in the last two or three times that they've come out, have been soft. And people are effectively reassessing what the Fed's trajectory is going to look like in the face of weaker inflation data.

TT: Now we just had the ECB last week. Draghi was very dovish, and today we've had some ECB governors and officials that have been a bit more on the hawkish side. What are your thoughts as far as the ECB with the Euro, some stuff happening in Europe right now?

DC: Yeah. So the– I remember, post-Trump, the long dollar trade was what everyone wanted to be involved in, right?

TT: Right.

DC: Short duration, long dollar. And it just kind of puttered out by early 2017, and it's since completely puttered out, so much so that the positioning actually seems relatively short dollar right now. There's plenty of good reasons why the Euro has rallied. Got past that French election, their data has been better from both the growth and inflation standpoint. I think the Euro is a really interesting one to focus on. In Draghi's his own words in 2014, he said that a 10% increase in the trade weighted Euro– so I think it's up about 7% this year, maybe up 13 or so percent versus the dollar.

But a 10% increase is a 40 to 50 basis point headwind on inflation on a going forward basis. That's a lot. That suggests to me that all this talk of tapering is probably a little premature, if indeed that occurs, right? The ECB is not exactly in a situation where they can afford inflation to start dropping down. They've worked very hard to make this progress. What do we know about US experience, is that the QE that we thought was going to come and go as an emergency measure, it just lasted forever. I just don't think we should believe that the eurozone experience should be much different from that.

TT: I think a lot of people are saying that Draghi is going by the seat of his pants. He's like, I'm not going to talk about it at this last meeting, but we're going to talk about it in October. So he's really put a red line on when he has to come out and say, we are going to either taper or we're not. I think that's a dangerous place for him to put himself in the corner with that. What are your thoughts on going forward into 2018 with the ECB and what they're going to have to do?

DC: You know, Europe is one of these areas where the structure of prices is something that you just never would think you could see before. I was just looking at it before we sat down. Even five year interest rates– so these are not overnight rates, these are five year interest rates, and six or seven European countries are decidedly negative. That's just a really fascinating– you don't think you'd ever see something like that, where a five year government bond could trade a negative interest rate even as growth is positive, inflation is positive.

These are not deflationary times for Europe. They've got a mountain of challenges, but these are not strictly deflationary times. And yet our five years, you've got the Netherlands, Germany. These are minus 30 minus 40 basis points. So I'd be curious to see how that ultimately reconciles itself. And I think Draghi is going to be in a very interesting position the next couple of months. His term is going to be up, as well, and so you do see, sometimes with the chair of the Central Bank, I think they do have sort of legacy issues.

Remember, Bernanke wanted to get the tapering started before he left. Yellen wants to get the balance sheet reductions started before she may or it might be likely that she leaves. And so I don't know that these are strictly economic decisions, but they want to be able to say I've got this going before I left.

TT: Do you have any thoughts on who might replace her? Or if the odds are if she stays? Any thoughts?

DC: Yeah. I mean, look I think Gary Cohn has shot himself in the foot. That's how the politics of this administration work.

TT: The Apprentice.

DC: Right. I happen to think that Kevin Warsh would be a fantastic replacement. It's someone who's got a tremendous background, not just in policy, but in markets. A careful very thoughtful read on the global economy. I think he's articulate and someone who can lead. But there's many other candidates, as well. I think that one of the

concerns I've heard from some clients is that just the randomness of the Trump administration is one where the Fed chairmanship and the leadership of the Fed could be overtly politicized. Call that a very low probability event, but something that you probably wouldn't even hear articulated under a different administration.

TT: Well you have to think that whoever comes in, and whoever Trump hires is going to be on Trump's side and will have to have a lot more– will be a lot more in communicative measures with the White House. You have to think that's going to be that way, and you have a few openings right now, as well.

DC: Yes. It's the potential for whole scale turnover, and the Fed is like nothing we've seen, certainly since I've been following the Fed. To your point on the you have to be on Trump's good side, that's not something you'd ever hear in a different administration from the Fed, right? We've always thought about the Fed as truly independent, again, at least in the last 20 years or so. And you may disagree with the decision making.

The Fed, sometimes, these are very difficult tradeoffs to balance with incomplete information, but it's been an institution that you thought was absolutely committed to its price objectives, and full employment objectives, not something that would be politicized.

TT: OK, so just changing course a little bit, there are a lot of hotspots in the world right now. What areas are you your clients, your firm, where are you guys are really concerned? And maybe you can rank them as far as how you see risk right now.

DC: Right. So, that's a great point, that you look around the world, and even as the VIX is hovering here at, I think 10.8 or so. And it's not just the VIX. If you look at interest rate volatility, if you look at currency volatility, if you look at implied volatility for credit options, or just look at credit spreads. All of these things point to stability, they point to a view that there's not a likelihood of a risk event. They point to the absence of demand for hedging.

And yet, there are plenty hotspots. So one of the things that we try to do is sort of put the mosaic together, and I like to say that episodes of market crisis, they tend to rhyme a little bit, but each has a unique area of sponsorship. We go back to the LTCM debacle, which is way too far away for a lot of people that are in seats right now to even remember. But Long Term Capital was short volatility, they were long swaps spreads, there were a lot of copycat trades, but the big unwind for that event was in the swap market, the US swap market.

The financial crisis is really a mortgage crisis, right? The vast gross under-pricing of mortgage risk. But then it became a crisis of everything else, as well. So what happens when you have a crisis? The regulators look at things and go, OK, well what went wrong? And let's try to prevent that. So they've certainly de-risked the banks. The US banking sector, while never not a risk– you know it's funny to think back 10 or 12 years and say we stared at Bear Stearns, Morgan Stanley, Lehman Brothers all at 30 to 35x leverage, and we were totally fine with it. That seems like a pretty risky thing to do.

But that's not the case now, right? They've definitely de-risked the banks. But in place of that there's a lot of other things that I'm personally concerned about, so hard to price, but it's very easy to say that the geopolitical landscape has never been more unsettled. You have a new administration, inexperienced, not exactly building bridges with allies. You have a newly strong Russia that's kind of flexing its muscle a little bit more, the rise of China is interesting.

And of course, in that same region, the North Korea escalation. While the market hasn't really reacted, again, hard to say that that's not important even if it's not something you could put a price on.

TT: Right.

DC: I would say the credit markets in the US and globally give me a lot of concern, and that is more of a liquidity concern more than anything else. Default rates are low. The default cycle could continue to be pretty gentle. But as we talk to clients that use equity derivative products, so our specialty at Macro Risk Advisors, is helping people utilize equity option products. A lot of our clients are credit investors who come over to the US derivatives market because they want to hedge credit risk.

And the reason they need to do that is because the liquidity profile of their own market is just very, very poor. We hear that time and time and time again, that one of the results of Dodd-Frank and some of the other regulatory initiatives, has been that the credit the credit market depth is way, way down. So if you have a slug of paper that you want to move, good luck. It's sort of become a, hey I'll get back to you. I'll try to find the other side.

Dealers don't stand up to hey, I want to sell you 50 million bonds on the wire. They just– that's not the business they're in it's more of a brokered market at this point. So the dealers are probably less risky because their books are much smaller. But in place is a buy side that's got more credit risk on than ever. The credit markets are as big as ever.

TT: Well, and they have grown exponentially from 2008.

DC: Big time.

TT: And that, to me, is a real concern now. What are your thoughts about passive investing and some of the passive ETFs that are out there? You can even go into some of the credit ETFs out there, that if there's no liquidity in the open market, it's going to be real tough for a passive fund to redeem out of some of these– trade out of some of these positions.

DC: Yeah. It's a really interesting one. Sometimes I say I just look at HYG is an example so that's the high yield ETF, and look at how briskly you can trade in and out of, not just the underlying, but you can put up big option prints. And, of course, the bonds are trading by appointment, and that's a concern. But if we also look at just the entirety of the mortgage market, there's MBS that's trading on people's houses that those individual loans aren't really moving back and forth, right?

So there is this concept of kind of securitizing a product and a market place providing liquidity. But that being said, the view that you can get into and out of credit risk through things like HYG, I do worry that there is a liquidity illusion there. It's liquid until it isn't. So that's–

TT: It's liquid on the way up.

DC: Right. At some point, people need to position the actual credit risk. We've been talking about buying the dip a little bit before, you've been rewarded for doing that. And I think the markets, in some ways, it's good until it isn't. If you have something where people's risk appetite, or the actual ability to withstand very high corporate earnings or low defaults, is somehow shattered, that's where you could get a significant risk off event.

TT: Right. Now, a risk off event, which CNBC the other day when the market was down 1% had a banner market sell off, and it was down 1%. Now I shudder to think if we get a 1% day, maybe 10 days in a row or something even sharper, what the participants in the market are going to be like. And like you said, there's a whole new generation that have never seen anything remotely down in the market.

Now I can give you a little snapshot. In 2007, when we had one bad February when it was all starting to come out with Bear Stearns, I had a financials trader that sat next to me, and we were down 350 points on the Dow, and that was a huge move. Because

like you said, it was a very calm market going up. But he was talking to somebody on the phone, and he said, we'll never see a day like this again. And I said, you're going to see a lot more days like this.

Now he's a very seasoned trader, and as bearish as it gets. But he was he had to learn what type of environment is a risk off market.

DC: Right.

TT: And that is rather painful.

DC: You don't see it for long enough, and it just becomes difficult to even imagine it. We go through these very low vol periods, and then suddenly it's a new regime. We just had a sequencing of weather events, right? Harvey, Irma there's maybe some others coming. In the press, there's been a lot of conversation on re-insurance and catastrophe bonds, and one of the things that I've been emphasizing is that financial insurance is a unique kind of insurance.

Catastrophe insurance is something where, if I sell catastrophe insurance, I'm not interacting with mother nature. Mother nature is mother nature. It's going to come when it comes. But the financial insurance side, the selling of volatility or the leveraging up of the system, this itself can become part of the risk event, right? Because people need to– they get– I don't want to get lazy or complacent, but you do get a little forgetful.

And so when there is a big enough risk off event and people see the pain in their portfolios, that's when the pressure to unwind something occurs. We saw– one of the stats that we observed earlier this year was over a six month period, more than 50% of the days in the S&P, the daily change was not even 25 basis points. I mean, literally unchanged almost every day. So your question on passive investing fits there.

If you step back and you look at Apple, and you look at the holders. And then if you look at Amazon, and you look at the holders. And Google, you look at the holders.

It's Vanguard. Vanguard was, according to Jack Bogle himself, was getting a billion dollars a day in new subscriptions. So Vanguard doesn't care about the iPhone 8. It doesn't read the newspaper. It just takes the money and puts it into the market. And it buys a market cap weighted strategy, which of course, most of that money goes to Google and Exxon and Apple and Amazon and Microsoft.

So this is back to the momentum, that sort of tying momentum and short volatility. The winners keep winning because the flow is, it's a little circular. The flows come in, it provides the capital to buy the stocks. Stocks go up. It's a nice healthy dose of a decent economy and a support of Fed as well, but people love winners, so they put more money in. And then the same thing, again, is true on the short vol side, as well.

Those minute daily changes, there's nothing better than selling volatility when there is none. So these things are kind of– a concern would be that the winning strategies, momentum and short volatility, what I'm watching from a concerned standpoint is when the leadership starts to falter, and in this case the leadership is selling vol and buying momentum. That's something to watch carefully for.

TT: So a lot of things you've mentioned here, where there could be a risk off event, an event, could it be something like 1987?

DC: That's a really interesting question. I think the likelihood of 1987, of course, is incredibly low. But there are certain strategies that are what are called self-insuring, and this is really what the '87 crash was about, was portfolio insurance, which is if the market goes down, I'll just sell more futures. And if it goes down further, I'll hedge by selling more futures. And it became self-reinforcing.

There are certain strategies that act a little like that at this point in time. Are they as big? It's really hard to say, but there's vol control strategies, as an example. So really quickly, vol control is something that you're trying to deliver to your end client a certain level of volatility in the strategy. And when volatility goes down, again I was saying that these minute changes have meant one of the lowest S&P volatility levels we've ever seen. When vol goes down, you gear up the portfolio. You just make it bigger so that you can control the vol to a higher level.

And then when the market sells off, you quickly de-risk so that you bring your vol down. So when vol goes up, you sell. And that's little like portfolio insurance. It's a little self-reinforcing, and I think we should be cognizant of those strategies that can kind of build on each other, can kind of feed on each other. Very difficult to know how much of that is part of the dynamic, but do I think '87 is coming? No. Do I think that low vol was epically misread by central banks in 2006? Yes. Do I think it's happening again? Yes, I do.

TT: Dean, let's leave it at that. I really appreciate it. We've had Dean Curnutt of Macro Risk Advisors. Excellent. Great talk, and hope to have you back in the coming months and quarters to hear a little bit more.

DC: Thank you very much.

TT: All right, thank you. That was great. Dean is a real pro. Macro Risk Advisors is amazing firm, and I just want to say that we really learned a lot today about the markets and what Dean's thinking. And a derivatives trader is really a special breed, because they really see the inner workings of what's happening in the market at a given time. Dean had some really relevant thoughts about volatility, positioning, passive funds, the Fed, ECB. This is going to be great to have Dean back on again real soon. So I just want to say thank you, and I'll see you again on Real Vision.