



MACRO Voices
with hedge fund manager Erik Townsend

Keith McCullough: Bond Yields May Have Peaked

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Erik: Joining me next is [Hedgeye](#) founder [Keith McCullough](#).

Keith, it's been a year – I can't believe it – since we had you on the program. Last time that you were on, I think that you were very much bullish real growth and there were a lot of naysayers saying the market was headed lower. You were adamant, and you were proven right.

Now things have changed and we actually got a little bit of a heads up from your colleague Darius Dale when we had him on the program. He said, hmm, we are not firmly bullish anymore. We're starting to think twice.

As I look at Slide 5 in your deck, it looks like you guys have moved into the fourth quad. So talk about the four quads, why you use them in your process. But, particularly, how did we end up here underneath the neutral line in the fourth quad? And where is it headed.

Keith: I appreciate you recapping that Erik, because being a bull or a bear permanently is no permanent position to take. And, really, we've built the process, or I have, over the course of the last long while trying to use the two most causal things that change markets, which are the rates of change and growth in inflation to get ahead of any change from bullish to bearish or bearish to bullish.

And what you find is that there is always something to buy and there is always something to sell. So in our four-quadrant map, as you can see there on Slide 5, I think everyone can see – when you're in the first or second quadrant, those are pro-growth quadrants. You have growth accelerating. When growth and inflation are accelerating at the same time, interest rates go up, the Fed goes hawkish, that's why in the box here it says monetary policy bias is hawkish. So that's what we were set up for.

Really, we were there for nine quarters in a row, which, by the way, is a new US record. The prior record was seven quarters coming out of the early 1990s. And you had tax reform really provide the extra juice on top of that. We didn't stay bullish because of tax reform. We stayed bullish because the data that was borne out of tax reform kept accelerating.

So, again, all I care about is whether the data is accelerating or decelerating. And, really, that's the point here.

That call that we made at the end of September was that we're changing –effectively, flipping

everything that we liked into things we don't like and then doing the opposite with things that we didn't like – starting to get bullish on long-term bonds, bond proxies. Because we're basically going to what we call the fourth quadrant.

The fourth quadrant, as you can see in that map, Q418 is a drastic shift from where we've been. And I'd say that the market's reaction at this point has actually been quite drastic and it's in the right spot.

I mean, typically, when a market sniffs out that the economy is going into the fourth quadrant they don't have to sniff out a recession or anything like that, which we get a lot of questions on. You just have to have the prevailing conditions of growth and inflation, which were tailwinds, become headwinds. And that's what's happened.

The three worst places to be when that happens is momentum, high data, and tech stocks. Tech stocks are obviously high data and momentum, so it was all one and the same thing. And I think we're just in the early stages of this correction on those in particular, those things that do the worst in the fourth quadrant.

Erik: Keith, I absolutely love your Hedgeye chart books, among the best in the business. Our long-time listeners have seen a lot of this, but I'm going to strongly encourage any new listeners to really spend some time on this chart book if you've never seen it before. Some of this, though, is boilerplate that our regular listeners have seen before.

So I'm going to skip ahead to Slide 12, which is where we get back to your next current data outlook in terms of GDP forecasts. Talk us through, starting at Slide 12, what you see on the horizon, where we're headed.

Keith: As I pointed out, nine quarters in a row. Again, I'd encourage anyone who hasn't done this before to acutely measure and map the data. These are facts. The data that's released is a fact. You might believe the government made up the numbers, but the reality is that it's a made up number versus a prior made up number. So it's either accelerating or decelerating versus made up numbers.

But if you actually believe the numbers, which in this case I do, I believe that US growth accelerated (on Slide 12) from 1.3% to 3%. It took nine quarters. That's, again, a new US record. And the green bar, which is our forecast – this is our predictive tracking algorithms that we're dropping new data into the algo every time we get a new data point – is not only below Wall Street for the first time in really six to nine quarters, but it's the first rate-of-change slowdown.

If you go to Slide 13, how that reads to Wall Street is going to be a pretty violent move in GDP. Wall Street doesn't look at the year-over-year. They look at the quarter-over-quarter seasonally annualized GDP number. If you don't know what that is, that will be the number that gets released when GDP gets released.

As you know, only because Trump was trumpeting it, 4.2% was the high number. A lot of pundits and strategists tell you that there was sustainability to that. We told you that the next number was going to be 3.5%. It actually ended up being 3.5%. We got that one right on the screws.

Now we're saying that if it just a modest slowdown year-over-year [that] gets you a drastic sequential slowdown. This is where the surprise factor really come in. We're at 1.29% for GDP for Q4. That number is going to be reported in Q1. Okay?

So I think, first of all, that's well below consensus, Wall Street consensus. But it also comes, Erik, right after the Fed rate hike. Because you've got the rate hike in December, which we think they're going to do. And then you're going to get a big GDP negative surprise that's going to have on the way to it a bunch of numbers that continue to be revised to the downside in terms of high frequency economic data points.

So I think that market participants are going to see what the market already sees. The market already sees what it sees. The market is always front running us. If you don't know that, you're going to figure that out the hard way. Eventually you end up with the data point that the markets had already been discounting. And this is what I think is ultimately the number the market is looking ahead to in January, even though it's only November.

Erik: So let's just put this in perspective. Because you're talking, at least in your 1.29% figure, about a major, major miss on expectations if you're right. Does that leave you outright short the market? And if you look at what's happened – some people think that maybe we're going to see a bounce into year end and if you wanted to get short it's not time yet.

Is it time to be short? And where do you see this going? Because I would think if you're proven right and the 1.29% comes true, we're going lower after that data comes out.

Keith: Oh, yes. And we're going lower into this because of that number coming out. I don't mean the news reconciles why we were going down. And the answer is absolutely yes. I mean, I've written multiple notes in the last six weeks saying, yes, I still believe what I believe. God forbid I believe what my model tells me, and it told me the same thing on the way up that it's telling me on the way down. At the same time you should have conviction in a process and a model.

So the key here Erik is, of course, selling the stuff that goes down most. And, whether it be tech, really – on Slide 8 we show you what it is at the equity sector level, it calls to short on bounces, tech industrials, and energies. Those are the three big short calls.

And then the other side of it, what this model tells you to do, is buy things that look like low beta or bonds or bond proxies. So it's buy utilities, buy REITs, buy consumer staples. So you don't have to be out of the market. You have to be out of the things that everybody else is long in the market. And you have to go buy the things that everybody else is underweight.

So that's an easy thing for me to understand because, of course, I'm basically shorting the things that I liked and I'm buying the things I didn't like.

The next big part of this, I think, is on Slide 14. Especially on those bond proxies and long-term bonds. I know a lot of people are bearish on long-term bonds. There are a lot of famous people that don't like bonds. I'm not famous, but I didn't like bonds either. Now I do. The main reason is because bonds over the course of the long term, intermediate to long term, tend to go where inflation is going.

So our forecast on inflation, I'd say it's a layup, you know, by Q1 of '19 falling below 2%. We're at 1.76%. And that of course is the layup now, because oil has just crashed. So oil is the heaviest weight in that model. So I want to be acutely positioned for that. And you can obviously be long long-term bonds if you're bearish on inflation.

I think that Wall Street can come to us on that metric as well.

Erik: I really, really want to encourage our listeners, particularly newer listeners, to study the entire chart deck. And if you're not familiar with some of the Hedgeye process, listen to Keith's interview from a year ago when we went into a lot of detail on this.

I'm going to skip ahead again to Slide 23 where we get into what you're actually looking for in terms of Q3 2018 Macro Themes. Walk us through these three themes and why they're important.

Keith: A theme is important when it's new and then it starts to trend. So our call on the US dollar when we called the dollar breakout in April – and then we reiterated in Q3 that the dollar should strengthen at this point. So we're going to stay with that. And as much as shorting in emerging markets on all bounces to lower highs.

So, again, if you're a Hedgeye power user you know what to do at the top end of the risk range, which we publish daily. That's where you make your sales. You don't sell them just because they're up. You sell them when they're up and at the top end of the range.

A good example of that, obviously, is the four-day US equity bounce that we had coming out of the mid-term election. We wrote a note that said huge selling opportunity. So, again, that's what it is.

Have interest rates peaked? I think that's the biggest call left that has not yet worked in a meaningful way, but I do think that the 10-year bond yield is about to break. I just need it to break 3.05% on the 10-year yield. I think there is a trap door underneath that towards 2.5% on the 10-year yield.

And I don't think everybody else thinks it can go there. At least they haven't published that

forecast. Maybe there is somebody. If they want to be in my lonely corridor with me on that, then that's great.

Quad four is the bigger theme, which is on Slide 24 – we're just rolling through –

Erik: Hang on one second, Keith, before you go on. Let's come back to rates because there is such a chorus of people that are just so convinced – look you saw the breakout past 3.10–3.12%, whatever you want to call the magic number on the 10-year. It got all the way up to 3.20-something, came back and retested that 3.12 level as support. It held, moved higher.

There are so many people that just say, that's it. The secular bond bear market is upon us. Give us the rationale. Why do you disagree on a fundamental level those views?

Keith: Well, one, the easiest way that I always disagree is that most people are just looking at a chart. I mean, there's a lot more to this than just looking at a chart. And anybody can look at what I affectionately call the 200-day moving monkey or the 50-day moving monkey. And they are one-factor models.

We get it. If you pull the chart back far enough on 10-year yields, you can get – almost every traditional technician is going to tell you it was a breakout inasmuch as every technician, Erik, as you know, has told you that the Russell looked fine at the end of August and so did the Nasdaq. Subsequently they've both gone down on the order of 12–15%. Now the charts look bad.

So that's the whole point of having a research process that front runs the turns in the technicals. And that's, really, when I look at it – I don't look at other people's technical, I look at my own quantitative signals.

As I pointed out, as inflation data points come out lower, I think the Fed is going to go from hawkish to dovish. So I think they're going to raise rates for the last time in December. And if they continue raising rates during the Quad Four slowdown, the stock market is going to continue to go down faster and they're going to have to eventually cut rates faster anyway.

So I really think that in the next three to six months all my catalysts are really in the forward-looking outlook. And today it would be very hard for people that don't agree with me to see those things, because people that see those things are just looking at a chart – you know, once they start to hear the Fed turning from hawkish to dovish.

And then eventually the Fed is going to have to start cutting interest rates again. It will be way too late to be buying long-term bonds. And that's effectively the point when I look at that.

Another big thing that people call out is, of course, the gargantuan amount of Treasury issuance. All the reasons why we could have given you to be bearish on bonds and bullish on bond yields for two and a half years are clear.

Bonds have been going down for three years – long-term bonds have – for a reason. And so has the short end of the bond market as well. I just think the cycle has peaked – again, on inflation but also on growth and also on earnings. So the three-legged stool of peaks called the triple peak is the main reason why we have that outlook on bond yields going lower, taking lower highs effectively from that 3.25–3.23% level for a year now, for that matter.

Erik: Okay, I cut you off on Slide 24. Quad Four again, for anybody who's not familiar with Hedgeye terminology, means we have both slowing growth and slowing inflation at the same time.

Why Quad Four? What does it tell us? And what's next as far as these themes on Slide 24?

Keith: Quad Four is simply summarized the way that you summarized it. So you have growth, you have inflation, both are now slowing in rate of change terms. So then rate of change is the second derivative. That's what's going on and that's what the markets trading on.

Cyclical peaks in earnings, that's a really important one that we want to go through as well, just to highlight the moment of it all. But that lands squarely into junction with Quad Four. If you're in Quad Four and you think interest rates are done going up, then you'd probably start to buy something that went down because interest rates were going up.

And that's why we like housing here. It's also playbook Quad Four longs. When you're in any quad, we have longs and shorts. If I ran a broker dealer, maybe I'd make a lot more money or something like that, because we'd always have something for people to buy and to sell.

The reality is that these are based on historical returns by asset class, subsector exposures like housing – housing really only likes it when interest rates go up. And that shouldn't surprise anybody, as much as it shouldn't have surprised anybody that housing went down while interest rates were going up. When interest rates go down, housing likes that. Of course, mortgage rates fall.

Take all the Quad Four themes, the other two themes are just extensions of that theme. And we go through a variety of different slides in this deck to the extent that you want to kind of dig into that.

Erik: Why don't we touch a little bit more on housing and be specific about what markets. Are we talking about US housing specifically? Because, obviously, Canadian and Australian housing have got a lot of people's attention as potentially being bubbles. Housing in what markets are we talking about here?

Keith: Yeah, and I think our housing analyst has been with your listeners. The CliffsNotes version of it is that he's been the bear on both Canada and Australian housing. We have plenty of reasons to be bears on those markets on housing, particularly in those markets.

Those markets aren't the ones that I want to be bullish on. I want to be bullish on the one market in the world that has millennials. And millennials, of course, are the big household formation cohort that are going to be buying houses in the next three to five years. In fact, if you're 26 or 27 years old right now listening to this, you're one of 4.7 million in America that is going to be looking for a house in the next three to five years, ostensibly.

So there's a big demand wave in the US that's nowhere else in the world (certainly not on an order of magnitude like this). It challenges the rate-of-change charts of the baby boomers. 32- and 33-year-olds are about 4.4 million of those.

If you have that, falling interest rates, you have easy comparisons also in the US because this year was a terrible year for housing. And you have falling input costs.

So the other side of our inflation falling call, Erik, is that the input costs – like take a chart like lumber. Anybody who does macro across commodities knows that lumber has crashed. At one point in the year, it was up 63% and now it's down 20%. Okay. So you've got pretty much everything going for you a year out, maybe six months to a year out. And Mr. Market is probably going to be front running you faster than that. That's really the summary on housing.

Erik: So when you say long housing, what are we talking about as far as an actual trade? Are we talking about home builders? Are we talking about commodities like lumber? Where is the trade here, specifically?

Keith: Home builders. I'd be going with home builders. Eventually, when the Fed goes dovish, Erik, I hope I get a chance to get on the blower with you again, because when the Fed goes dovish I'm going to buy the living daylight out of things that are commodity related. That's what you do.

That's the whole point of money printing. The Fed wants to resuscitate or reflate asset prices. And the best way to go to that, directly to the vein, so to speak. I'm not a pothead or a drug user or anything like that. I'm just telling you the best way to get the bang for your buck is to go to commodities.

If and when the Fed goes dovish, you probably reverse our dollar view. Or I'll sell that, book gains, and buy commodities, which would include anything from lumber to crude oil. I mean, we're already on perdition's path, by the way, on crude oil. And Quad Four annihilates oil. For anybody who didn't know that, I guess now they know.

But, again, that's the whole point. Quad Four is – you can substitute one word and it's called deflation. Once you get through the deflation and the Fed realizes deflation is a risk, they try to devalue the dollar and reflate those assets so it's then fully loaded.

So I'd like to buy commodities on a lag at some point next year and emerging markets maybe – maybe – at some point next year. But first I'll just go with buying home builders or an index that

reflects a basket of liquid US-listed home builders.

Erik: Let's continue with your slide deck. On Slide 25 you're talking about comps. What are we comparing here?

Keith: The base effects, that's the main component for our model that provides us a forward outlook that differentiates itself. Put simply, on a two-year basis – when you look back, you can always add up two years and, again, divide, and you end up with a two-year base effect.

And, as you can see, in 2Q of '18 the 1.7% number for US GDP was the easiest base effect of the entire period. Okay. As we go forward, the base effect goes from 2.2% to 2.25% to eventually get, at this time next year, 2.65%.

The math is pretty simple, if you get second derivative math, which is as the base effects steepen and the data flows into steepening base effects, you get falling forward outlooks. And that's it.

I mean, it's the same thing for the comparative base effects model for inflation. By this time next year, you're going to be lapping extremely difficult comparisons for inflation. So that's why – and, again, 78% of the time, looking back at US history, the forward outlook should reflect the opposite of what already occurred.

Those of you that want a quick lesson on base effects, it's back further in the deck. We provide some material on that. I don't write white papers on it and I'm not going back to college to write a white paper. I'm just going to tell you that I already wrote the conclusion in the white paper and that's what it is.

Erik: Keith, as I look to Slide 26, I see a sea of color here moving from red on the left side to green on the right side. That must be a good thing. What's the important thing, though, to be watching? Where are the areas of concern on this chart?

Keith: For people that don't do rate of change, this is a quick way to get caught up. To your point, Erik, when it's all red it's bad. When it goes from red to amber, it's less bad. When it goes to yellow, it's not so bad. And then, when it goes green, it's obviously good. And when it's bright green it's really, really good.

And, as you'll note here, the aggregate of the US economic acceleration really culminated in the bright green Q3 of 2018. But, really, you can see color coding it by Q2, Q3 of 2019, we're back to yellow lights. And that's – if you're going to just see one picture and then line up the ducks on the biggest components of GDP and inflation, which is basically what we're showing here, the real point is that the probable outcome is that we slow.

Now that's when I make calls. When the probable outcome is something that Wall Street is not positioned for, I want to, obviously, take that position. So, again, if the lights were to change,

Erik, – and you know how I do this. If the lights were to change in Q4 and Q1 of 2019, if they were to go bright green again, I (until I live in Moscow) reserve the unalienable right to change my mind and freedom to change my position. So this is a good example of how I use data dependence in its pure intensity to make decisions.

Erik: As you said that, I started to say what about the effect of the tariffs in terms of changing color, and I see you've got it at the top of the next slide. You're reading my mind.

Keith: A lot of these slides come from – we have a lot of institutional investors as clients and they ask us, obviously, very good questions. So you're asking the right questions. People will say, okay, look, aren't these tariffs inflationary? And the answer is yes.

But are they inflationary in dollars? China represents only 22% of US imports. First of all, when you start doing the math you start to come to some more specific conclusions as opposed to political or ideological ones. And, really, the dollar's strength right now is offsetting any inflationary impact from tariffs.

Again, when you show somebody what imports are on a reported basis, you have to report those in dollars. And the reality is that the dollar in Q1 of '18 was down 7% year-over-year. Now, as you go into Q1 '19, the dollar's going to be up 7%. That's a 1,400 basis point delta. Even if you fully tax all of Chinese imports, the full 25% that was bandied about, you still wouldn't have inflation in dollars. You know, like how you report it.

So that's why it hasn't really bothered me inasmuch as wage inflation would. On Slide 28, we kind of get into that. Those are the two big things, Erik, that people ask about.

Actually we're bullish on wage inflation. We've had the highest wage inflation estimates on Wall Street all year long. So that's easy. But it's harder for people to say with tariffs and with wage inflation how do I get a forward outlook of falling inflation?

Well, falling headline inflation is actually quite consistent with rising wage growth, because wage growth is the last thing in the economic cycle to go up. And anybody who hasn't studied that hasn't studied cycles.

On Slide 29 you can see that too where we show you – headline inflation, which is CPI, it goes down, the dollar is going up, and wages are going up. And you get a margin squeeze. I don't know if you've looked at this chart before, Erik, but in red bars you have the recessions. And the grey line is wages.

Wages always accelerate into a recession. They perpetuate a recession. So the Fed sits there and they're too hawkish too late. Wages are rising. They're tightening policy. And, lo and behold, you end up getting a big red bar and that's predominately driven by rising wages and falling profits. One perpetuates the other, as you know.

Erik: Moving on to Slide 29, you're talking about a margin squeeze. I'm assuming that's a profit margin squeeze and not a margin interest, as in borrowing on margin squeeze.

How does this fit into the story? A lot of people have said, we've got great profits. Why would they be squeezed suddenly?

Keith: At the end of every economic cycle, you get spiking wage growth. That's the beginning of the end, all of the time. That's where you get a red bar on Slide 29. Wages are rising faster than profits have because, over time, profits can't go up forever.

What's interesting about this, of course, is that wages in this cycle are coming off the all-time lows, whereas in every other cycle they were high and rising to begin with – so a dramatically different setup for people to be concerned about from a margin squeeze perspective.

If you take this down to the studs on slide 30, what we're showing here are the rate(s) of change – and classically, or at least from our perspective, this is all we look at is rate of change. Your real earnings growth had accelerated in something like technology – fourth row from the bottom in this chart – to 32% growth in Q2 of '18. That was the top.

So, actually, if all you did was, as a bottom-up investor, pick stocks that had accelerating earnings growth in your tech stocks, you crushed it. But then if you didn't sell them when the slowdown began at the end of the third quarter in the current reported season to 26.6%, and then it's going to be lower in the quarter after that and the quarter after that and the quarter after that, then you've got body bagged. You don't want to do that.

So it's not about the level of earnings growth. It's about the rate of change of earnings growth. And we've proven this out empirically. At the end of the day, not enough people understood or believed this into the end of the summer-time. But now they're starting to ask the right questions on whether or not rate of change slowdowns in earnings can perpetuate broadly lower stocks.

The reality is on Slide 31, 100% of the time that's what happens. This is showing you the operating margin for the S&P 500 and the three tops you could have bought stocks at before you got body bagged – getting body bagged isn't very good – when the margins go down the stocks go down. And even if you only look at this coming out of the 2015 top of the S&P's operating margins to the 2016 low, the average decline in there, Erik, was 38% in the Russell 3000. Like the broadest swathe of US stocks The average decline by stock was 38%.

So I think that this sucker is going down. This red line is going down. The easiest way to make it go down is the dollar going up, first. Secondly, it's wages. So, really, Slides 29, 30, and 31 they go together.

And there is no case to be made in US stock market history – which is different than US economic history. US economic history, everybody is like, oh my God, until you tell me there is a

recession then I'm not going to be scared.

And then, by the way, guys like me are going to tell you to buy stocks during the recession. Because that's what you do. You buy stocks after this red line on Slide 31 goes down. And that's just a fact. I don't know how anybody could debate it at this point.

Erik: Moving on to Slide 32, the Shanghai Accord, supposedly to control appreciation of the dollar. I remember there being a lot of talk about that. I'm not sure it was ever substantiated beyond theory.

Where does the Shanghai Accord come into this story? And, perhaps more importantly, what about the whole narrative of China growth slowdown? And how that could affect other markets and contagion risks that exist there?

Keith: It's at the end of this presentation, but it really should have been at the beginning. I mean, the beginning of the economic slowdown, Erik, in 2018, started with China slowing. So, again, good time-series folks have to go backwards and say, where did China accelerate against now what we're already slowing?

It started with the Shanghai Accord.

Now the Shanghai Accord, for those who don't know, on the left side we're showing during the deflationary scare of early 2016, this is Janet Yellen going dovish. So the line is going down because she wants to devalue the dollar. And, again, going dovish, that's what happens, and resuscitates asset prices. Particularly, she got that, obviously in the resource space.

At the same time as the Fed is going dovish and the dollar is going down, on the right side you see the Chinese providing the largest stimulus in the history of China. That's why they called it the Shanghai Accord. The largest stimulus in the history of China is obviously a very long time.

You can see that when the Fed and the Chinese are stimulating at the same time, Marty McFly might not know that stocks and risk assets are going to go up, but anyone who's done this for any period of time should know that.

And that's exactly what happened. So you ended up with this massive acceleration in the part of the Chinese economy that they as communists can command and control, which includes heavy construction, empty cities. Again, very cyclical stuff.

If got too bearish in the lows of '16 on empty cities in China, you made a drastic mistake because you underestimated that a communist was trying to get re-elected for life. And that's really what we call, in conjunction with the Shanghai Accord, we call it really Xi's magic trick. I mean the guy got elected for life.

If you go to the next slide actually, Slide 33, if you take secondary industries as I pointed out, like

the heavy stuff, construction etc., in China, the blue line went from 0% growth. In late 2015 and early 2016 it's at 1%. Then they stimulated and it went to 14% growth.

14% growth, to put that in context, was almost 50% of China's GDP growth. And you wonder why the world went into a globally synchronized recovery and why it was easy to be bullish – even a guy like me could have been a bull. You had a globally synchronized recovery that was backstopped by the Chinese and the Fed devaluing.

And then Trump did tax reform. It's like the best growth story you could possibly imagine.

But now, that's a comparison. So now the Chinese have to lap that. That's why I show that in Slide 33.

This is the most important chart I think – this is all about awareness. What are the base effects? What are the comparisons? What happened? What are we trying to compare against?

And, again, as you go from ignorance to awareness, you come up with the revelation that the Chinese are going to continue to slow because they only have steepening base effects or top-ward comps all the way into the end of 1Q19.

By the way, 2Q19 isn't exactly an easy comparison at 11.6%. (I'm talking about the black bars in that chart.)

I think that no matter what – and this is I'd love to hear your thoughts on this or anyone's else's thoughts – a lot of people think that Trump is going to magically tweet that he likes the Chinese or they're having good discussions or whatever. I really don't think there is anything he can do to get the Chinese to accelerate against the biggest stimulus in the history of China. It's just math.

And I think that's actually one of the biggest trap doors in the market – if you're looking for Trump in a tweet to save you on tariffs I think you're looking for the wrong thing.

Erik: Fantastic chart deck, as usual Keith. I want to touch on something outside of this though. We've had Charlie McElligott, who heads up cross-asset strategy at Nomura on the program recently. And he talks quite a bit about the modelling that they do where they basically anticipate at what levels are the trends following CTAs going to change their allocations. So nobody's making any kind of rational decision. It's just at a certain level on various different markets, things tend to accelerate.

Charlie was incredibly prescient at predicting if we got to certain levels on this S&P selloff that it would accelerate to the downside. And that's exactly what happened.

So I'm seeing a lot of credibility to these models that are not based on anybody having an opinion about the economy. It's just when you get to a certain level, the machines are going to

do this, and it's going to cause a panic, and that's going to result in that and the other thing. And these predictions seem to be coming true.

Is this a big risk in the market? And how do you factor that into your very fundamental-driven viewpoint in everything that you do in your analysis?

Keith: I agree with that 100% that that has a big impact and it is perpetuated by these factors that are fundamental that I've been talking about. I've spent most of the time talking about our fundamental research process, but on our quantitative signaling process, which runs side by side, I come up with very similar observations. I call it The Machine. Especially if you look at equities.

So it's an interesting call by the gentleman at Nomura because the equity market really is the most obvious place to see this happening. 90% of daily trading is systematic. Systematic trading. Rules-based trading. Anyone who is systematic or rules-based doesn't care about what the company's PE is, what the company does, if you like Apple or not. It has to do with the rules of the quantitative system.

If you start to break and – really, what you can observe quite quickly if you break one-month price momentum in anything to the downside or the upside –this works both ways, that's why it's very relevant – it also perpetuated the squeezes we saw in the FAANG into the summer-time highs or momentum over growth etc. etc.

These are all factor exposures that the machines are chasing. And the machines will chase it and chase it and chase it until the factor that's causing it changes it. So I think that that's easily the thing that's making things happen faster and faster.

You have 2 trillion dollars that's being managed by the quants – I mean pure rules-based quants. Then you have the POD chaps, and I'm not going to name names but you know who they are. And they are delta hedging constantly. And then you just have people that have no idea that are just chasing charts, and they are also a large constituency of people.

It's a really sad thing on the downside inasmuch as it's a great thing on the upside. So I think this thing goes both ways. And the main thing is that the volatility of volatilities that predict these modes, or at least run side by side with our fundamental research view, and I think it's a glaring market risk to the downside right now.

Erik: Well, Keith, I can't thank you enough. And, particularly, you and your colleagues at Hedgeye for putting together another fantastic chart deck. Your chart decks are always excellent. We always appreciate them. I very much encourage our listeners to check out all the slides that we skipped because they are very much relevant. I just wanted to focus on the content that our longtime listeners have not heard before.

I do want to come to this time of year. You guys at Hedgeye have all kinds of different research

products. If you were to sign up for all of it, it's about \$2,700 a year. So it's great stuff but it's not cheap.

Once a year, and only once a year, our friend Dan Holland puts together a very special offer. It's a huge discount and it ends up being basically \$1,000 to get access to everything. MacroVoices is the only, I'm told, partner that you have that Patrick managed to actually talk Dan down another \$100. So it's \$899 for the all-access pass.

I feel a sense of responsibility though that that product is really not for everybody because you're teaching people how to do something that requires a fair amount of time. So who is that for? And how much time to they need to dedicate to it in order to fully benefit from what's on offer there?

Keith: I appreciate that and I appreciate your audience and your listeners. It's obviously true, we're not giving this to anybody else in terms of a promotion because you have to be somebody who is interested in developing a macro process. MacroVoices, of course, spans all different segments of what people could be interested in from a global macro analysis perspective, whether it be quantitative or fundamental research.

And we have a lot of components to our process when it comes to that that are surgically analyzing, measuring, and mapping macro. So you can't just do it with one product. If you want to develop a process like mine – I'm effectively trying to get people to use my process whether it's to just augment what it is that they're doing or to complement a component of what it is that they're doing or just borrow the whole darned thing. And, in that case, you need all the products.

To your point, Erik, I think a lot of people would say that the price point to that is too high. What that's borne out of is that 90% of my business is institutional investors where the price point is well ahead of that level. So we're doing our best to give people that really want to get good at this the right access to the right products and the right information. That's why putting it all in a bundle makes it all the better.

Erik: I couldn't agree more. The bundle is very much a bargain at \$899. It was a bargain, frankly, at \$999. I just feel a responsibility to mention to people the reason it's a bargain is because you get a lot of service that's going to require a lot of your time. This is for somebody who really wants to learn about a formal investment process, how to trade your own accounts the way that a hedge fund or other professional investor would trade theirs.

All of this information is linked in your Research Roundup email. And we improved the process this year so it's no longer necessary to email a guy at Hedgeye and say, hey, I'm from MacroVoices, give me the extra discount. The link in your Research Roundup will automatically give you the correct price.

Keith, I can't thank you enough for a fantastic interview. Patrick Ceresna and I will be back as

MacroVoices continues right here at macrovoices.com.