MACRO Voices
with hedge fund manager Erik Townsend

Tian Yang: A New Commodity Bull Market is Coming

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Erik: Joining me now is Tian Yang head of Macro Research for Variant Perception. Tian prepared a terrific chart deck for today's interview, registered users will find the download link in your research roundup email. If you don't have a research roundup email that means you're not registered yet. Just go to our homepage at macrovoices.com look for the red button that says looking for the download above Tian's picture.

Tian, it's great to get you back on the program, it's been way too long frankly, and just looking at your slide deck, it's very timely, we've been talking quite a bit on this program that I'm convinced at some point, we get a secular shift to inflation. Commodities eventually have to bottom and we see a new upcycle in commodities and boy, that's exactly what you've got.

In the first half of your deck here is the next commodity super cycle starting with inflation as a driver. So where do you guys see this inflation picture? Is it just around the corner, or it could still be a year or two off?

Tian: Thanks Eric and thanks for having me on the show again. As you say, I think right now there's a number of both structural and cyclical changes that are starting to come together for the next commodity super cycle.

Obviously, we know over the past few years it's been somewhat of a Widow maker trade for people to be calling the bottom. But what's very interesting is that historically when you see major recessions they often tend to kind of signal major trend changes or leadership changes. And obviously, you coming out of this recession in 2020 we see a number of kind of quite dramatic policy shifts, that means the structural pictures change.

And in addition, what we're seeing right now is that cyclical economies led by China starting to pick up at the same time as supply conditions actually quite constrained across a number of commodity sectors. So it's a very interesting playing time right now where we have this broader shift towards a more inflationary policy mix, a cyclical pickup in the economy. And you also have the situation where financial assets, obviously very richly valued, yields are starting to hit zero everywhere yet inflation is expected to pick up.

So you're also going to have this structural flow, where investors have to think about what they do with their 60/40 portfolios, what they do as fixed income assets. And eventually have to think about shifting away, more likely into real assets and commodities, obviously, I'm gonna be a big beneficiary of that as well. So there's a number of things kind of coming together right now to drive the next super cycle.

Erik: And where do you see the inflation story coming into this?

Tian: So I think we need to think about inflation both from a structural point of view and a cyclical point of view. So the thing to say is cyclically, when unemployment rates are still quite high, when there's still capacity in the economy, you don't expect to see kind of immediate pickup in core inflation. Headline could tick up a little bit when commodity prices industrial commodity, so forth, initiate pickup, so on the cyclical front, there's not necessarily as much inflation pressure right now.

But structurally, we've seen some truly seismic shifts in the kind of policy landscape and the structure of the economy actually just this year. When you see governments and developed market governments around the world start to run giant fiscal deficits funded by central banks, that's obviously a very dramatic shift away from independent central banking and the focus on inflation.

This is very much going back to the old Keynesian kind of playbook of essentially, fiscal led growth and at the same time, we've seen the US Federal Reserve do a number of quite dramatic shifts this year. Firstly, moving to average inflation targeting is obviously quite a big mission that they don't really know where the NAIRU (Non-accelerating inflation rate of unemployment) is, they don't really care what the NAIRU is, they are just going to run the economy and let it run hot.

And such a policy is also pretty timing consistent because it's not well defined, what's the period over which we're targeting average inflation. The incentive will always be as inflation picks up for policymakers to just run their heart because it's easier to kind of keep the party going.

So, both fiscal and monetary policy are starting to become a lot more expansionary and loose. And the historical precedents for this kind of price action would probably go back to World War 2 with a fair-trade record, that essentially meant fiscal deficits would be very large. But there was a moral imperative for the central banks to finance the government deficits, and that ended up creating a lot of inflation.

And this time around, the moral imperative is that the central bank's got to play their part with the pandemic. And going into the future, the central bank probably has to play their part was

addressing inequality, climate change, or any of these big issues that essentially justifies why central banks should finance government deficits.

So that's quite dramatic policy shift, the other thing that's happened is that the Fed is now proactively kind of destroying the quality of its balance sheet. So again, as extreme, we could go back to when we were on the gold standard, if you look at central bank balance sheet, most currencies backed by gold, right.

So $1 is an asset for us but for the central bank $1 is a liability so previously they backed it on the asset side of their balance sheet with gold. Obviously, over time we abandoned the gold standard, so forth, the quality of assets on the central bank's balance sheet is getting worse and worse. And obviously, this year, the fact that they started buying corporate bonds, the fact that, they're willing to take on fallen angels, hide your debt and take on more credit risk is just another reflection of just the weakening central bank balance sheets.

It's not necessarily a immediate concern, but it lays the foundations for people to kind of increase inflation expectations and to really worry about what the value of the dollar is. And so when you have these kind of structural shifts in policy coming together in a couple ways to make a kind of deterioration in central bank balance sheets and government balance sheets. That's typically been the recipe for inflation expectations to become unhinged.

So, the way we've kind of described it is that we're moving towards more of an ocean regime than the lake regime when it comes to inflation. So you should think of it as, essentially, if you have a boat that you can sail on the lake, it's probably not going to be good on the ocean but you might be able to get away with a decent amount.

But if the waves truly pick up on the ocean then obviously a lake worthy vessel might not make it when space has very big waves. And we think that's the kind of way to think about inflation, right now. We're no longer on the lake, we're moving towards more of an ocean where we need to sail through.

And so what investors really need to think about right now is whether there's any immediate risk of inflation or not. The key is that the risk premium that investors need to price in for inflation, especially in some of the longer duration assets, that needs to start to go up. Even though central banks here are going to have lower for longer and so forth, we still have term premium being very negative.

These are things that don't really make sense when we're moving to a more inflationary kind of environment. And so even over the past few months what we've seen with the rising yields is a lot of is being driven by the term premium, which is obviously going from deeply negative to less

negative. And so I think a lot of these things need to start to happen right now, just so investors accurately price in the risk of inflation, let alone actually seeing any inflation come through.

Erik: Tian, I love the picture on page five where you're talking about lake and ocean regimes of inflation. Needless to say, you're not talking about a necessarily a really calm easy day out on the ocean, but maybe a stormy day.

Now I want to go back to what you said because it seems to me that the game is very different this time around in that you drew an analogy to, okay, after World War 2 we move to a whole lot of deficit spending, which should be inflationary. The thing is, after World War 2 we were still, as you said, on a gold standard. And the big inflation didn't really get unleashed until we came after the gold standard with the breakdown of Bretton Woods in 1971.

Now, this time around, we're going to have I think the same if not a greater shift to a public policy emphasis on major spending programs with a lot of deficit spending. But we're already in a pure fiat environment, so nobody's pretending there's a constraint on how much money you can print in order to finance government spending.

I would think that means that the inflation is certainly not delayed by 20 years the way it was after World War 2, but is it immediate? Or is there still a lag of several years before that inflation really hits the system in terms of consumer price inflation after those pre generated factors like deficit spending kick in? How long does it take before we really see the inflation start to get away?

Tian: Yeah, I mean, that's a great question. I guess it's a little bit like when they think about how people go bankrupt, right, it happens very slowly and or all at once. I think this is kind of the analogy we're kind of drawing here because we're talking about a shift in inflation expectations, which is obviously predicated on just the general belief in the system.

These things are obviously inherently fairly hard to predict but what we can do is kind of position for when it already makes sense. So when markets are already not pricing in much inflation risk premiums and also as the economy cyclically picks up, those things are going to help just drive a more normal reflation cycle.

So right now, if you position for that, then when the tail comes through and potentially more inflation picks up later, you're kind of on the right side of it. In terms of the mechanism it could, as you say, potentially happen quickly or you could take a few years. I mean, if we're in this kind of 1960 style environment then what you need to do is go along for the excess capacity in the economy to be used up first, and then have inflation pick up.

And then you will need that to feed into shifting hecs inflation expectations higher, and then you should move into more of a wage price spiral. Then when people think inflation is going higher, they're going to demand higher wages and that's what really kicks off the more uncontrolled inflation right now.

Arguably right now for a lot of people, you know say live in the United States, the actual cost of living inflation is actually already been a lot higher than what CPI would be saying if you look at shadow stats, inflation and these kind of different projections. They would say inflation has be running a 4-5% annually for the past 20 years, if you get rid of a lot of the hedonic adjustments and so forth.

And arguably, it's actually this mismatch between what official CPI says and what people feel is their true cost of living. That gap is also fueling a lot of the populism and the kind of general discontent that we have been seeing in society and, by the way, this isn't a new, it's just quite rare that we see it in developed markets.

If you take emerging market economies like Argentina or these places that have been known to have huge inflation's, this is typically what happens. The population doesn't believe in the CPI, they think their real cost of living is going up a lot higher, so when it comes to wage negotiations, they demand CPI plus 5-10%.

And then obviously, wages go up a lot more than inflation and then you get the wage price spiral, so I think it will probably take a little bit of time for these dynamics to truly kick in the US. But the first step is use up the spare capacity in the economy, which is going to generate some some inflation and then we'll see how we go from that.

Erik: Tian, let's talk about how this translates for portfolios, it sounds like we're very much in agreement that inflation is coming, but it's kind of hard to know exactly when and how it shows up. Probably when it does show up, it shows up in a big way, you don't want to be caught by surprise, but you don't know that it's happening right away. So what do you do in terms of your portfolio in order to be ready for that?

Tian: Yeah, well that's kind of the million-dollar question at the moment isn't it? So the first thing to know is, I think I mentioned briefly at the start, clearly more traditional portfolio construction, the kind of 60/40 or the heavy allocation to fixed income, it's naturally kind of getting to the end of the road. I think most people recognize that as yields bump up against the zero bound, the ability for your fixed income portion to really offer a diversified impact or a hedge to equity risk is going to diminish.

So, going forward, what's very interesting about commodities is that one of the unique properties of commodities is typically when commodity volatility is high commodity prices actually tend to go up a lot. And this is quite different to equities because normally for equities only when equities are crashing that volatility picks up, whereas for commodities, the volatility tends to be to the upside.

So there's a few of these natural properties for commodities that blends itself well to mix in with equities. So, we do see the potential for people to think a lot harder about commodities and real assets as part of their portfolios.

Now, the thing to say about commodities is that one of the big reasons why it tends to be very high volatility is that there tends to be quite prolonged periods of demand and supply mismatches for the industry. Just because typically supply responses can take a long time if you're going to build a new mine, or drill a new well, or build a new plant, it could sometimes you could take up to three to five years. Obviously, if it's like the super-efficient shell well, maybe it takes one year to get to get it going.

But for a lot of commodity sites if you're going to build a refinery or build a chemical plant or things like that, it's going to be three to five years. And because of that very delay supply response it is where you end up with this prolonged period of demand supply mismatches. And so that that's kind of what we're starting to see right now, where for a lot of commodity sectors are more capital scarce.

This being a prolonged period of a lack of investment, a lack of capex, and so these are sectors that we would expect to have quite explosive upside as the as the economy recovers and as demand comes back. So I think in the slide deck there's a section on page 15 where I mentioned the capital cycle. So, I think this is a very interesting framework to actually think about when we're trying to decide where to invest in.

So for the capital cycle I think that the best thing that I've read that's really inspired us on this was some pieces written by Marathon Asset Management. And it was basically collated together in a book called "Capital Returns: Investing Through the Capital Cycle", and the book was put together by Edward Chancellor. And so the basic idea is that, if there's a lot of money flowing to a particular industry or sector, then that inflow of money will cause a lot more competition within that industry which drives down returns and then as returns fall very low then nobody in the industry can make a profit.

So naturally, companies want you to go bust or companies will need to leave the industry and in turn that restores more profitability. So lots of businesses are kind of going through the cycles over time and what we've tried to do is take that insight and try to apply it quantitatively. And

essentially proxy for capital scarcity by looking at things like, how much capex or R&D spending is going on in the industry relative to its asset base, you know, how much are assets depreciating? How much are assets being written down? How much your assets are being amortized away? And then essentially ranking different industries using this metric.

And so what's very interesting as right now, what we see is that for a number of commodity related industries is they are showing up as incredibly capital scarce right now. Oil and gas, metals and mining, precious metals, gold mining, and as gold and silver, and so forth, a lot of these sectors are showing up as very capital scarce which lends themselves well to a more prolonged upcycle, and a longer boom period.

So those are some of the things that come out from our analysis and so again, I think this is the quite cute way of combining a more top down view with a more bottom up driven approach. So that as you say, the top down view is very much about the shift to inflation, the fat investors are underweight and the need for them to look for ways to hedge that inflation risk which drives them towards commodities.

And then from the bottom upside, what we're seeing from industry level from balance sheet perspective is that a lot of these commodity sectors are very capital scarce. And they have been for a number of years, which has caused them to delay or cancel capex projects and units cause supply to tighten a lot in a number of these industries.

So as that demand comes back or as the cycle picks up again there's not much room for supply to respond, so you get very outsized on price moves. If we just say, look at gold, the kind of magnitude of the move has been quite dramatic of the past few years after a very long and lengthy kind of bear market. So that's the kind of dynamic we're trying to look for in some of these other sectors as well.

Erik: Let's talk about the pandemic and the effects that it has on the macro backdrop and where these trends are headed. It seems to me, as we're speaking, we're just in the last few days getting a pretty significant spike in both new cases and deaths, both globally as well as in the United States. It seems to me like on the one hand, this pandemics probably going to last longer than most people expect, the demand destruction is probably going to last longer, that has maybe some suppressive effect on prices.

But boy, the capital destruction, and the lack of investment that you're talking about is really being exacerbated. So it seems to me like this is really a setup for maybe prices to stay depressed because of the pandemic until they're not anymore and then holy cow, the upside could just be out of sight. Do you see it the same way? Am I misinterpreting that?

Tian: Broadly speaking, I would agree. The one thing I will say is obviously it's almost a little bit dangerous to talk about the pandemic, just because it's kind of taken on such a political or moral tone when people talk about it. But what we're trying to do is just try and be objective and just follow the data and see what's going on.

And actually, broadly speaking, what we're finding is that in the second and third wave, for developed markets like in Europe and so forth, the kind of follow through, the impact in terms of hospitalization, deaths, versus back in March and April. This time around is actually a bit lower, which is probably why governments are trying to strike more of a balance between economy and health policy.

I'm based in London, and there's a lot more of a focus on more localized lockdowns, but again, this time they are trying to keep schools open, they're trying to let people keep going to work and trying to keep businesses open as well. So it does feel like the impact of the second wave is looking like a lot less. And that seems to be with the way the markets is kind of pricing as well and in turn, government policy hasn't quite been as draconian as back in March and April.

So, you kind of have this factor and potentially vaccines and things look to be coming as well so when you put it together, yes, things things are bad. But realistically when you start to look ahead six months to one year, it seems much more likely things are going to get better than not. So on the demand side, it does feel like we are somewhat of an idea and then on the supply side, as you say, supply disruption has been real if we look at shale in how the drop in production has been huge.

There's been a lot of bankruptcies that's come through, so yeah, it does feel like quite a rare setup that we're seeing right now. That the key is making sure that we position in a way that we can survive if the downturn does go a bit longer than needed and just to capture the upside. But yeah, broadly speaking, I would agree.

Erik: Tian, it sounds like you and I are in very strong agreement that maybe we can't call the exact timing. But you know, at some point, a really big move up in commodity prices driven by a combination of lack of investment that that capital shortfall that you talked about increasing inflation expectations, deficit spending, all of these macro forces sooner or later, are going to come to bear on these markets.

There's lots of different ways to invest in commodities, some people invest in the commodity itself through the futures market, other people invest in the commodity producing companies through either ETFs or direct stock plays. Some people try to do that with a broad brush of commodity producers, generally in a very broad brush ETF, other people are, you know, let's look at specifically which junior mining company is going to find the next uranium deposit that's going to change the world.

How do you think about this at Variant Perception if your view is commodities have a major super cycle ahead of them? Are you getting positioned in the equities? Are you getting positioned in commodity ETFs? Are you taking some different approach? How do you think about this?

Tian: Yeah, so I think it depends on a little bit on your ability to execute, but obviously, equities and in particular investing in the equities of the producers is probably the most simple way to do it because you can just execute it once there's an issue with the roll and so forth. And a lot of the bad news of (inaudible) being priced in, and obviously, if you can find the better quality management, they can help you address some of the issues with the cycle.

What we say is if you do it directly via commodities, it's doable, but what we found is that if you're going to invest directly in the commodities you actually do still need to rebalance regularly. As I mentioned a bit earlier, the nature of commodities is that the volatility is to the upside. And so when you have a basket of commodities what happens is often you'll get one or two that really starts going materially higher and as a proportion of your portfolio they tend to get very big.

And if you don't regularly rebalance it and balance out the kind of relative risk distribution across the commodities, your long, it's actually quite detrimental, like a lot of the value comes from the fact that it's very volatile. So rebalancing regularly actually allows you to effectively buy low sell high, so I think that's probably a bit harder to actually implement in practice for a lot of investors.

So I think for us, we've generally gone down the route of looking at the equities. Now, the issue with the equities is that if you take a step back and look at a lot of these commodity cycles over history, what we find is that because they tend to be very capital intensive sectors, they're subject to kind of boom, bust cycles. And the nature of the boom, bust cycle is that for the industry as a whole, if you buy and hold it through that time, they tend to a lot of times actually destroy value in aggregate.

So then it becomes actually quite important to either time the cycle well, or it becomes very important to pick out the relative winners within the sectors and within the companies. So in our view, we're kind of trying to get the best of both worlds right now, where we feel like the timing is actually pretty good right now coming out of recession. But at the same time, we think there is a lot of value to be gained from doing some stock selection right now.

So for example, in something like oil and gas, broadly speaking, you can almost break it down into either very safe infrastructure like midstream assets that you could potentially invest in. So it's not a BP midstream and Shell midstream, right? If they have the only pipelines that run up from the Gulf of Mexico, nobody else is gonna come along and just build another pipeline alongside you.

This is yours, this is basically the entrenched asset, so as the market picks up, this is still a very good quality asset.

And you can pick it up for 50 cents on the dollar, so that will be kind of be a very conservative way of doing some stock selection, and then picking stuff with very good asset values that has a potential to rewrite and that can still be cashflow positive even during the downturn. Now, the other way to do it is to look for aggressive ways to gain exposure as well, so again, digging for a little bit in terms of the quality producers sit on the EMP side. Guys have more track record, the London family obviously have a very good track record, companies like Pirates and so forth have generally considered to be well manage better quality assets.

And so these are where you're investing knowing that if the prices go up the upside can be a lot higher than some of the same infrastructure type plays, but also with a bit more risk. So I think that that's probably the way to play it, actually yes, timing wise is good and then going for the ETFs you'll probably be okay. But if it's possible to do some more kind of stock selection on top, there is more likely be a lot of value there just because the nature of boom, bust cycles in industries in general that tends to be a lot of also-rans in the industry that historically have destroyed a lot of a lot of shareholder value.

Erik: Let's break this down in terms of categories of commodities, obviously, energy is central to the economy and I think there's lots of reason to want to really look after this election. To where the trends are going to be headed in terms of green energy and so forth to make some investment decisions there. But you move on to base metals, copper of course, is the widely respected proxy for the general economy.

So copper mining seems like a place if you're getting ready for a big economic expansion, a lot of infrastructure spending, seems like a place to be agriculture is probably going to get more important precious metals. How do you think about the whole world of commodities? And how do you approach those sectors in terms of where you allocate?

Tian: Yes, so ESG and green energy and the energy transition of are very important secular trends. But I think that the nature of these trends is that they do tend to take time and actually the history of a lot of commodity cycles, how things have ended, how the coal cycles done previously, whale oil, rubber. There's been a lot of secular commodity, boom, bust cycles I've already seen over history we have previous examples of, and usually these cycles have heavily politically driven the end, so it's not so much economics, it tends to be politics that comes into it.

So certainly, if we're looking at energy from the more fossil fuels, the headwind is there, but the thing to know is that in the investment the worst case is you're treating it like a last dance kind of

investment. Things are so bad but it's still so essential to the economy that there's at least one more upcycle in it.

And even the most aggressive kind of net zero by 2050 plans, you're still going to give a lot of these industries kind of a 5 to 10 year window that's actually not that dissimilar from the norm. And from 2030 onwards, a lot of the transitions are expected to kind of accelerate, so I think those medium-term headwinds are certainly there. And they're more argument against the kind of buy and hold forever case but what they also do is obviously discourage a lot of capex and investment and R&D into the sector.

So if anything, in terms of what these longer-term headwinds are doing is they're exacerbating the current kind of supply demand imbalance. So you're just going to have a situation where supply is going to be constrained for the foreseeable future, nobody wants to invest here. Yet, as the economy recovers and picks up there's still a lot of demand, obviously, the transition to electric vehicle and so forth, there's a lot of argument about how quickly it happens.

I just use simple rules of thumb, if I think about how long cars last, the typical new car can probably last for let's say 6-8 years. I mean, most cars you can probably drive it for 10 years and they're still quite good right now. So if overnight, everybody stops using petrol fueled or diesel fuel cars and move to electric, because average cars used for 7-9 years is still going to take you that long to slowly phase out. And that's obviously the most extreme, assuming everyone changes overnight.

So I think it's just more these are factors that for the more traditional fossil fuels, there are headwinds, but a lot of it does seem to be in the price. So you're very much going for a more value play plus kind of cyclical rebound, or something like copper, that's probably where you're trying to be more aligned with the kind of ESG mega trends and so forth.

So one of the very interesting things is that because you don't have the ESG or the green headwinds, the valuations will obviously for those sectors naturally be a bit higher. But at the same time, you're a lot more likely to benefit from a kind of arms race between, say, the US and China to go out and electrify and go for green technology and to build out electrical grids and build out new charging stations, all these things.

So I think that they do still broadly fit because they are all capital scarce, but conditional on them being capital scarce, energy, fossil fuels, are much cheaper in terms of valuation than some of the other sectors. But obviously, the play is a bit different if you go for the fossil fuel, you're going for more value, you're going for kind of the last hurrah, big cycle, at least. Whereas if you're going for the copper, or some of the other battery related like, lithium, nickel, a lot of these sectors, one is a

lot like the other ones, they probably aren't as capital scarce because people are kind of more open to investing there.

And when you have more capital available, it actually is not so good for investor returns. But the plus side is that potentially because the world we're living in is geopolitics, the kind of arms race in trying to transition economies towards more green technologies that we've seen China, that voracious appetite for a lot of these commodities.

China consumed half the world's copper but they only have 5% of the production, so they're going around the world trying to buy up mines, secure supplies everywhere. And obviously as depending on who comes in, the poll suggests Biden comes in, but regardless, we also see that for a lot of developed countries as well. There's a more shift towards embracing fiscal spending, infrastructure spending, and so forth that again, necessitates, you know, more demand for commodities.

Erik: It certainly makes an argument for copper because you've got the double win that infrastructure spending is going to benefit copper and a green spending is going to benefit copper, because of the electric vehicle play. Are there any other double whammies that you can think of for investors where there's a double win and a particular play that that really makes sense?

Tian: So the challenge with it is not so much just a double win, I think it's whether it's in the price, it's in evaluations, and what's embedded. So I think that's the challenging thing for battery challenging things, as I mentioned, lithium, nickel, some of these minerals actually going to be quite important, you know, rare earth metals.

These are all things that are ultimately going to be quite essential but in terms of where the price is, is probably not as cheap as some of the more fossil fuels. So I think it is in more investor preference in the trade off rather than necessarily picking one in absolute sense.

I think copper is one we've chosen to highlight because it's still in somewhat of a sweet spot where the industry has been flagged as actually being very capital scarce. And yet, it has this double whammy kind of tail wind behind the infrastructure or green energy. So I think that's what is probably somewhat more unique about copper, versus some of the other ones where it's not really as capital scarce.

Erik: And how do precious metals fit into this whole story?

Tian: Yeah, so gold and silver are slightly different that a lot of investors don't think of them as commodities, but more is just alternative to fiat currency. So because of that property, it does fit in with the kind of whole inflation changing inflation regime we've discussed. But what makes gold

miners and silver miners very interesting is that there's potentially a bit more upside than even owning the metals themselves, owning the metals themselves, obviously, it's just more part of the classic hedge.

And if you want to own physical gold, it's about also dealing with the fact that potentially not only the world's going to turn more inflationary but perhaps tax is going to pick up. There's gonna be more expropriation of wealth in a lot of these trends that typically accompany more inflation regimes or that tend to come out from very unequal societies. So owning the physical metal is kind of the ultimate hedge against a lot of those things.

So that aside, assuming you don't care as much about some of these more risks like expropriation, and so forth, if you're willing to kind of live with that risk. Then what's interesting is gold miners are still relatively cheap compared to the gold themselves because as a sector gold last peaked in 2011. The sector's been through kind of almost 8-9 years of a prolonged bottoming bear market process if the capitals fully dried up, so it's a very capital scarce sector.

So for the guys that are surviving, who still have the reserves in the ground and operations they potentially set to really benefit now the gold prices are picking up and they can start mining. And I'm really churning out cash flow so there all the same arguments we talked about right near inflation, so apply for precious metals, but going for the miners potentially gives you that extra bit of performance on the upside.

And the trade off is obviously that you don't get to own the physical gold. So if you're really worried about rising taxes, appropriation, you need to have your gold in the vault in Switzerland, then you probably want the physical.

Erik: Well Tian, I can't thank you enough for another terrific interview, it's great to have you back. Before I let you go tell us a little bit more about what you do at Variant Perception and where people can find out more about your work.

Tian: Yeah, so Variant Perception is a data driven independent research provider. So we're essentially trying to come up with very macro top down views backed up by data and then when the top down data leads us to interesting places we'll go and do some micro work and come up with a broad thesis as well. So if listeners are interested in a trial or to see some of our reports, please visit variantperception.com and fill out the necessary forms there.

Erik: It's great to have you, we look forward to getting you back in a few months for another update. Patrick Ceresna and I will be back as Macro Voices continues right after this message from our sponsor.