

**SM76 | 7.2.2022****Summer Playlist | Episode 1**

Jeff Currie, Global Head of Commodities Research, Goldman Sachs

**Summer travel is here this holiday weekend! Join us as Jeff Currie, Goldman Sachs' Global Head of Commodities Research, and host David Greely go around the world in just under an hour.**

**Originally meeting at the University of Chicago in 1992, they worked together in the 2000s through the “revenge of the old economy” commodities bull market. Today, we’re bringing them back together to discuss what’s different this time and what remains the same.**

**In the first track of our SmarterMarkets™ Summer Playlist, Jeff and David turn up the heat with a freestyle conversation touching on everything from carbohydrates to hydrocarbons — and how we can encourage, rather than discourage, the investment required to provide the food, energy, and metals we need.**

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**Jeff Currie** (01s):

The situation needs to be dealt with from a policy perspective and an investment perspective and the question is, what does that look like as we go forward. It's like we like to tell clients, you know, get long, buckle your seatbelt and hang on for the ride because ultimately higher prices are gonna be needed to solve some of these issues.

**Announcer** (20s):

Welcome to Smarter Markets, a weekly podcast, featuring the icons and entrepreneurs of technology, commodities, and finance ranting on the inadequacies of our systems and riffing on ideas for how to solve them. Together we examine the questions we are facing a crisis of information or a crisis of trust and will building smarter markets be the antidote?

**David Greely** (00:45):

Welcome to our Smarter Markets summer playlist, where we're sitting down with our special guests midway through this momentous year in markets to talk about where we are and where we might be, and need to be heading next it's beach reading in a podcast. I'm Dave Greeley, Chief Economist at Abaxx Technologies. Our guest today is Jeff Currie, Global Head of Commodities Research at Goldman Sachs. We'll be discussing why food and fuel prices are so high and what, if anything we can do about it. Hello, Jeff. Welcome back to smarter markets.

**Jeff Currie** (01m 16s):

Great, Dave, thanks. Thanks for having me today.

**David Greely** (01m 19s):

Yeah, really happy to have you kick off our summer playlist and you know, when I look at what's happening this year in the commodities markets, this feels different. When you were last on Smarter Markets at the start of the year, you talked about the needed upswing and the investment cycle and a very bullish outlook for commodity prices. You were right and in these past six months, a lot more has happened. You've been doing this a long time. Jeff, you and I work together throughout the two thousands commodities bull market, but this feels different to me. Does this feel different to you?

**Jeff Currie** (01m 52s):

Oh yeah, very different. I think at the core of it really is that the policy response. Yeah. It has created an environment that has unwound two decades of energy liberalization, you know, we've seen actually, if there's anything it looks like, and I don't know, it feels like because I wasn't old enough back in the 70 , but it looks like what the seventies looked like. You know, you have wind windfall, profit tax, power price caps. You know, the list goes on and on in terms of the similarities there in terms of the policy response and so what that is doing is it's creating an, an environment that is likely to extend the higher prices and it creates an environment which discourages the investment. Now why is that important, because at the core of this story really is one of under investment. You know, Dave, you and I back in the 2000s thousands, in fact, you know, you and I together coined the term, the revenge of the old economy, the whole idea of that story was poor returns in the old economy, saw capital redirected to the new economy and it choked off the investment that would've been otherwise used to grow the supply base of the old economy.

**Jeff Currie** (03m 18s):

Another way to say it in the current environment is investors preferred Netflix over Exxon. Now it was completely rational for them to do that because of the returns were so high, but it went on for a decade, oh, by the way, the similarities and it's probably worth, you know, going over these revenge of the old economy story is it's apparent in each one of those previous commodity super cycles you know, the commodity super cycle in the 70s started in 1968. What preceded it the Nifty 50, that was the big new economy boom then and obviously the one night we were together during the 2000. It was preceded by the .com boom effects when we coined the term, the revenge of the old economy and this time, you know, we have the fan boom. Now what makes this cycle far more vicious and it goes back to your first question.

**Jeff Currie** (04m 18s):

Does this feel different to you, it is the policy response, whether if it's, you know, ESG, you know, ESG was there when we talked, you know, six months ago, but the policy response driven in part by I would argue misguided environmental policy has definitely made a underinvestment story that much more hostile to do new investment coming in. So one of the conclusions for, you know, how is this different today. It means that this commodity super cycle and the underinvestment, particularly in energy is gonna be really difficult to overcome because let me ask you how many people want to line up to buy energy utility and you know, you know, power companies, you know, share prices when they know that they face a potential windfall profit tax, but you know, it just doesn't stop there. I mean, you know, Juniper this week, you know, in Germany was down something like 70% because you know, the policy has failed to create a mechanism for, for them to be able to pass through the higher natural gas price is what, you know, given that Nord Stream One was shut down, you know, two weeks ago, but it illustrates that policy, you know, is creating an environment which is making it very difficult for these companies.

**Jeff Currie** (05m 45s):

Not only to do their day to day operations, but to be able to harness capital, to be able to make the investments that are necessary to solve this problem on a, on a, on a longer term basis. So bottom line, this is a very different environment than what you and I saw in the 2000s.

**David Greely** (06m 02s):

Yeah and I'd love to dial in to, you know, what you're experiencing in Europe because you're in London, I'm in New York, you've been near the epicenter of the most recent energy crunch with the, the energy, the natural gas power crisis that's unfolded in Europe here. Our natural gas market has been more insulated from the sky high prices in Europe, but now in the United States, people here are experiencing gasoline prices over \$5 a gallon, the highest inflation rates in 40 years as they try to take their own summer vacations and for people who aren't close to the commodity markets, but are listening now that this is really impacting their lives. Can you help them how to think about what's next, not just for energy, but for food and materials because I think Europe's been, you know, a little bit in the forefront of experiencing this right now.

**Jeff Currie** (06m 52s):

Well, let's start with the supply story. The revenge of the old economy, that story was said in motion going all the way back to 08/09, because coming out of that environment, given the uncertainty around future economic growth, future economic policy investors became unwilling to carry long-term risk, meaning making investments in long cycle CapEx. They preferred short cycle CapEx over long cycle CapEx. Another way to say it is they preferred iPhones over compromises and as a result, you know, investment in the entire old economy, not just energy and in, you know, things like metals and mining, which started to taper off around 2012, you know, it was everything I know autos included that we saw this partially again because of poor returns. Now, when we think about the environment today, the demand story obviously given the policy response to COVID is what exposed the severity of these supply constraints.

**Jeff Currie** (08m 01s):

So think about this, you had the revenge of the old economy already put in motion. So we had these supply constraints and then along comes March, 2020. We see a huge surge in demand and that surge in demand turn exposed the severity of these supply constraints. So that's kind of like in, in a nutshell, but I want to dig deeper into this story and to do that, want to tie the events of 08/09 to the events of today and I want to start with, with a, you know, a broader statement, commodity bull markets and inflation are solely driven by low income groups. I know that my outside sound sounds surprising, but it's, it's critical to this story and I talked about it last time I was on the show but it's worth going back and summarizing because it's so critical to this story. When we think about commodity markets, you know, they're volume metric markets.

**Jeff Currie** (09m 01s):

And when we think about how do you quote one, it's like oil, millions of barrels per day in contrast financial markets like equities are notional dollar markets or call them dollar markets. How do you quote an equity billions of dollars of market cap. So, you know, when we look at a commodity market to be bullish, you just look at the volume of demand versus the volume of supply. If demand's bigger than supply, you're bullish a equity market you pump money into it. It's gonna be bullish. It's gonna go up. So I think you get the difference between the two. Now what I want point out though is when we think about dollars, what are the world's high income people control they control dollars. This is important because let's ask the following questions. Can the world's rich create financial inflation, just one guy by himself.

**Jeff Currie** (09m 50s):

The answer is absolutely yes. They just pump money into the markets and they go up, can they create GDP growth on their own absolutely yes, but can they create inflation or commodity bull markets on their own its numerically impossible and the reason being is there's simply not enough high income people in the world to do that. Only the world's low income can create commodity bull markets and inflation because they control the land. That that is a critical point here to understanding how we got here and where we're likely to go and why these policy responses I was just referring to are critical. Another way to say it, high income people don't eat that much more corn than the low income guy they do through the beef things. There's beef. So, but I think it, you know, it's not like they can control, they eat up 10% of the world's corn supply.

**Jeff Currie** (10m 40s):

So if the price of corn is going up, you know, it has to be coming from new entrant of a low income person, whether they're consuming beef or something like that and so I think you get the point there. The core driver of marginal demand increases in commodities, old economy goods, you know, as well as capital goods is mostly being driven by that low income consumer. So let's go back and let's ask what happened in 08/09 actually before I do 08/09 let's just so you see this point about volume mattering, let's go to the 2000s. You can think about once China joined the WTO in 2000, it triggered a powerful outsourcing arbitrage between rich Americans and Europeans and low income, rural Chinese and we think about the low income, rural Chinese that's your volume I talk about. This is what created that bull market in the 2000s inflation in China.

**Jeff Currie** (11m 36s):

How many of them were there 400 million low income, real Chinese. That was, they got brand new paychecks and went out and bought stuff. So that commodity super cycle was driven by that low income dynamic. I was just talking about, but you can see, by the way there is no exception to all periods of inflation, all commodities markets, always driven by low income groups. So let's go back to 2008, 2009. What was the financial crisis. It was a subprime crisis, you know, lending too much to lower income groups. The term was redlining back then. What was the immediate response by governments on both sides of the Atlantic in October, 2008, cut credit extension to low income groups. So just cut their credit lines. The next thing number two, through austerity stop physical transfers. Number three was QE, which benefited high income groups over low income groups.

**Jeff Currie** (12m 34s):

In other words, we pulled the carpet out from underneath them, demand collapsed. You can just see it in any data source and it didn't come back up until guess when March 2020 why, because you unwed all you now COVID was a crisis of inequalities, which forced policy makers to deal with the disadvantaged groups. And as a result, as policy moved away from being focused on macro stability and now focused on social need, we basically recreated the environment that was conducive to lower income demand growth and I can show you some pictures by zip codes in the United States and your head would spend how impactful it was. So that created that huge surge demand and by the way, it was global in nature and occurred at the exact same time and that's the critical point. Why we're so short of this IT happened everywhere exactly at the same time.

**Jeff Currie** (13m 30s):

And then you expose the severity of it. Now let's bring up, you know, what's going on in Europe more specifically. So you got the underinvestment story now, why is it so concentrated in Europe is because, you know, Europe is very dependent upon wind power and when we look at what occurred in the middle of last year, you saw a 20% drop in wind power generation in Europe. That's huge, basically equipped blowing in Germany. Now, given that drop in that wind production, you had to replace it with something and they went to the gas market because of this underinvestment thesis in ESG, as they went to the gas market, there simply was not enough gas and then that caused a spike in the gas prices that was around September. Now, let's look at an observation. When did Putin start

building up troops on the border in Ukraine, October of last year, essentially right after the spike in and when it was clear that you had an energy crisis going on in Europe.

**Jeff Currie** (14m 38s):

So this is an important point. Why am I bringing it up, because every policy maker out there wants to blame the current environment on the Russian invasion of Ukraine. No, the causality goes the other way. The energy crisis in Europe then created the incentive for Putin to build up troops and try to take advantage of the situation and invade Ukraine. So I want to make sure that all of our listeners see that the causality goes the other way around yet every policy maker out there is trying to use it as the scapegoat for what they're currently witnessing and then once you have the problems that develop in, in around the Russian Ukraine invasion, which by the way is way worse than any military strategists or, you know, whether, if it's the Americans, Europeans or even Russia themselves, the situation has gone on far longer than what anybody anticipated.

**Jeff Currie** (15m 36s):

Ironically, though the impact that it's had on commodity markets is, is, you know, not nearly as great as what leads you believe, which tells you that the underinvestment in this space due to misguided environmental policies and you know, the revenge of the old economy is far bigger than the supply disruptions that are created by Russia, you know, the one last point, you know, you're talking about, you know, energy, you know, in metals, the metal story, it's a tiny bit different than, than the rest of them and it has been a little bit asynchronous is because China is a far bigger driver of metals. So it has exact same story. Shortages happened in the metals. The difference is that you had the, the property crisis began to ensue in the, in China last year. That then created a pull back in metals that when they saw know, the COVID related lockdowns it became that much greater.

**Jeff Currie** (16m 41s):

The demand for metals in China, between the property problems and the COVID lockdowns during April and May was down 10% and when you're consuming 50 to 60% of the world's metals that's huge on a global basis. But when we look at the environment seems to be improving in China, and if anything, China is employing the third largest stimulus on record so we're very positive on the metals and we think they're going to, you know, rebound rather aggressively here in the second half of this year, you know, but I, you know, let's not dismiss that demand was really weak. One last point on food because there clearly is a food crisis going on as well as you know, what's going on in energy. Let's not forget, you know, food is called the carbohydrate. Energy's a hydrocarbon, both are very, you know, are, are, you know, dependent and very much embody carbon.

**Jeff Currie** (17m 41s):

In fact, I like to point this out. The only two assets on your screen that are up year to date are carbohydrates and hydrocarbons and when we think about carbohydrates, let's not forget that, you know, 50% of the 8 billion people alive today would not be alive. If it weren't for nitrogen, nitrogen comes from ammonia and ammonia is a hydrocarbon. And I like to point out we're made of carbon and carbon's a relatively scarce source. The key here is using carbon efficiently. That's whole another discussion I'm gonna get there but you know, when we think about a lot of people, I think there's this food crisis going on you know, it's not radically different than what's happening in energy and they all boil down to the same underinvestment drivers that cause that, so, you know, the situation on food was well exacerbated by Ukraine because Ukraine was one of the largest weed exporters, 25% of the world's weed exports come out of the Black Sea, so I'm not gonna dismiss the Ukraine, Russia situation in food.

**Jeff Currie** (18m 41s):

While in energy, think about natural gas, really serious in the Nord stream flows. We're just, you know, connected oil, not that serious wheat really serious and you combine that with the underinvestment thesis, which is why we have the shortage of, you know, in food there. But I think when we like looking about the big forces, I just want to summarize again, those a lot to, you know, take in is, you know, we have you know, the underinvestment thesis that stems back to 08/09 COVID occurs policy response to benefit the disadvantaged groups, huge surgeon demand exposes the severity of the supply constraints, prices rise and then the one last stage of this is everybody told me that, you know, the redistribution story that came out of COVID meaning redistributing wealth from higher income groups, low income groups was going to end with the pandemic. Let me tell you it is not ending. You know, you had California this week announced, you know, subsidies to lower income groups to deal with, you know, the food and energy crisis and you also, you know, you've seen it in Europe with the, you know, windfall, profit taxes revenues being given to the lower income groups. So the story that created the initial spike that you know, that you asked me to describe, I want to make sure everybody here understands it's still very much underway and if anything being reinforced by governments around the world,



**David Greely** (20m 06s):

This is why I love talking with you, Jeff, about commodity markets, because you're so good at explaining it and bringing it down to, to a real level and I think you wrote very succinctly in one of your recent reports that, you know, you, you can print money, but you can't print energy, food and materials and that's a, you know, the volumes that are being pushed through it creates the inflation that we're all we're all wrestling with and you know, you've given us such a good basis to think about what's happening and what might happen next but I want to take it up a, an even one more notch of difficulty for you because one of the things that I've always found so intellectually fascinating about the commodity markets is that they sit right in that vital center of the economy markets policy, and anyone who listens to you for more than five minutes, you know, gets the sense that you're thinking about all those different systems coming together.

**David Greely** (20m 58s):

And the commodity markets are both, as you've said, being influenced by what's happening in the economy, other markets and policy in particular, but also influencing them. And I was hoping you could just share with us a little bit, how are you thinking about the feedback loops between policy, the economy, food and energy prices. Now that we have the war in Ukraine sanctions on Russia, high rates of inflation that you've been discussing are forcing central banks to really tighten monetary policy for the first time in a very long time. And oh, the stock markets just finished their worst first half of the year in over 50 years.

**Jeff Currie** (21m 35s):

Well, I'm gonna, you know, you know, go back to, you know, a point here that carbon, whether or not it is in the form of carbohydrates or in the form of hydrocarbons, by the way, wood chips are carbohydrates, oil would be a hydrocarbon. Wheat is a carbohydrates, bottom line, one of those two groups carbohydrates, or our hydrocarbons has powered our society is for millennia. Yeah. This goes back, you know centuries of millennia, you know, whether, if it's Pete Cole or, you know, wheat or oil, they always sit at that nexus that you're referring to you. I mean, in fact, all of them come let's think about the, the, you know, the, the, the four big building blocks of society, you know, it's ammonia, steel, concrete, and plastics, all of those come from carbon and let's not forget and forget the importance of ammonia.

**Jeff Currie** (22 m 36s):

The nitrogen, you know, again, it goes into the fertilizers and again, half of the world's population wouldn't be alive today, if it weren't for those innovations that occurred, you know, during the 50s and 60s with the green revolution. So, you know, that's why these things sit at the center, you know, basically the ability for, you know, here's the way I think is most economists will tell you that they don't matter. They don't matter because they're too small of a share of, of growth. Turn that upside down and think about how much GDPs tied to one barrel of oil or one BTU, a gas going into Germany right now and they're finding this out, then you go, wow, it's really important because it's a small share of GDP, but the amount of output tied to one BTU or one barrel of oil is massive.

**Jeff Currie** (23m 27s):

And in many cases it's very difficult to substitute away as we're learning in Europe with the shortages in natural gas and that's why they sit at that nexus between economic policy and the economy and you know, the, let's say, you know, geopolitical risk. I just quickly want to talk about, you know, about monetary policy, you know, and I'm just gonna repeat what many of the central bankers, whether if it is Christine Lagarde, Jerome Powell, they all make it very clear. There's not a lot that they can do about these supply side factors because I like to point out raising rates and creating a recession or demand destruction are not a long term solution to this problem. The only long term solution to this problem is investment and interestingly and when you look at what occurred in the 1970s Walker and I was the hero for solving inflation, then took rates up to 20%.

**Jeff Currie** (24m 33s):

He did. So after a decade, let me repeat that a decade of massive CapEx, in fact, that CapEx boom, and it started around 68 and ended around 1980 was the biggest CapEx boom ever seen in the data in the modern history. Yeah, there was military in there because you had, you know, everything from Vietnam to a cold war to, you know, energy to, you know, all of it. But I'm just gonna ask you to think about the, the question. Was it the rate hikes that solved the, the inflationary problem or was it a decade of the biggest CapEx boom we've ever seen. I think I would put a lot of weight on that CapEx boom. Then you go, okay. When we think about that feedback between policy and you know, the pressures in these markets, was it a really good thing that we had an overheating economy during the 70s?

**Jeff Currie** (25m 25s):

Yeah, you may have had stagflation, but those high prices created CapEx and created a lot of investment and was that investment instrumental in debottleneck in the system because the system got a free ride from essentially 1980 you know, all the way until the most recent time period and energy. Yeah YOU had your shortages in the 2000s and that, that created shale, but it, it lasted a good 25 years after 1980 wasn't until 04/05 that we started having shortages again. So you know that, so what that's telling you is it's a very fine line between raising rates too far to kill off in inflation and letting them remain too low, creating too much inflation today and so, you know, then you throw in, you know, the, the war in Ukraine, it makes it, you know, much more difficult in terms of, you know, threading that threading that, that needle through that.

**Jeff Currie** (26m 22s):

But I think, you know, the key, you know, the key message here is, you know, when we look at, you know, policy makers, they do have the capability to deal through, you know, wage inflation. That's not my expertise in core inflation. I'm not gonna go there, but the one thing they don't have control over is that gap between core inflation and in the headline inflation, which is part of the reason why they drop it out. But I will say this, you know, the policy makers on the fiscal side are making life really difficult for the essential bankers. You know, through the policies that are, that are being implemented because they discourage the investment and they increase demand, which just creates a, you know, much more, you know, hostile market. But I think, you know, I think one of the, you know, the key point there is really thinking about, you know, how important these are in terms of, of allowing growth to happen.

**Jeff Currie** (27m 13s):

Whether if it is food in the emerging markets or natural gas in places like, like Germany and while they're taken out of the, you know, core inflation measures and the sitting in the headline inflation numbers, I think, you know, the key thing and key metric you need to be paying attention to is whether or not we see CapEx flow, whether or not that investment can get to these resources to develop them and think about any fed induced recession or demand destruction is being an impediment to the longer term solution. And this is why we'd argue. This is likely to take a decade. One thing it's interesting that I've learned since probably the last time we talked, Dave is why these super cycles take 12 years because the one of the 70s started in 68 and ended in 80. The one in the 2000 started in 02 and ended in 14, both were 12 years.

**Jeff Currie** (28m 13s):

Here's why I think it is the case and I picked this up by looking at, you know, some of the best hedge fund managers I know out there that trade this stuff and they had a hard time raising money and I try to dig down to why is it the case and discovered, you know, in talking to the asset, allocators is that their clients don't want this stuff. They don't want energy. They don't want metals. They don't want any of this and one of the key reasons, there are three reasons they don't want. It is the first reason is a history of bad returns. Let's not forget two years ago, oil prices were negative. The second reason is the volatility's too high. It's all over the place. The third reason was ESG. Now I asked, what will it take to get over reason number one, meaning what will it take for allocators to want to give capital to, to this space and chase?

**Jeff Currie** (29m 09s):

What I think are great returns by the way, I don't maybe repeating myself. I want to make sure everybody heard. I say this. The only two commodities that are only two asset classes on your screen that are up year to date are hydrocarbons in carbohydrates. They've outperformed everything for the last two years. So it's amazing why they're not getting capital. You know what the answer was, the only way this sector's gonna get capital is if it can prove to the world, it can generate positive returns for three years running. We're about 20 sub months into those three years. We got another year to go. Now, if you assume it takes three years to get a track record, to get money in this space. Now I know why it's a 12 year cycle, three years to get a track record. Then three years to deploy the capital because you can't deploy trillions of dollars of capital into a sector overnight and expect it to be absorbed in like five months.

**Jeff Currie** (30m 01s):

It's gonna take takes about three years. Then once the capital and people and everything's put in places, then the following three to five years you debottleneck the system. Now look at the 2000s Dave, this is what, okay, bull market started in 02. You and I were there together. When it started, when did the capital flow, it started flowing in oh five after three years of a spectacular bull market, they finally jumped in and then when they jumped in fact I remember, you know, we were sitting there in new coin, the term long term shortages create near term surpluses when they bought into it, they had to wait for three years and then the equities ripped back into the oil curve, ripped, everything went up and you had cost inflation because you tried to throw trillions of dollars into the system and it got bottleneck.

**Jeff Currie** (30m 50s):

And then finally, you know, years call it 7 through 12 you start to get real investment. You think about when did the shale just say it was like Independence Day of 08. I think Brian Singer wrote a piece called Independence Day of 08 when the shale gas started coming out and that's basically year 7 through 12. We debottlenecked it such that by the time you got to 14 the system was, you know, in surplus. But I think, you know, the big observations, five heads since we've last talked really is this idea that the sector needs a three year track record before this capital's gonna flow and you know, I think going back to tighten it in with policy, policy's gonna make it that much more difficult for that capital flow once it does begin to flow.

**David Greely** (31m 35s):

Yeah. So I guess, you know, heading back to the beginning, what's not different this time is that over the long term, it always goes back to investment and people really need to keep that in mind and you know, you and I are University of Chicago guys and for me if I can't think of something in terms of supply and demand, when it comes to economics, I figure, I probably don't understand it and you know, the point of, you know, if you look at what happened in Europe, you know, with the energy transition, trying to move away from using as much carbon, whether it's, you know, clearing land for more agriculture, whether it, you know, and creating food or whether it's, you know, using fossil fuel energy, you know, if you cut the supply of something, but you don't cut the demand prices go up.

**David Greely** (32m 18s):

And so if we're trying to get through an energy transition where we're not finding ways to reduce demand, by finding other sources of energy food, the things we need, the basics of life, you're gonna have prices go up instead of prices going down. And you know, there, there's not really any way to get around that. And I'm really glad you brought up the point about the tightening of monetary policy because you know, often when you hear about it in the popular press, it's, well, the Fed's gonna hike and that's gonna cut demand. But what is, it's not really cutting consumption, it's cutting investment. Like we'll talk about, oh, it'll cut, you know, home buying and home building and it'll cut cars. But you know, to an economist, those things are really more investment than immediate consumption and so the same way that it cuts investment in new houses or durable goods like cars, it can also impact the investment that we need to get through these supply problems and get to a longer term, you know, more affordable prices for these basics of life.

**David Greely** (33m 15s):

And, you know, I guess one of the other things that hasn't changed since the two thousands has been that there's a lot of policy responses being proposed by governments and politicians you've alluded to a few of them, you know, gas tax holidays, strategic petroleum reserve releases, blame the oil companies, blame the speculators, put caps on natural gas prices particularly coming out of Russia and I expect you believe that most of these proposed policies will, will do more harm than good. Maybe you could walk people through quickly. Why and like, is there something probably the more important point, is there something policy makers can do that you think would be helpful?

**Jeff Currie** (33m 55s):

Well, I'm going to answer what can policy makers do that could be helpful number one's just create an environment's conducive to investment that however, in the current context is a really tall order to ask because you got to tell the constituencies, we're gonna go out and subsidize oil companies, by the way, in the seventies you did, you know, maybe it's getting bad enough in Europe where you know, that, that those kind of thoughts, you know, aren't completely inconceivable at this point and by the way, I think this past week when Macron did the hot mic slip with Biden about, you know, OpEx being out of spare capacity, you know, there was a lot of political reasons he could have been doing that, whether it was to get the, you know, the green pressure off the back or potentially incentivized Biden to want to you know be loud at trying to get the incentives for the shale producers to ramp up production.

**Jeff Currie** (34m 48):

But I think the key point here is that policy needs to be focused on solving this problem and solving this problem is creating some type, of incentives to get production up and by the way, the, all of these things are all rolled into one, we need clear so that people know what the policy is and consistent. It can't be all over the place. It's got to be consistent. It may not even be the best policy. It can't change on you. That's the key point and it needs to be globally coordinated, because these are global markets. Once you get that, then you can start to solve these, these problems. You know, a lot of it's just taking the uncertainty out of it. That's all they need to do. Can't even if it were medium, okay policy it, you know, it just can't be policymakers kind of indicating there.

**Jeff Currie** (35m 34s):

It might be okay to invest in hydrocarbons near term, but not long term. Well, no, you can't have that kind of policy. That's exactly the type of policy that is, that will discourage the investment here. But I think, you know, the key point here is creating that policy is really difficult in the current environment. I know I can, if I were a policy I can see here on this podcast and talk about, yeah, the right answer here is, you know, create tax breaks in case oil prices, collapse to oil companies. That's not gonna go over too well. So it needs to be wrapped up in a general policy statement that goes, think about managing decarbonization or energy transitions, such that create well defined targets about how we're gonna bring down bound emissions when by the way in, you know, potentially even back off on the how to do the, the green investment, you know, but I think the key point is we don't have that policy ESG has arisen because those types of policy frameworks simply don't exist.

**Jeff Currie** (36m 42s):

And you know, I think going back to let's go over why they don't exist. I think that that, that's an important point here. One of the key reasons why they, they don't exist is the three big emitters think about three blocks, America, Europe, and China, they emit 66% of, you know, overall emissions and when we think about, you know, when we think about the three blocks, let's say Europe can pass a carbon tax. It has all other problems with discourage investments. I'm gonna take that off let's, but they got the right direction in carbon pricing. China would get there, but China wants it instead of going to one and a half degrees, they want to go to two degrees. Why they want that extra 10 years and there's a lot of political reasons. They want their extra 10 years, but that's the, the problem between China and Europe is in the US.

**Jeff Currie** (37m 30s):

The problem with the US is passing a carbon tax is incredibly difficult, you know, for, for America, like, you know, no taxation without representation, 250 years to go back to the Boston tea parties. This is gonna be a tall order to ask really, really difficult. But if you can get those three groups together, we're gonna end up, you know, we can get to that point where we can start just create the globally coordinated, clear, and consistent type of policy that can start to address these issues. Because the only way you can actually say, hey, let's help out in getting the investment on the hydrocarbons because the point is you can't subsidize it forever. You know, the energy transition's gonna happen. You don't want to do some long cycle thing. You know, you got, it's just go to be defined. They know, okay. If I do this short cycle, I can get the returns out of this because that's when it's gonna go down, then it's you start to create a mechanism in which you can, you know, create the transfers to get the investment to happen on the green siding.

**Jeff Currie** (38m 30s):

It, you know, no way to say it's rebalancing the carbon investment with the green investment and doing it in a way that is sustainable on a more longer term basis. But I think, you know, going to, you know, the failure with, with the Americans is how, you know, cause I think you get the Chinese board, how are you gonna get the Americans to pass, you know, policy, now I unfortunately look at history. When did Nixon sign into law the Clean Air Act Amendment 1970 It was because Lake Erie was on fire, you know, like to call it the lake Erie moment. Unfortunately we probably go to get to a lake Erie moment before the you know, the Americans are gonna pass that, which means we're a long ways away from, you know, getting that, you know, that, that policy response. But I, you know, in terms of, you know, what have we done more real recently?

**Jeff Currie** (39m 20s):

You know what we've done more recently to answer your question. Is it counterproductive you know, the answer is most likely yes. Why, if you do windfall profit taxes that discourages the investment, but what are they using the windfall profit taxes to do to provide subsidies to consumers, to buy more energy. I think most of the people on this podcast can understand that that's gonna create higher, not lower prices. You know, whether if it's a tax holiday in the US, you know, that's just gonna lower the price of gasoline and create more demand. They may do the federal all in price may go down \$0.16, it was \$0.18. If they did that but the, the demand would increase significantly putting more upward pressure on the overall underlying petroleum prices. And then, you know, the SPR releases you know, that's been great recently and put a cap on prices, but it discourages investment and it ends in November.

**Jeff Currie** (40m 19s):

So there's a lot of question marks that are, that, that are being, you know, created here. I saw, you know, I, I think, you know, you know, the answer to your question, you know, what we are doing at this point, you know, this is the kneejerk reaction, like what we saw in the 1970s, you know, that the question is what can they do. I'm gonna go back to just leave the message here. It needs to be clear. It needs to be consistent, not changing. It needs to be well defined and it needs to be coordinated. You get those three ingredients, right. It could be mediocre policy hence gonna do a lot to solve this problem. Anyway, I'll leave it at that.



**David Greely** (40m 56s):

No, that's great. And as you said, like that's a, it's a tall order, but I like the idea that mediocre that's clear, consistent, and globally coordinated is a lot better than the, the, the uncertainty and flip flopping that we're more likely to see and as you said, because it's a tall order, you know, the policy response that we will see will probably be different from that and given the realities of politics, you know, that probably means things get worse before they get better in terms of affordability and I'm curious, you know, just briefly, how do you see energy, food and metal price dynamics developing over the next few years? And I, I really wanted to bring up where does gold fit into all of this?

**Jeff Currie** (41m 38s):

Let's let me answer the question on food and energy first. You know, more I think about it is that that food and energy story there's so much more tied than I ever, you know, I actually, you recommend, oh six, you were the one doing the original work on the biofuels on our team. And that's one of the areas where you do see that, that connection, but the one that, you know, that, that I've actually more and more have connected food and fueled together is this ammonia connection you know, through the fertilizers and through you know, even the cost of, you know, the, the tractors and everything and the energy to, to, to produce it. So those two are very much tied together. Both of them are facing very severe shortages right now. And when we look at, you know, the current inventory levels very low, yes, there you know, there still is OpEx spare capacity out there, you know, you know, little down near 1.5 million barrels a day.

**Jeff Currie** (42m 36s):

But I think the key point is this is likely to be exhausted as we move towards the end of this year, which then starts to create a much tighter market. You know, policy has done one thing right now. It's just focus on keeping the price lower. That's why we're still trading in that \$110, \$115 a barrel, \$115 barrel range, just because policy so focused on the price situation. But I think when we start to look out towards the end of this year, you know, the, the, the, you know, the situation starts to become explosive to the upside and then food, you know, a lot of is dependent upon the weather this summer, you know, do we get a, you know, a positive yield response, do we get hit so far. The weather's been positive, but still you're talking about, you know, beans in the teens, which, you know, historically was, was, you know, unthinkable.

**Jeff Currie** (43m 22s):

So, but, you know, in terms of looking at, you know, what, you know, eventually the policy situation is not constructive, which means, you know, whether or not it creates a, you know, an environment which creates a lake Erie moment or whatever you want to call it. Like I discussed before the situation needs to be dealt with from a policy perspective and an investment perspective. And the question is, what does that look like as we go forward? It's like, like we like to tell clients, you know, get long, buckle your seatbelt and hang on for the ride because ultimately higher prices are gonna be needed to solve some of these issues, turning to the metals and gold. You know, my last time we talked, you know, let's go back, actually, you know, my first experience being here on this, which I think was in like November of 2020 on Smarter Markets, you know, there, I lumped it all together. We talked you know, earlier this year the metal story started to diverge. The metal story now I think is very, very different. Why one is what's going on in China. And then number two will be the green CapEx story that begins in earnest in 2023. Let's start with what's going on in China. You, I think the key point there is that the situation in China is that we have a property slow down occurring on top of the zero COVID policy. And this created, what I say is a recession for commodity markets during you know, the April may time period of this year and in metals it's a 10% decline in demand. Energy demand down was down, you know, two and a half percent globally. These are big numbers.

**Jeff Currie** (45m 12s):

And the fact that we're still sitting at, you know, \$8,500 copper and \$115 crew given that is pretty impressive. Everybody's going where's. The recession is coming. It's coming. News flash had happened in the commodity markets when China went through that time period. Now what that did created a really strong dollar. So fundamentals of copper are tight, despite all of that, you know, the situation gold looks like it'd be fabulous. Why aren't golden and copper in the doldrums, main reason why is, is it very weak C&H you know, in Chinese and Chinese one and a very strong us dollar?

**Jeff Currie** (45m 51s):

You know, it's one thing we like to argue is oil Grainger causes dollar, dollar Grainger causes metals prices and particularly base metal and precious metals and so when we look at that drag, it has created, it is real, but the demand weakness there, it's hard to say how, by the way, I just want to quickly make the point. Why is it a drag on, on metals and not energy, think about this. Energy is a lot of fixed costs and very variable, very low variable costs. Think about, you know, you put a lot of fixed costs in to get the donkey going up and

down those things that go up and down in the fields you don't have any labor in contrast with metals it's not a lot of fixed cost, but you have those big mining operations, lots of labor that go in and energy that go into you know, the minors, the truck drivers and everything.

**Jeff Currie** (46m 47s):

And so you could think of metals being in agriculture, being high variable cost, low fixed cost, energy, high fixed cost, low variable. Why is that important, because these are dollar denominated assets. Fixed cost is always in dollar. Variable cost is always local and so when the dollar is really strong, those variable cost drop and that's why acts as a drag on, on the underlying metals and price metals prices and so when we look at, just take a picture of C&H the Chinese one, the weaknesses experience, it's perfectly correlated with both copper and gold prices that act at the drag. But let me ask you this, is it the weakness in China that creates the drag on the, you know, on the commodity prices? Or is it the weakness in China that creates the strong dollar, it's the same conclusion, the only way that it gets better for the metals, whether if it's gold or if it's copper, is that you need an improvement in China.

**Jeff Currie** (47m 44s):

And again, physically, China's a big buyer, the world's biggest buyer of gold. They like it for, you know, they buy gold bars when you know, when things get you know, the risk begins to pick up, they buy it for jewelry. They're big, real, this is the real consumption for gold. It's not, you know, financial investment pure per se. It's actually real physical, unlike what the Americans do. So bottom line is when we look at metals prices, you got to keep your eye on China and, you know, the potential improvement there. Our base case is you got the third largest stimulus package. Since the financial crisis in China right now Xi Jinping has its party Congress, I think at the end of October, early November, and you'll have every incentive to see a very strong economy going into year end. So we like metals from this point.

**David Greely** (48m 34s):

Well, Jeff, thank you. You've given so much for all of us to think about today and for myself personally, you've triggered so many memories. I'm now thinking about the piece we wrote a long time ago called food feed and fuel and it sounds like we need to know, add another F to that at some point for fertilizer. So thanks so much for being so generous with your time before I let you go, though, you know, for this, you know, I think of our Smarter Markets summer playlist as a type of beach reading, maybe for wonkier types, but beach reading at a podcast and in that spirit, I'm gonna ask each of our guests in this series, what is on their personal beach reading list this summer, Saul's hoping you can kick this off. So what are you reading this summer, Jeff?

**Jeff Currie** (49m 18s):

How the world really works? I think that's the title of it is by Vaclav Smil. And I highly recommend it to anybody that is struggling with how to think about climate change. And he really goes into just how important things like fertilizer are how important concrete and steel and how they, how they make modern societies work. And you also, you know, de materializations being driven by this whole data movement. The world still can't function without materials. We can't go to a completely digital world. We still need steel, concrete, fertilizers food oil. And unfortunately the production processes that are put in place in these things are critical to you know, to creating those emissions. So it's a really difficult problem, and I really suggest people pick this up. You know, it's a relatively quick read and it really sheds a lot of light on just how difficult decarbonization is gonna be. So thank you, Dave. I really appreciate, you know, the time today.

**David Greely** (50m 19s)

Absolutely, anytime and How The World Really Works Vaclav Smil I'll go pick it up today. Thanks so much. Jeff, talk with you again soon,

**Jeff Currie** (50m 29s):

All the best.

**David Greely** (50m 33s)

Thanks again to Jeff Currie, Global Head of Commodities Research at Goldman Sachs. We hope you enjoyed the episode. Join us next week. As we continue our summer playlist on Smarter Markets with our next special guest, we hope you'll join us.

**Announcer (50m 45s):**

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