

Exchanges at Goldman Sachs

Food, Fuel, and the Cost-of-Living Crisis

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Allison Nathan: The recent decline in commodity prices has provided a rare respite for central banks trying to rein in high inflation. But even as most commodity prices are off recent peaks, many physical commodity markets remain tight. At the same time, Europe is facing an acute energy shortage with the curtailment of Russian gas flow. So are the energy and food crises afflicting the world actually easing? I'm Allison Nathan, and this is Exchanges at Goldman Sachs.

On this special episode of Exchanges at Goldman Sachs, we're breaking down my most recent Top of Mind report. We first pit a commodity bull, our global head of commodities research Jeff Currie, against a bear, Gary

Shilling of A. Gary Shilling & Co., to understand where commodity prices might be headed from here. Currie has long argued that we're only at the start of a new commodity supercycle. He believes that the recent reprieve in prices will prove temporary because the structural issues that led commodity prices to rise in the first place remain unresolved.

Jeff Currie: In October of 2020, we started arguing that we were entering a commodity supercycle, similar to what we saw in the 1970s and in the 2000s, driven by structural underinvestment in pretty much everything in the old economy, which we coined the re-bench of the old economy. Put bluntly, poor returns in the old economy saw capital redirected to the new economy. Another way to say it is investors preferred Netflix over Exxon and rightfully so. The return on equity in Netflix was substantially greater than that of Exxon. The issue is it went on far too long, creating supply shortages. This dynamic is rooted in history.

We go back to the supercycle in the '70s, it started in '68 and ended in '80. What preceded it? The Nifty '50, the new economy boom of that decade. It crashed and we ended up with underinvestment in the old economy, which then created supply constraints throughout the 1970s. Then in the 2000s, what preceded it? The dot-com boom. This one is no different. On the demand side, COVID was a crisis of inequalities. It forced macro policy to shift from a focus on financial stability to a focus on social need. And it did it simultaneously everywhere in the world in a global synchronous manner. There are three policies that are very distinct and common across everywhere in the world. Policies around redistribution, the environment, and deglobalization, RED. We call it redlining commodity demand.

Allison Nathan: In particular, Currie argues that a recession would only provide a temporary solution to high commodity prices given underlying supply constraints that will require substantial capital and time to resolve.

But even if we have deeply rooted supply shortages, if we end up in a global recession, won't demand just fall very

sharply and end this high-price environment for commodities?

Jeff Currie: Recessions and demand destruction are a temporary solution to higher prices. They're not a long-term solution. There is only one long-term solution here, and that is investment to de-bottleneck the system either through increasing new supply or through technologies to improve productivity. It's important to remember food and fuel demand is not that cyclical. Copper and the metals can get hit hard, and that's why copper has sold off so sharply. But food and fuel don't really vary that much over the business cycle. The reason why most people's memories of how damaged oil demand was in the previous three recessions is the last one was a pandemic, so you shut down driving. The one in '08 was a credit crisis, and everything shut down which caused oil prices to collapse. And then the one in '01 was due to September 11th.

But if you go back to the Fed-induced recession in '70-'71, oil demand was relatively stable. In the 1970s, there were multiple recessions. The economy would go in and out of real growth and real contraction, but nominal GDP kept growing over that time period and so did commodity prices

as well as commodity demand. During the '70s, a lot of focus is on Volcker raising rates 20% and that killing off the inflation. Let's remember, he did that in 1979, after a decade of a major cap -- in fact, the biggest CapEx boom we can find on record during that time period. And think about the benefits we got from that 1970s CapEx boom. De-bottlenecked oil supplies for two to three decades, refining capacity, metals production capacity, the military investment led to the Internet. So that investment boom in the '70s had profound implications on growth for the following three decades.

That brings into Allison Nathan: Who solved the inflation problem longer term? Was it Volcker or was it Burns, who was crucified during that time period? By letting the system run hot, it created the largest CapEx boom that we've ever seen in modern economic data.

The key point is that a recession is a temporary fix, not the long-term solution to the problem. We need investment, and thus far we have yet to see an investment cycle begin to take root.

Allison Nathan: But in the past, haven't we ultimately

seen prices getting high enough, returns getting large enough that you do see the supply response?

Jeff Currie: Despite the fact that the only assets up here today besides the dollar and the ruble are hydrocarbons and carbohydrates. Commodities are under invested. One thing that's really important to keep in mind about positioning in commodities is that, when we look at what happened to AUM since 2008, it's risen tremendously. But at the same time, the amount of assets in commodities declined sharply over that time period. So relative to total AUM, the amount of capital in this space is very small.

When I speak with allocators, they indicate there are three reasons why their clients do not want this space. Number one, a history of poor returns. You remember, it's just two years ago the losses in this space were nothing short than epic with negative oil prices. What's going to overcome the history of poor returns? The answer is the sector needs a 3-year track record. And when we go back and we look at historical supercycles, it gives you an idea why these supercycles last somewhere between 10 and 12 years. Years 1-3, track record. Years 4-6, you put the

infrastructure in place to accommodate that investment, and it creates cost inflation. And then Years 7-12, you debottleneck the system. And that's what happened in the '70s. That's what happened in the 2000s.

The second reason is volatility. The volatility is really high. This discourages investment in the context of the border portfolio. And then number three is the policy. What's different this time? Policy is more unfavorable, whether it's coming from ESG or if it's coming from the likes of windfall profit tax. Those policies make it very difficult for investors to want to put money to work in this space.

Allison Nathan: But economist and investor Gary Shilling rejects the idea of a coming commodity supercycle and even the insistence of commodity supercycles at all.

Gary Shilling: If you look at commodities -- and I'm looking at the broad CRB index -- it has corrected for inflation, declined 83% since the mid 1800s. This decline in commodities took place, particularly in the latter half of the 1800s, in the face of huge commodity demand. And I'll give you two big sources of that demand. One was the American Industrial Revolution, which was in full flower

during that last part of the 19th century. And the other one was the forced industrialization of Japan in the last three decades of the 1800s. Huge commodity users. And yet correcting for inflations, prices came down. Yeah, they bounced back in wars and when you get oil embargoes and like that, but they're pretty short lived. And I think the idea of shortages of commodities, boy, you're swimming upstream if you want to say that.

I can remember when serious economists thought that the telecommunications business was going to come to a grinding halt because there wasn't enough copper in the Earth's surface to make all the wires necessary. Guess what? Fiber optics came along. And the silicon is the second-most abundant element on the Earth's surface. Human ingenuity beats shortages any day.

Allison Nathan: Ultimately, though, given the focus on climate change and ESG, will we get the same production response that we've seen in the past?

Gary Shilling: Sir John Templeman said the most dangerous words in the English language are “this time it's different.” And I think you've got to have a lot of

substantial evidence to say it is going to be different. And so to suggest that you're not going to have typical responses, I've heard that chorus many times. Maybe it finally will happen in the case of commodities, but it hasn't in a long time and I've been in this business over 50 years.

Allison Nathan: So Shilling thinks the peak in commodity prices for this cycle is behind us as the global economy heads into recession, supply response to high prices, and speculators exit long positions.

Gary Shilling: There are a number of reasons that suggest to me that we've seen the peak in commodity prices. China, of course, which is a huge user of commodities, you think about China, their economy accounts for 18% of global GDP but 24% of global manufacturing. A lot of what comes into China in terms of commodities is then turned into manufactured goods, which are exported to the West. And with what I think is a recession developing in North America and Europe, this backs up to China. And of course China's also had a problem with COVID and the shutdown.

Another thing is the strong dollar. Of 45 well-traded

commodities, 42 are traded in dollars. If you want to trade wool, you got to do it in Australian dollars. If you want to trade amber, you've got to do it in Russian rubles. If you want to trade palm oil, well, you've got to do it in Malaysian ringgits. But the rest of them are in US dollars. And the dollar has been strong and I think it will continue strong. It's as safe haven. And it makes life very tough for countries that have to buy commodities in dollar terms when their own currencies are weakening.

You look at grain, in early June, the peak, it was up 59% in dollars but it was up two thirds in Chinese yuan and 85% in Japanese yen. And it's much worse in some of the emerging markets. Many of these emerging economies simply don't have meaningful currency reserves, and they have current account deficits. And if you have a current account deficit, it has to be covered by a reduction in your currency reserve. And I think that, with the global recession, that problem is going to increase on their supply side.

The one thing to keep in mind about grains -- and it's true of most commodities -- high prices are the best fertilizer. When you have high prices, farmers plant fence row to

fence row, and you get an excess supply. And of course that pushes prices down. Copper supply is also coming out of the woodwork. The International Copper Study Group, they see refined copper of 328,000 tons surplus this year versus a deficit last year of 475,000 tons.

Speculators also tend to be on the same side of the same parade at the same time, and it has very interesting implications because let's say you'll see a sell-off in wheat. The you see a sell-off in copper. Why? Because a lot of the guys who were long wheat are taking a beating. They've got to conserve capital, so they liquidate their copper positions even though copper has nothing to do with wheat.

Allison Nathan: How much farther do prices have to fall?

Gary Shilling: I think we could see [UNINTEL] at \$60-80 a barrel. OPEC, plus, they're not hot to see big reduction in prices, and American frakkers used to be the "drill, baby, drill" approach. But now the lenders and investors are saying, "Hey, we'd like to see some dividends, some stock buyback, some profits." So you don't have these things in free fall, but I do think you have a number of factors are pushing oil prices down.

You look at the agricultural sector. Now, of course, that's very weather dependent. But so far the weather in this country, it looks pretty good. Copper is used in almost anything that's manufactured -- computers, plumbing fixtures, machinery, cars -- and therefore it's a very good measure of global manufacturing. And I think that we're in or close to a recession on a global basis, so you get a cutback there.

Also, the nice thing about copper in terms of forecasting is that it doesn't have cartels on either the demand or supply side like oil. Copper futures, they were 488 on March 4th. They're down about 31%. I think they could go down up to \$2, \$2,50.

Allison Nathan: We then turned to Chris Barrett [sp?], professor at Cornell University, to deeper into the global food crisis. He explains that this is a crisis of high food prices rather than food shortages.

Chris Barrett: The global food crisis is really a global food price crisis. Prices for food are about 25% roughly higher than they were a year ago worldwide, basic commodity prices. And then add onto that oil prices are

higher, so transport takes the basic oil field commodity prices and add the margin for delivery so individual consumers going to their local markets face even higher prices than we see in the global commodity markets because you have to add a transport margin on there. So this is creating a real cost-of-living crisis for lots of the world's poor and even the middle class because they spend a lot of their budget on food.

For most poor populations, they're spending 30-70% of their income on food. If food prices double, they simply can't afford a healthy diet. So there are lots of different manifestations of the crisis, but the core of it is high price.

Allison Nathan: And Barrett emphasizes that the crisis of high and rising food prices predated the war in Ukraine, even if the war exacerbated it.

Chris Barrett: Prices actually jumped more in the year to last May than they did in the year to this May. Put differently, the run-up in prices in global food markets long predated anybody's serious concern about Russia invading Ukraine. It was coming from a combination of supply chain disruptions in markets for everything, as we've all

seen, and that has impacted pretty heavily global agricultural market. Agricultural commodities are relatively low value to weight, though you have a lot of problems with ocean freight service providers not wanting to take the time to fill containers with relatively low-value product. The shippers find the time savings from getting back and getting the next high-level cargo so much more worthwhile that they won't dock to take on board agricultural commodity cargoes.

Another big problem has arisen because we've had a series of just natural disruptions. Climate change is causing problems in agricultural markets. And then add the disruptions caused by the pandemic other than the supply chain disruption, including the fact that we've seen this massive reorientation from people eating outside their homes in cafeterias at schools and offices as well as at restaurants. The packaging, processing, manufacturing supply chains are completely different for large-scale institutional sales to restaurants and cafeterias and such versus retail sales. And that has driven food prices markedly higher and caused changes in agricultural commodity markets.

All of that stuff predated the war, and prices actually jumped more before the war. And the final bit part is livestock feed. Livestock feed and biofuel -- converting agricultural commodities to liquid fuel for transport primarily -- consume about half of the world's grain production. And that's a bit part of what's been changing in the underlying fundamentals of agricultural commodity markets. We see significant growth in animal feed per person because, as incomes have grown worldwide, especially in low- and middle-income countries, places like China, you see a big added demand for animal source products. And that means you got to feed those animals.

The inefficiency of feeding animals is a big source of the underlying structural demand increase for agricultural commodities. The war in Ukraine aggravated things for two really basic reasons. One is that both Ukraine and Russia are major exporters of several important commodities -- wheat and maize and sunflower oil in particular -- as well as inputs like fertilizers, nitrogen fertilizer in particular. And so the war is disrupting the regular trade in those commodities, which drives prices up as importers have to look for a new supplier. And to get a new supplier, they typically have to pay a premium.

But another big part is the disruption in the oil market. For every dollar we spend as consumers on food, only about a quarter of it actually goes back to farms. About three quarters of what consumers spend on food globally is actually going into all the different things that happen when commodities leave the farm gate. So it's covering the transport, the storage, the processing, the manufacturing, the retailing, the wholesaling, etc. And oil is a big part of the cost structure of those things, as is labor. Both labor costs and oil costs have gone up a lot. Oil costs in particular have increased markedly in response to the war, in part because Russia is such a significant oil exporter. A study one of my colleagues at Cornell and I did a few years ago showed that, when you have a change in the global oil price, that actually has a bigger and faster impact on retail food prices in Africa than does a shock to the global maize market, which seems really counter-intuitive to people. So the impact to the war is felt through both of those panels, the oil markets as well as the agricultural input and output markets. But that's just the recent aggravation of an underlying problem.

Allison Nathan: All that said, Barrett doesn't believe that

a resumption of Ukrainian grain exports will provide much relief. He argues that investing in technologies that increase food production using less land, water, and costly inputs is the only way to solve the global food crisis.

Chris Barrett: The key message is people need to not be distracted by the war in Ukraine as the big driver here. The wheat export loss from Ukraine that we believe is happening is less than 1% of global production of grain-based calories. So opening the port of Odessa will reduce a little bit the losses of Ukrainian wheat, but it's not going to matter a whole lot to global commodity markets.

If the war ended tomorrow, the fundamental problems of global agri food systems are not going away. They existed before the war. They'll continue after the war ends. And the only way to address them is through major technological and institutional innovations that help us to produce more food on less land and with less water. Food demand is going to continue to grow. The human population is growing, incomes are growing, and more people are moving from rural to urban areas. All three of those things drive added food demand, so that is unavoidable. The question is: How quickly can food

production rise to meet that demand? And we need to be investing more.

We need significant investment in systems that will recover waste to turn it into fertilizers and feed for animals and thereby take pressure off the land. We need investments in controlled environment agriculture that can deliver significant expansion portably for fruits and vegetables for urban populations so we don't rely on long supply chains with massive greenhouse gas emissions. And we need improvements in basic crops as well as alternative proteins to help to satisfy some of the growing demand for animal sourced foods without having to turn massive amounts of extra land into cultivation just for animal feed. That investment in R&D is really fundamental and it's long term.

The window for that to happen is only the next maybe two to eight years? Once we get into the 2030s, if we haven't made more headway than we're making right now, we will have some significant problems.

Allison Nathan: Specifically, Barrett warns that if we don't address the food crisis soon, there'll be severe humanitarian consequences potentially undermining social

stability in the most vulnerable developing countries.

Chris Barrett: We already started with about 3 billion people worldwide unable to afford a healthy diet, so adding another half billion onto that causes a crisis. And that can translate into knock-on effects, political instability in developing countries in particular that don't have good safety nets so that people really feel the pain of these market gyrations, problems that exist as governments are to have conflicts with one another diplomatically because of things like export bans. Because if governments stop cooperating with another on one thing, they tend to stop cooperating with another on other things.

The connection between high food prices and sociopolitical unrest is well established now. I was asked in 2011 by the US national intelligence community to coordinate a group of experts around the world to probe what food insecurity meant for sociopolitical instability around the world. The resulting volume at 2013 Oxford University Press book that I edited on food security and sociopolitical stability, its core thesis was that food insecurity indeed causes unrest. And the evidence behind that was pretty overwhelming, and it's been followed up by a bunch of very careful quantitative

studies demonstrating pretty convincingly that there is indeed a causal effect of high food prices on social unrest and violence.

We saw this in 2008 with food price riots all through the developing world, notably in places that don't have reasonably robust safety nets. If governments are stepping in and protecting their population then people don't take to the street. But when food prices get high and the simple act of going out to buy bread for your family that day infuriates people, it is just one more bit of evidence already disgruntled people have that their government isn't actually representing their interests, and they become much more likely to take to the streets and they become much more easily co-opted by opposition movements or even guerrilla movements, so you wind up seeing a much higher propensity for civil unrest and even government overthrow.

One of the consequences of that is mass migration. People leave their home when they can't get enough food to feed their families and especially if bullets are flying. We are seeing record numbers of forced migrants. So there are, like, 89/90 million forced migrants at the end of 2021 before an additional 12 million Ukrainians were driven

from their homes. So we're probably up over 100 million forced migrants in the world today. You haven't seen numbers like that since World War II. What does that mean? First, it means as the world has these humanitarian crises, very expensive to address. Much more expensive to try to feed people in refugee camps than it is to feed them in their home.

But secondly, that migration causes lots of political problems. So the nationalist anti-migrant movements in Europe and here in the United States have gotten a lot of fuel for their movements from mass migration of this sort.

Allison Nathan: Finally, we turn to Megan O'Sullivan [sp?], professor at Harvard University, to understand the geopolitical implications of the commodity crisis. She argues that the geopolitical heft of sovereign oil producers is likely to increase rather than decrease even as the world transitions to cleaner energy.

Megan O'Sullivan: This crisis with Russia is underscoring some realities which were either insufficiently appreciated or not acknowledged at all, and that was many people felt that with the energy transition underway, with

an increasing earnestness of the global community to move to net zero, that oil and oil producers were going to become gradually less and less important on the geopolitical stage. In fact, the dynamics of this whole transition are such that many of these actors were and are due to become more important during the transition rather than less important. It may be mitigated by carbon capture, but all of net zero scenarios still have the world using a lot less oil than it does today but still substantial quantities. And who's going to produce that oil? It's going to be the producers that can produce at the lowest cost and with the lowest carbon footprint. And that really suggests that it's going to be the gulf producers. It's going to be Saudi Arabia. It's going to be the UAE and others who will now produce more of a much smaller pie of global oil production, which of course means they're going to be more geopolitically important. And I think it's one of the reasons why we saw President Biden ultimately make a decision that it was important for him to try to mend the relationship with Saudi Arabia.

Allison Nathan: O'Sullivan also believes that shifting oil flows resulting from the war in Ukraine will likely have important geopolitical implications, especially for the

closely watched Russia-China relationship.

Megan O'Sullivan: We've already seen China increase its imports of Russian oil pretty significantly. We've seen India do it dramatically but from a very small base. And we have this commitment on the part of the Europeans that they're going to stop importing piped Russian oil by December 1st. And so the real question is: How much are they going to enforce another agreement, which is to ban insurance on shipping Russian oil? And how much will that impact the ability of other countries like India, like China to import and substitute?

So there's a lot of uncertainty about exactly how much the countries in Asia can substitute as energy partners for Russia, but I would say there is going to be a significant change in these relationships. The one that gets the most attention, rightly so, is the Russia-China relationship. In my mind, there's no question that these stronger energy ties are going to reinforce a partnership that has really moved in the last ten years from being very transactional to being more strategic.

However, I would point out that one of the biggest

vulnerabilities of the growing Russia-China relationship is the fact that it's not a relationship of equals. As much as the two leaders would like to present it as a relationship of equals, the reality is that this is a deeply imbalanced relationship. And this energy dimension is going to make it more so. China is going to be evermore dominant in the relationship, and Russia will be more and more the energy appendage to China. So I think again a much stronger relationship there, although with some vulnerabilities that could be significant over the long run.

Allison Nathan: More broadly, O'Sullivan warns the period of significant geopolitical tumult ahead as the world grapples with two crises at the same time -- the energy crisis and the climate crisis.

Megan O'Sullivan: Looking ahead, I'm anticipating that there's going to be a lot of disruption in these markets, in the energy market world, for the coming decades. And a lot of this has to do with just how disruptive the energy transition itself is going to be. We often think about the energy transition as subbing out one form of energy for another form of energy, but the reality is that we're really talking about remaking the entire global energy system.

We're talking about changing how we generate, how we use, how we transport, how we store energy. And this amounts to remaking the backbone of the global economy, and the world is trying to do this in a very short time period of just a few decades.

So energy and geopolitics have always been very closely connected. And in this case, we should expect that there's going to be a lot of geopolitical tumult that comes as a result of trying to change that energy system so dramatically in such a short time scale.

Allison Nathan: With questions about where commodity prices are headed sure to remain in focus, we'll continue to keep a close eye on commodities from here. I'll leave it there for now. If you enjoyed this show, we hope you follow on your platform of choice and tune in next week for another episode of Exchanges at Goldman Sachs. Make sure to like, share, and leave a comment on Apple Podcasts, Spotify, Stitcher, Google, or wherever you listen to your podcasts.

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