

## **Goldman Sachs Exchanges**

### **Shifting supply and demand dynamics buffer oil market**

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**Allison Nathan:** Despite the ongoing conflicts in the Middle East, oil prices have remained relatively subdued. So why aren't prices higher? And how are geopolitical tensions affecting the landscape more broadly?

**Daan Struyven:** A bigger US oil sector gives us another buffer, another adjustment mechanism, to deal with supply disruptions, for instance, out of the Middle East. That said, I think that oil prices in the short-term could still spike a lot if you were to see geopolitical supply disruptions.

**Allison Nathan:** I'm Allison Nathan and this is Goldman Sachs Exchanges.

[MUSIC INTRO]

To help explain the supply and demand dynamics that are driving the oil market, I'm sitting down with my colleague in Goldman Sachs Research, Daan Struyven, who's head of oil research. We'll discuss the factors driving oil and other commodity prices, and look at how policymakers are securing energy sources amid rising geopolitical tensions.

Daan, welcome back to the program.

**Daan Struyven:** Thanks, Allison. It's great to be on.

**Allison Nathan:** So, Daan, as I just said, the markets seem to have somewhat shrugged off the concern that the conflict in the Middle East is going to lead to a big disruption in energy supplies and, ultimately big price spikes. Why is the market so complacent here?

**Daan Struyven:** Yeah. So, if you look at brent crude oil prices, they have been fluctuating in a very narrow range, roughly around \$80 per barrel. And I think there are really two reasons for that limited volatility. Number one, the so-called geopolitical risk premium in oil prices remains remarkably modest, despite the two ongoing wars in Russia and the Middle East. And I think, second, there have been

several other factors related to demand concerns that have been weighing on prices as well, especially related to China demand and the possibility that the Fed cuts may not come any time soon.

**Allison Nathan:** You mentioned the geopolitical risk premium. What is that? How is it measured? And why is it so low given everything that's happening in the Middle East and in Russia?

**Daan Struyven:** So, the geopolitical risk premium is basically the part of the oil price that we cannot explain by the central outlook, the most likely outlook for supply and demand, but the part of the price, the premium that reflects fears that supply may drop off a cliff in a non-central risk scenario related to geopolitics. It's low in our view, despite the ongoing wars, based on two observations. Number one, the actual oil price is pretty close to our fair value that doesn't incorporate geopolitical escalation. And second, if you look at the cost of insurance against big oil price spikes using options prices, the cost of insurance is low. It's pretty cheap to insure yourself against big price spikes in oil.

**Allison Nathan:** And so, you mentioned there's a supply component and a demand component to this relatively complacent market, even if there's been some volatility. Let's dig into the supply situation because, of course, the scenario that is scary that everyone is ultimately concerned about is something like what we saw in the early 1970s, with oil embargos. Is the supply situation just different today? Or is there a potential for it to be repeated?

**Daan Struyven:** It is still the key tail upside risk to oil prices, big geopolitical supply disruptions in the Middle East. If you were to see, for instance, a closer of the Strait of Hormuz, highly unlikely, but it would be very meaningful. Prices would probably rise by 20 percent or so, just in the first month. And could eventually double. But not likely.

And so, what has really changed? I think that energy consumers and energy producers have drawn lessons from the energy crisis we had in the '70s and '80s. And actually, also from the energy crisis we had over the last couple of years.

On the consumer side, countries like the US, Europe, and

China have built up big buffers through strategic petroleum reserves. Consuming countries have also reduced the so-called oil intensity of GDP so that the number of barrels of oil you need per dollar of GDP, by switching heating to electricity, by having more fuel-efficient cars, for instance.

And then turning to the producer side, producers, I think, realized that it's not in their long-term interests to see these mega price spikes because you sort of reduce your long-term demand for your OPEC barrels. And I think what we have seen is that Saudi Arabia, in particular, is very focused on keeping oil prices elevated, but not too elevated, and avoiding these big, big price spikes that eventually harm your demand over the medium run.

**Allison Nathan:** And the other big shift that we have seen in the production landscape more broadly is that the US has become a gigantic producer of energy. How does that factor into this? And what does that mean for OPEC leverage today versus in the past?

**Daan Struyven:** Yeah. So, if you look at US total oil production, it's basically 21 million barrels per day. And

that's as much as Russia and Saudi Arabia combined.

Another striking statistic is that over the last decade, 100 percent of the incremental growth in global oil supply has come from the US.

And so, yes, a bigger US oil sector gives us another buffer, another adjustment mechanism, to deal with supply disruptions, for instance, out of the Middle East. That said, I think that oil prices in the short term could still spike a lot if you were to see geopolitical supply disruptions.

One reason is that while Saudi Arabia, for instance, can bring on extra barrels to the market in a few weeks, it would still take two to three quarters before you were to see a big jump in US supply. Moreover, we think that with consolidation in the US energy complex, US oil supply has become less price responsive because those big producers have their growth targets and are not going to massively ramp up their production in response to price spikes.

**Allison Nathan:** And that consolidation has actually really been this emerging theme. And we have seen many, many headlines in the last several months, but even in recent weeks. So, what's really driving that? And what are

the implications for oil supply?

**Daan Struyven:** Yeah. So, I think two big drivers.

Number one, as the US shale complex is maturing, as you're sort of gradually depleting the most productive pieces of land, I think the market's putting a big premium on the best remaining assets. And so, producers are trying to target those. And second, there's a big focus on cost efficiency gains by building scale and through operational leverage.

What does this big rise in consolidation mean for oil prices?

I think it could increase the short-term price volatility somewhat because the bigger producers are less price responsive than the small, private ones who are losing market share. And also, look, as the big producers tend to hedge their price risk less. And if you have less hedging, that means more price volatility.

It could also at the margin, I think, put some downward pressure on long-dated oil prices as those big producers continue to book efficiency gains and lower the cost of production.

**Allison Nathan:** Let's turn to the demand side, you said the other big factor here as we think about the overall oil outlook. Obviously, global economic growth has held up pretty well. But there are a lot of concerns right now building about the outlook for growth in China. And China, as we all know, is a huge consumer of commodities: oil and other commodities. So, how is that factoring into your view? What are you seeing in terms of Chinese demand right now? And then how concerned are you about this relatively muted outlook for Chinese growth?

**Daan Struyven:** Yes. In terms of the demand data, taking a step back, in 2023, macro investors were pretty pessimistic about the Chinese economy. But commodity demand was booming. We saw 8 percent year-over-year growth in demand for oil because of the reopening. And also, 8 percent growth for copper because they're really stimulating the green economy.

Over the last months, to be fair, we have seen some incremental softening from very elevated levels. And I do think that a disappointment in China oil demand is the biggest downside risk to global oil demands and our oil price.



That said, we still feel pretty comfortable with our range-bound outlook where Brent stays in the low to mid 80s, because demand in other parts of the world is actually surprising to the upside, including the US, but also, for instance, India, which I think over the long run, is going to be the number one source of global oil demand growth while currently it's China.

**Allison Nathan:** So, your view is that we will remain range bound in terms of crude oil prices in the mid to low 80s. What could break us out of that range to the upside and to the downside?

**Daan Struyven:** Yeah. So, in terms of upside price risks, geopolitical supply disruptions as we discussed, especially in the Middle East, but actually also in Russia. That has been the key source of upside price risk. I think a second other risk is that perhaps that Saudi Arabia and its OPEC+ partners are targeting a higher oil price than what we think. We think that when prices sort of move to the mid to high 80s, that the Saudis will bring some of their barrels back to the market to regain market share. If we are wrong on that assumption, and if they're maybe targeting prices

in the 90s, that would be a source of moderate upside price risk as well.

**Allison Nathan:** And what about downside risk?

**Daan Struyven:** Downside risk, I think to see a meaningful and sustainable drop in Brent below 70, you need to see a combination of two factors. One, demand disappoints meaningfully. Much softer global economic outlook than we expect. Or a big downturn in China. Plus, a shift in the Saudi strategy where they are stopping to limit builds in global inventories and where they're basically giving up the OPEC put, which we think is around \$75 to \$70 per barrel. I think you really need both. And one key reason we believe that Saudi Arabia will prevent oil prices from falling below \$70 to \$75 per barrel is the fact that Saudi Arabia needs a lot of funding for their so-called Vision 2030 project. Vision 2030 is a very ambitious investment plan to build, basically, the diversified, non-oil economy of tomorrow. Which is expected to cost 300 percent of their GDP over the next 10 years cumulatively.

**Allison Nathan:** So, you expect to see range-bound crude

oil prices. But what about the energy that we actually consume? Gasoline prices, diesel prices? Is the outlook similarly range bound?

**Daan Struyven:** We think the outlook there is structurally more bullish and more volatile. We think that the refined products market is structurally more bullish than the crude oil market. While the crude oil market has a lot of spare capacity, mostly in countries like Saudi Arabia and the UAE, the global refinery market is very tight.

**Allison Nathan:** Just to be very clear, refineries are what takes the crude oil that's coming out of the ground and turning it into these useable products? So it's basically processing this crude oil.

**Daan Struyven:** That's right. If you, for instance, look at the global refinery utilization rate, you're in the top quartile of history, both because of a lack of investment - the median age of a refinery in developed economies is 53 years old. And because on the demand side, we have seen pretty robust global oil demand.

And so, I think one interesting question is why is this

crude market pretty loose? And why is refining so tight? And I think the key reason is that refining has not benefited from this big jump in short-cycle supply and the shale productivity boom we have seen in the US. And so, refining is very tight. And so, we see pretty elevated refining margins, both on the gasoline side and the diesel side for the years to come.

**Allison Nathan:** So, we're sitting here in February. All eyes are going to be trained soon on the summer travel season. What does this actually mean for gasoline prices?

**Daan Struyven:** So, we think that gasoline prices, which have started to pick up in the US from the low \$3 per gallon to now sort of \$3.2/\$3.3 will edge up a bit further, with a peak in the summer of sort of \$3.7 a gallon. In part because we think demand will be solid. And also, and this is a bit more technical, because there is really a lack of capacity to process the more expensive summer grades for gasoline.

**Allison Nathan:** Right, because places like California actually require a lot more processing than elsewhere.

**Daan Struyven:** Exactly.

**Allison Nathan:** The other question I had for you on that side of things, Daan, is electric vehicles. Obviously, we're hearing so much about electric vehicles. So many people own them these days. Is that making any kind of dent in gasoline demand at this point?

**Daan Struyven:** Yes, it is, but it's a very gradual process outside of China. So, to put things in perspective, we estimate a hit to global oil demand growth this year because of the rise in penetration of EVs of 0.3 percent of global oil demand. So, a pretty modest number. And I think one key intuition is that the level of gasoline demand depends on the stock of cars with combustion engines. And yes, EV sales, so the flow, are rising pretty quickly in places like China. But the stock of EV cars takes ten or 15 years to really turn over. And so, that's why the impact is still pretty modest outside of China.

And actually, we think that the rise of EVs is pretty bullish for the commodities complex on net. And again, the intuition I think is that the level of oil demand depends on the very slowly increasing stock of ICE cars, whereas the

demand for copper is related to flow of EVs because for every EV car that you sell, you need copper to wire it, for the battery, and for the electric motor.

**Allison Nathan:** So, let's talk about that for a moment because it feels like copper is in focus for that reason. But how much of that bullish view on copper tied to electric vehicles is already priced in?

**Daan Struyven:** So, we think that commodities are mostly spot assets, are mostly pricing supply and demand fundamentals over the next couple of quarters. And so, that's why we think that copper prices do not fully incorporate the bullish demand outlook we have. And on top of that, and it's a big difference with crude oil markets, the supply side looks really, really quite tight with very big mining supply downgrades that we have seen over the last couple of months.

**Allison Nathan:** Is that a crowded trade, though, at this point? I mean, again, EVs, very buzzy right now. So, are people taking on those positions?

**Daan Struyven:** When we polled our investors at the

macro Hong Kong conference last month, when we asked them what is the commodity that's going to benefit the most from the energy transition, copper was the number one answer. But then when you actually ask investors, are you investing at a large scale in copper, the answer is often no. And so, that's why we think there's still a lot of room for upside.

**Allison Nathan:** Okay. Interesting. So, let's pivot back to the energy markets for a moment and go across the pond. 12 to 18 months ago, Daan, we were all talking about a European energy crisis off the back of the Russia/Ukraine conflict. And now we have a whole another set of disruptions as we've been talking about in the Middle East and beyond. But natural gas prices in Europe have actually declined sharply in recent weeks. So, is the European energy crisis over? Or is it just beginning?

**Daan Struyven:** We think the energy crisis is not quite over. The acute phase is clearly over. And we see one more winter at risk for European gas prices and the European economies.

If you look at the last two winters, all of the adjustments in

the European gas market have happened on of the demand side. In other words, all the Russian supply that was lost was not replaced by additional supply. The market balanced because of weaker demand from consumers related to very warm winters. Lower demand from the power sector. And also, lower demand from the industrial sector because Europe has undergone a pretty severe industrial contraction.

Our view is that some of these demand losses could be temporary. Who knows? Maybe we get a cold winter next year. We're also seeing in the high frequency European manufacturing survey data that there are green shoots for an industrial recovery. So, we think we should not be complacent. And we see a potential renewed move higher in European gas prices next winter, not to the scale what we saw during the peak of the energy crisis. But we're quite focused on the risk of higher gas prices next winter.

That said, moving beyond the winter of '24/'25, we think that this massive wave of supply from LNG, from the US, and Qatar is going to push global gas markets in oversupply and end the European energy crisis.



**Allison Nathan:** So, in the wake of the Russia/Ukraine crisis, in the wake of the pandemic, and now as we are seeing this Middle East conflict play out, there has been this intense focus on security of supply. But we have seen many examples where the market is adjusting. So, is this focus on security of supply still a concern or is that fading given how much we've seen the market being able to adapt?

**Daan Struyven:** I think policymakers remain very focused on the security of energy supply, especially in China. I think Chinese policymakers' goal to reduce imports of both oil and gas helps to explain a lot of developments we're seeing in China. A massive jump in EV sales. A big jump in coal consumption, and therefore also emissions related to coal. And also, a big push in renewable supply and in green metals.

And I think that the focus on energy supply security is also going to lead countries such as China, but also India, to boost their level of strategic reserves, which all things equal, is pretty bullish, while you buy all these additional reserves.

And I think that the focus on security of energy supply is also going to shift more and more to critical minerals and green metals. Policymakers in both Japan and Germany are planning to create SPRs or strategic petroleum reserves of tomorrow, which not only include oil, but also include strategic stocks for green metals of tomorrow to be ready for potential supply disruptions in those new critical markets.

**Allison Nathan:** Interesting. Whenever we talk about geopolitical tensions, gold always seems to come up in the conversation. So, we've seen a little volatility out of gold prices. But what are you expecting? Do you see more upside from here?

**Daan Struyven:** We see additional upside for gold prices. Really three reasons. Number one, lower US interest rates should support gold prices. But in fact, if you look at the price of gold and compare it to what you expect based on interest rates, gold is already pretty expensive. And I think that relates to the second reason, which is that structurally, we think that gold demand has risen and will rise further in an environment where geopolitical uncertainty is elevated and where EM or emerging market

central banks and EM consumers invest in gold as an alternative asset. And then finally, third, if you see additional geopolitical escalation, gold is very likely to benefit from that.

**Allison Nathan:** And so, as we sit here today, inflation is, once again back in focus. I don't know if it ever went out of focus. But it's certainly back in focus. We've gotten another bout of somewhat hot inflation data. If we think about your commodity outlook, Daan, how does that fit into the broader inflation view and the goal of central bankers around the world to reign in this inflation and begin to start cutting rates?

**Daan Struyven:** I think that both monetary and energy policymakers globally have been pretty successful so far in fighting both energy and broader consumer price inflation through aggressive rate hikes on a monetary policy front. But also by intervening in energy markets and releasing a lot of oil, for instance, through the strategic petroleum reserve, or in the case of Russia, by designing sanctions such as the price gap, that allowed to keep a lot of Russian oil in the market rather than restricting supply.

Looking forward, in our central case where oil prices are range bound, we don't think that a surge in commodity prices will prevent central bankers from reaching their target. But we really think that upside risk to commodity prices remains the key threat to bringing inflation to the target and to the soft landing.

And I think that the somewhat stronger inflation data you're seeing over the last month, and also the impact of Red Sea disruptions on, for instance, diesel prices or gasoline prices in Europe, is at the margin making monetary policymakers a little bit more cautious in starting to launch their easing campaign. ECB President Lagarde, for instance, did mention that geopolitical escalations and the disruptions in the Red Sea are the key upside price risks to price stability in Europe.

**Allison Nathan:** Interesting. So, it's a risk to watch?

**Daan Struyven:** Absolutely.

**Allison Nathan:** Daan, thank you so much for joining us and sharing your insights.

**Daan Struyven:** Thanks so much, Allison.

**Allison Nathan:** Thanks for listening to this episode of Goldman Sachs Exchanges, recorded on Friday, February 16<sup>th</sup>, 2024.

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