

Global Research Unlocked

Upward sloping natural gas price curve means gas equities likely to climb higher

Key takeaways

- BofA Global Research analysts join the podcast to discuss emerging risks, opportunities, and growth themes in global markets.
- LNG export projects have met some delays but as more come online, US natural gas will see a demand boost.
- But the downward sloping oil price curve makes for a tougher case for oil equities absent those with idiosyncratic drivers.

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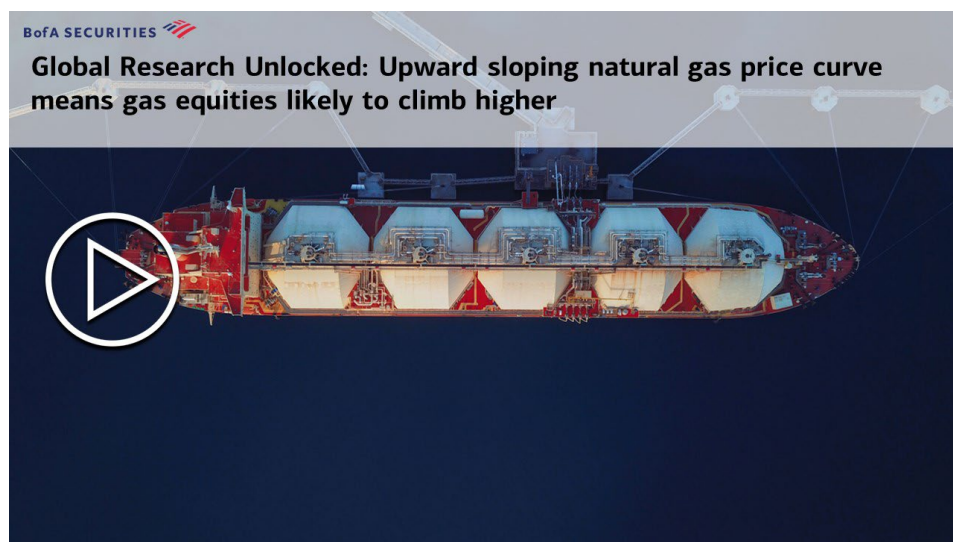
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The dynamics of the US gas market about to change

US oil production grew roughly 1mm barrels per day in 2023 and while US production growth may be slowing, it's growing elsewhere including in Guyana and Brazil. Such growth outside of Saudi threatens their market share, and that could mean even more supply as Saudi looks to take that share back. That all makes for a tough backdrop for the oil price and oil-levered equities, but the situation is more positive for equities levered to US gas. Significantly more LNG exports are expected to come online over the next 4-6 years, boosting demand for natural gas and reflecting positively for gas equities. Higher exports will require a higher clearing price to incentivize production, which is why the gas curve is upward sloping, a different picture than oil. Doug Leggate joins to discuss what all of this means for US E&P companies, how more M&A in the sector will lower costs for producers, and how the correlation of population growth will play a role in oil demand over the next decade. *Global Research Unlocked can now be found on public podcast platforms, including Spotify, Apple Podcasts, Google Podcasts, and Amazon Music. These podcasts are first released to clients and then to the platforms.*

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Full Podcast Transcript

T.J. Thornton, Head of Product Marketing: Hello and welcome to Global Research Unlocked, where we discuss what's rising from growth industries to rising risks and opportunities in global markets. I'm T.J. Thornton, Head of Product Marketing at BofA Global Research, and we're recording this episode on Wednesday, January 10, 2024.

The US is already the biggest LNG exporter, and it's about to double those exports, and that gas supply is going to have to come from domestic E&Ps, and it won't come at \$2.60 gas, it's got to come north of \$4, and that's very bullish to gas equities. I reiterate our thesis here, that the dynamics of the natural gas market in the United States are undergoing a massive sea change over the next 2 or 3 years and the big winners are the domestic US E&P gas producers.

- Doug Leggate

As a sector, energy has been a huge underperformer over the last decade; however, recent years have been more kind. Energy was the only S&P sector that was actually up in 2022. It outperformed in 2021, and Doug Leggate, Head of US Oil and Gas Research thinks there are opportunities on the long side in 2024. But the opportunities are more on gas, natural gas, than oil, according to Doug. We'll talk about that in some of the dynamics that are likely to keep oil range bound despite these geopolitical headlines. We'll also talk about gasoline demand now and in the future and how that impacts our views. Thanks very much, Doug, for joining us today.

Doug Leggate, Head of US Oil & Gas Research: Thanks, T.J. I appreciate you hosting our year ahead outlook.

T.J. Thornton: Doug, as mentioned, you recently published your US Oil and Gas Year Ahead. You're defensive when it comes to oil levered equities, largely because you see the oil price stuck in a range. One of the negatives for the oil price that you point to is strong production growth from non-OPEC, specifically the US. Just how strong has US production been, and are we likely to see continued growth even with crude down from highs, potentially impacting the willingness to drill?

Doug Leggate: First of all, I think the perception of US oil production has changed dramatically over the last 10 years. It's gone through a period of unbridled growth where the industry was basically spending all of its cash flow, not returning cash to shareholders, but doing so with a subsidized oil price, essentially through the support of Saudi, through OPEC (Organization of the Petroleum Exporting Countries) in particular. With COVID, Saudi basically broke the back of that growth story in the United States. When demand collapsed in 2020, they took all their spare capacity, they put it on a ship and sent it to the United States, and the end result was that US oil prices went negative at some point. And the industry's response was basically to realize that in the words of some of the larger companies, the US cannot grow at a rate that threatens OPEC. And that really heralded a change in business model, which came with a lot of free cash flow and a lot of cash distributions for shareholders of those companies, but we're talking about public companies. The problem is that the private companies didn't react the same way. And the private companies, their whole MO, if you like was to grow production to a credible scale and then sell their businesses. And so, as we saw the post-COVID recovery in oil prices, we also saw a post-COVID recovery in rig count and activity levels dominated by the privates, and that basically ran through the early part of 2023. Now production growth tends to come with a lag, six to nine months, and the response to that rig activity from the private companies ended up at about a million barrels a day of growth in 2023. That's exit to exit. And if you think that global demand growth on average is probably somewhere between one and 1-2, 1-3 a million barrel a day of growth in the US is a problem to OPEC, who are basically trying to support the oil price. The good news is that the rig count rolled over again in the middle part of the year. And so using that 6-9 month response function, we would expect a much slower rate of

growth, but it's still going grow. I guess the punchline is that the US grew dramatically over the last year or two, that's slowing down. But the problem that we all face is that while the US is no longer growing as quickly, other areas are, particularly Guyana, particularly Brazil. And when we roll all three together, it leads us to one conclusion, which is if Saudi's policy is to support the oil price; they're going to do so into a market where there is no room for them to add back any oil production, which basically means they're giving up market share. And sadly, anytime that that's happened in the last 20 years, they tend to take back market share, if non-OPEC growth becomes too much. Its early days, but the minimum we are faced with is that a lot of spare capacity within OPEC is a result and that puts pressure on the back end of the oil curve. The oil curve is a forward curve. Yes, the oil price might be high at the front of the curve, but the forward curve is much lower, and ultimately that's a headwind to valuation. That's why we have this defensive position on oil, a lot of non-OPEC growth, no room for Saudi to add back production, which means even if they succeed in supporting the price, the consequence will be a backwardated oil price.

T.J. Thornton: And to explain that backwardated price further, if I wanted to buy oil for July 2025 delivery, it would be a lot cheaper than if I want to buy it for February of '24.

Doug Leggate: Exactly. And if you think about the value of these companies, these are companies that have a finite asset base. So, they have a finite inventory of production, unless they replenish it in some way, whether it's through acquisition or whatever. But at the end of the day, that finite inventory has therefore a finite value. And that value is defined by what the market is prepared to price into those cash flows. In other words, the backwardation in the curve, it's not going to take \$80 today and hold it flat for the next 15 years. It's going to take \$80 today, \$70 next year, \$65 the year after and so on, it's a bit of a headwind to valuations.

T.J. Thornton: That's a good segue into the next question, which is on natural gas. And I know that the curve looks much different in natural gas, so could you talk a little bit about that? Why you're bullish on gas? Why the curve looks the way it does? And also just briefly weather, because I know weather has tended to move gas around quite a bit. Is that something that concerns you with that bullish view that you have on gas and equities that are particularly exposed to gas?

Doug Leggate: Our team at Bank of America takes a very differentiated view on the answer to that question, because a lot of people do focus on the very short term. Weather is obviously a factor because what it influences is storage levels for natural gas and storage levels, when you've got full storage and nowhere for the gas to go, the price is going to fall and vice versa. Winter has a big effect, but what also has a big effect is demand growth. And the issue in the United States right now is we're going through a bit of a revolution on the dynamics of the gas market. It's something we've been talking about now for about a year, and it relates to LNG (Liquefied Natural Gas) exports, and it's not an aspirational view of the world. It's basically construction of major LNG export projects has been underway for 4, 5, 6 years. And in the next 4, 5, 6 years, those projects are going to start up, they're going to come online and they're going to require a lot of gas. When you look at that forward curve for gas, much as we've got a lot of spare capacity for oil, the gas curve is basically telling the market we need a higher price to meet what we know is coming as this massive inflection and incremental demand. You have what's called a contango curve. What that means is that the curve is moving higher in the future as opposed to declining. The punchline is that in order to meet that incremental demand, we need a higher clearing price to justify the investment in incremental supply. And right now, that number's sitting about \$4 a couple of years out. If you go back again to the DCF type of view of value of a finite inventory, the Discounted Cash Flow view, 1 or 2 years is not going to dominate the value. It's the 13 years after that, and let's say in a 15-year model that dominates the value, the short-term fluctuations in weather really have a relatively de minimis impact on the valuation of these companies, if you believe that forward curve. The punchline is basically that the

dynamics of the US gas market are about to go through a major change, the first time, frankly, in 20 years that this has happened, and the gas equities is where we are bullish.

T.J. Thornton: Okay. And Doug, I know there are a lot of different groups involved in this LNG trade. The more US exports there are, the more demand for US gas, that's a positive for E&Ps, but there's also pipeline companies, there are shipping companies that actually move the LNG from the US or to Asia, and there are exporters. How do you think about the whole supply chain for LNG? If there is a big boom in LNG exports, is it the gas companies you want to own or are there other areas? Realizing that you don't cover all of those areas, but obviously you're close to them all.

Doug Leggate: Yeah, it's a great question because there's lots of moving parts in this supply chain. The LNG market is dominated by major oil companies. The LNG market is a global market, where you're going to have competition between Asia and Europe, and basically for those molecules, those that don't have indigenous gas production. What we are really focused on is a lot of that. It's obviously a commodity, so it's going to swing with demand patterns and so on. But what we're really focused on here in the US is that the supplier of those molecules is facing a call on demand that has never been there. And it has a potential to reset the dynamics of the US natural gas market, including not just the absolute price to meet that demand, but also the volatility of that market, because you really have gas on gas competition between exports and storage domestic demand, basically, for the first time in 20 years. Although LNG's been around, there's a lot of players in LNG that participate, those that move the gas, that process, the real winner here, in our opinion, is those that are seeing a step change in the value of their net back molecule. What that means is, if you look at the international price and you net it back to the value at the shore of the US, the US natural gas price has to come up. The US is already the biggest LNG exporter, and it's about to double those exports, and that gas supply is going to have to come from domestic E&Ps, and it won't come at \$2.60 gas, it's got to come north of \$4, and that's very bullish to gas equities. I reiterate our thesis here, that the dynamics of the natural gas market in the United States are undergoing a massive sea change over the next 2 or 3 years and the big winners are the domestic US E&P gas producers.

T.J. Thornton: Let's talk a little bit more about domestic production E&P companies, Exploration Production companies. I know you talked about how they've gotten more disciplined, particularly the public companies. But the business model is still a bit challenging because there are decline curves. A field that produces X now is going to produce less than that probably 10 years from now, unless you really invest a lot of money to keep that production up. And so, there are challenges for this business model. Then, longer term, there are concerns about demand for especially oil because of renewables, electrification, efficiency gains. How do you think about the space in light of all of those challenges?

Doug Leggate: Gosh, I'll try to be measured in my response here because I think the first thing I would say is don't believe everything you read. The end of the oil age was declared 20 years ago, 2003. Six years before that was when the Kyoto Protocol was signed, which was the first big inflection in I guess a morality of the market, as it relates to climate change and fossil fuels and so on. And the end of the oil age was declared 25% ago in terms of oil demand. Obviously, the parallels this time around were the Paris Agreement in 2016, and the energy transition is the new end of the oil age. The base case for the most quoted commentator, which is the IEA, the International Energy Agency, is the oil demand grows about 10% through the end of the decade, and then flat lines, so in other words, it doesn't decline. Now, they talk about a lot of scenarios and that there's a longer conversation on this perhaps, but they talk about what if you try and cap temperature change, if you believe that to be the case at 1.5 or 2 degrees, or in fact, what if you try and go to a net zero emissions energy mix by 2050? I think most people would argue that those are aspirational at best, and they are certainly scenarios. But the base case, what the IEA is projecting as its forecast, as opposed to advocating

as its idealistic outcome: the forecast is that oil demand continues to grow and then stabilizes between 2030 and 2040. But the reality is that at very simplistic levels, consider that oil demand and population growth are historically very highly correlated, and at the end of the day, the driver of demand growth between 2003, the end of the oil age and 2023 was China. Again, population growth, the industrialization of their economy, the next wave of that, I think consensus would point to India. And at the end of the day, the consumption per capita in some of these emerging developing countries is extraordinarily low compared to places like the OECD in the United States in particular. I think taken with a very large grain of salt, the oil demand is somehow challenged, even though we've got, certainly on the margin, electric vehicles, a lot of calls for renewables, but at the same time, even the IEA acknowledges that oil will remain part of the mix. Now, that can get us to the second part of your question which is, aren't these business models challenged? Because at the end of the day, if oil demand is projected to increase at a more moderate pace, a larger 100 million barrels a day is a big number, so if you grow up 1%, it's a million barrels a day per year. But we have to not only maintain current production; we have to replace the declines that come from those existing fields because these are not annuities to your point. The challenge for the whole industry is how do you replenish that inventory? How do you continue to explore and how do you maintain that business? So, it is very capital intensive, but the reward is very high cash margins when you get it right. Guyana for example, where we saw one of the larger E&Ps was part of an M&A (Mergers and Acquisitions) story last year. They were really the Guyana story, and Guyana didn't have any oil production a few years ago. It will have 2 million barrels a day of oil production by the end of the decades. Now that's the kind of success story that we are trying to tap into for a market that is going to, where maintaining that oil production is going to be the biggest challenge for the industry, and that obviously is very constructive for the long-term oil price.

T.J. Thornton: Let's talk about M&A, which I think relates to that question because another thing that these companies can do in addition to investing in their own fields and production, is buying other companies, which gets them a few things, and I know that's part of your thesis. You think there's pretty big opportunity in M&A, especially in the gas space, so could you talk a little bit about that? Do you expect to see a big pickup in M&A and just how positive is that, especially for some of these gas names?

Doug Leggate: First of all, it's a great question, so thank you for that. But I think the starting point is about resource or replenishment for the buyer. How do you maintain that your business, your production in a declining asset base? If we go back to the financial crisis in 2009, when the oil price collapsed, Saudi government policy, the way they framed it was \$147 oil, which was the peak in 2008, is not good for demand. And the collapse in oil prices took us to \$47 in 2009. And to which they responded \$47 is not good for investment. We need to have a level which is good for producers and consumers. And they stepped in and started defending price at \$100 a barrel, and they did that for 4 or 5 years, to which the industry responded by overcapitalizing. That then spawned a market share battle, where Saudi exerted its advantage of very low costs, and they basically collapsed the oil price with oversupply in 2014, you might remember at the end of that year, a lot of the major oil companies cut back their discretionary capital in response to that, meaning their exploration, which is how they reloaded their pipelines of long-term project development. Five, 6, 7 years down the road when you realize the oil demand is not going away, but you haven't invested for 5 or 6 years, one of the ways you can get back in the game, so to speak, and replenish your inventories through acquisitions, and we've seen that in 2023 in particular with a couple of very large transactions, two of the biggest deals that we've seen in several years. The problem today is that you've now got this backwardated oil price that we talked about earlier, and the sector's had the tremendous recovery as it relates to its investment case. And with consolidation, even bigger challenges that if we look at our market capitalization of our sector, we have five companies represent 75% of the market cap. The remainder of the other 25%, which is call it 75 companies, how do they compete for relevance? And one of the ways in a static oil price or a range-bound oil price environment is to lower your

costs and that becomes the next lens through which M&A is important. It's no longer about replenishing your inventory, it's about reducing your breakeven, expanding your free cash flow and finding a way to reload your relative investment case in the context of this very concentrated business, so that's what we anticipate happening. On the gas side, our view is that the valuations on the generic natural gas sector are untenable. They cannot, in our view, remain at these levels. And ultimately, we think, it is going to spawn consolidation. There's been a lot of speculation in the market about who that might be. Obviously, that's impossible to predict, but if we look for the high quality portfolios, which have been mispriced against the forward outlook for the commodity, you can at least start to screen where the opportunities are to reduce cost and where some of those deals might happen.

T.J. Thornton: Okay. And a follow up there, you recently upgraded a stock, a company, integrated oil that had announced a large M&A deal. The stock of the acquirer or this integrated was weak after the deal was announced, I think there was a weak quarter involved as well, but do you feel like you have a different view on M&A or are you more positive than the, because the market didn't seem to like this relatively large transaction. Why was that and why do you maybe take this different view?

Doug Leggate: We sometimes have different views on a lot of things relative to consensus, but the specific situation we were talking about; we had actually lowered our rating on the major in question, Chevron, back at the beginning of the year. It really goes back to this issue about under investment, because they were caught up in that 2014-15 reset in the oil price with a lot of capital commitments that really hurt their balance sheet for a period of time, so they stopped spending money and under invested for a long period of time. And the stock had languished relative to the peer group, so I guess we were quite happy with how we had positioned that. The acquisition solves that problem. It reloads the underinvestment for the past 10 years has been reset.

T.J. Thornton: Okay. Thanks Doug. We talked earlier about longer-term threats to demand, but I want to talk about the near term and what's happening today with demand. If you look at US gasoline demand, at least based on the Department of Energy's implied number, it's languishing and still below actually pre-COVID levels. I wonder for one, do you think that's a good measure of gasoline demand? And if demand is below levels from a few years ago, why is that happening and does that concern you?

Doug Leggate: Yeah, there's a lot of moving parts here, and again, another terrific question. If I go back 20 years, not quite 2005, the US government introduced a thing called the Renewable Fuel Standard, and it was a way to force ethanol, basically corn ethanol into the gasoline pool. I don't know if you're aware of this, but a hundred and something years ago when Henry Ford had automobiles in the United States, they ran on ethanol. Whatever gasoline was in 2005, you basically removed 10% of that demand and replaced it with corn ethanol, and that gasoline supply basically then was exported to the rest of the world, so domestic gasoline demand has been influenced by those kind of things, CAFE standards, fuel efficiency standards is another part of that. There's certainly been some penetration from electric vehicles, of course there has, but at the end of the day, there's also a big population driver of gasoline demand. When your three kids get their first car, do you buy them an electric vehicle? Do you buy them a secondhand gasoline car kind of thing? There's a lot of demographic dynamics that are going to drive this and at the end of the day, we don't really see gasoline demand deteriorating. We don't have an aggressive growth assumption for it, but we think a kind of range bound view post-COVID, and remember, if folks are working from home and so on, they're not commuting as much, that's probably dented gasoline demand a little bit as well. And then weather, when you get a bad winter, folks stay home and you're not driving so much. At the end of the day, there's a lot of moving parts, but we don't see a structural decline. What we do see on the other hand, is a structural shortage or reduction in domestic gasoline supply, believe it or not, for a lot of reasons, but mostly because of legislation, the capital cost and the maturity of the refining industry because

basically we've been closing refineries in the United States to the tune of about 10% of supply.

T.J. Thornton: Okay, great. Doug, and just a quick follow up on that point about refining. It seems structurally that refining the US is in a good place. But I know there are times to own these things and not in their kind of trading vehicles, so could you give us some quick guidelines on what would get you more positive on the refining space in the short term?

Doug Leggate: Another great question because about a year and a half ago, we published a series of reports called the Regional Golden Age of Refining, and it was actually a redo of something I had done 20 years ago, but it was more of a global picture. And the argument was the net impact of what we just talked about, the closing of refining capacity and the recovery of demand from COVID and so on, it basically meant that the US was more dependent on international imports of gasoline, in particular, and this is still going on, we're closing another refinery in the west coast here imminently called Rodeo. And what it means is that our incremental domestic margin, the incremental price if you like, has been set by higher cost imports. Now, why are they higher cost? A large part of that goes back to what we were talking about earlier with natural gas. Natural gas is a source of hydrogen, and the big push on gasoline recently, and diesel for that matter has been to reduce sulfur, reduce emissions, and the way you do that is to hydrogenate these products. But what it means is higher natural gas prices internationally, means higher cost of supply for gasoline. And here in the US, we have a very low cost of supply, better margins for the refining sector. We called that thesis "The Regional Golden Age of Refining". Now the other consequence, however, and this really gets to the heart of your question, the other consequence of closing refinery capacity is that you get much greater volatility. Refineries don't run a hundred percent, 365 days a year; they have to go down for maintenance. It means that anytime you go down for maintenance to take those turnarounds, those retooling events, you're going to tighten up the market disproportionately to levels that you've seen any time in the past that comes with much greater volatility, and that volatility is by definition seasonal. That's the one thing that we don't think is easy to quantify yet, we're only a couple years post-COVID. Our thinking is that if that exacerbated volatility is a new normal, then the mid-cycle margin for the redefining sector may have additional upside to what we thought was more of a structural issue related to supply and demand. The bad news is that it makes a sector quite seasonal, quite a trading vehicle to some extent, if you could call it perfectly, you transition from winter to somewhere in the March, April, May time. We'll take a hard look at the refiners at that time and see if we see opportunities.

T.J. Thornton: Okay, much appreciated, Doug. Some great insights there. Thank you for joining us today.

Doug Leggate: Thank you so much.

T.J. Thornton: The oil price is challenged, we didn't get into geopolitics, but supply is fairly plentiful, and that does create some breathing room on the geopolitical side. And while US production growth may slow, there's growth elsewhere like Guyana and Brazil, and there's spare capacity in OPEC. But the nat gas picture is more positive. The curve is upward sloping, unlike for oil, and there's big growth in LNG exports ahead, that's a good thing for domestic natural gas producers. And they could get an additional boost with return of M&A. And while the US gasoline demand picture isn't great, there's growth elsewhere in the world and a shortage of refiners. That's a positive for the refining sector, but timing is key here as these do tend to be trading vehicles. Thanks for joining us today.

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