

SM84 | 8.27.2022**When Markets Break | Episode 3**

Arjun Murti, Former Head of Energy Equity Research, Goldman Sachs

To close out our When Markets Break series, SmarterMarkets™ host David Greely sits down with Arjun Murti, the Former Head of Energy Equity Research at Goldman Sachs and the publisher of Super-Spiked on Substack. David and Arjun discuss the July 2008 spike in WTI crude oil prices to a record high of \$147 a barrel and their subsequent collapse.

Arjun Murti (00s):

Gasoline's gonna be the last thing to really roll over in the crisis, and people forget how fundamental energy is to our life. And it's a physical business. It has to be there. You can't anticipate it's gonna be there. You can't forecast it's gonna be there. It actually has to be there in physical volumes, and that is something that's a big issue today.

Announcer (19s):

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 are we facing a crisis of information or a crisis of trust and will building smarter markets be the antidote?

David Greely (45s):

Welcome back to when markets break on Smarter Markets. In this podcast series we're looking back at past market crises with the people who were there to learn what went wrong and what we can learn from it. I'm Dave Greely, Chief Economist at Abaxx Technologies. Our guest today is our friend Arjun Murti, the Former Head of Equity Research on the Energy Sector at Goldman Sachs and the publisher of Super Spiked on Substack. We'll discuss the July, 2008 spike in WTI crude oil prices to a record high of \$147 a barrel and their subsequent collapse. Hello, Arjun welcome back to Smarter Markets,

Arjun Murti (01m 21s):

Dave. Thank you. It's a real pleasure to be here.

David Greely (01m 24s):

Yeah, I've really been looking forward to this. We don't get to talk often enough and thank you for joining us today, you know, to revisit that July, 2008, super spike, and the, the collapse in oil prices that followed at the time for our listeners, you know, you and I were both working on energy research at Goldman Sachs. I was on the commodity side, you were running the equity energy research, the oil and gas company coverage and the 2008 spike was really, you know, in my view, the culmination of a pretty steady rise oil prices that went back at least to 2003 when Venezuela nationalized its oil company, PDVSA, but I'd love just to kind of go back for our listeners and hear how you experienced it and remember it, can you take our listeners back to that period before the 2008 spike?

Arjun Murti (02m 13s):

Yeah, absolutely David and so I won't go back to ancient history, but my career started in 1992 and in that period of time, oil was in the midst of what was basically a 15 year period of 15 to \$20 oil prices and those of us new to the sector thought those Arab oil embargo years were an aberration. There's some old timers who remember it and wish for it to come back, but those days are done and you might recall companies like Exxon and Shell and BP were vying for who could have the lowest long term forecast out of anybody and you fast forward to the early 2000s and my colleagues on the equity research side led by the team in London. We put together what was our first top projects report, top 50 projects and we were forecasting like everyone, 4% non OPEC growth.

Arjun Murti (03m 00s):

And we forecasted one year and it came in at zero and you know, that year there were some hurricanes or some disruption. So we thought it was an aberration. We, again, forecasted 4% in the top 75 projects the next year. It again came in close to zero and at some point kind of made the decision. Maybe we need to examine our underlying assumption started to recognize the easy oil that came out of the 70s boom, debottle in exploitation projects were perhaps starting to run out costs were starting to rise and so something was changing on the supply side at the same time on the demand side, Dave you'll remember this in 2003 oil demand grew about a million

and a half barrels a day. And 2004 was the first year. It really shot up. So we had 3 million barrels, a day of global demand growth of big chunk was China, but that was only about a million or maybe a little less rest of the world contributed and oil had risen to maybe \$40 a barrel.

Arjun Murti (03m 52s):

Well above that old \$15 to \$20 trading band and people said, this is the peak. This is the peak growth rate. We get to 2005 and oil demand again, grew one and a half. So the bear said, hey, wait a minute. See it did peak last year. My point was, and this is we're actually working with you and Jeff Currie came into help. No, we've actually normalized. The three we've grown on top of it. Oil's the physical business. The barrels are still growing. Supply is still disappointing. Something is changing here about the business. If you get to the price part of this call, even some of the senior folks at Goldman Sachs, would've said, hey, if oil ever gets to \$50 a barrel, it means that Saudi Arabia was quote destroyed as a country and when Saudi Arabia destroyed the global economy and you know, everyone remembers the nominal price band of the 70 where it peaked the \$30 or something like that in nominal terms.

Arjun Murti (04m 48s):

And I think we did some work saying, why is it that demand is actually still growing in absolute terms, despite the fact that we've gone from \$15 to \$20 to \$30 to \$40, and maybe we're in the 540s at that time and that's when you know my team and I did the work on let's look at gasoline spending as a percent of the economy and for 20 years in a nutshell, gasoline had underperformed the broader economy. So if you started to look at what percent of consumer spending were we at that peak in the late 1970s and that was the type of analysis we did to say, hey, wait a minute. We think the economy can withstand a much higher oil price in actual terms than what the consensus is out there and that led to this, the super spike super spike call.

David Greely (05m 31s):

Yeah, I remember those days and it's so good to go back to the 90 because I think people forget, I came into looking at oil markets kind of in late 2001 and I remember when I started it was very much seen as a mean reverting market yeah you know like, oh, there's this price and prices go up, prices go down, but they always come back and you know, people's conception that you could see prices move out of that band in a big way just wasn't there. I remember, you know, you reminded me of a meeting I was doing refined product forecast at the time and we had like a \$75, a gallon gasoline forecast and the traders were like, yeah, you gotta be crazy. Like, you know, there will be a revolution in the streets if people have to pay, you know, if it's a \$75 on Nymex, you know, maybe that means it's two and a half bucks at the pump, but it was like, there's an amazing psychological shift that had a come of people realizing that the environment had changed.

David Greely (06m 25s):

And I think, you know, you were a big proponent of, hey, we're in a different environment than people have been accustomed to and you know, you can see it in the fundamentals, you can see it in the demand, you can see it in the lack of a supply response and I think over that period, you know, you became known for your super spike call and you know, this was often the subject of controversy, you know, it was, you know, in hindsight it's like, oh yeah, that was the super spike, but it was not easy. I'm sure at the time and I think it was often misinterpreted by people and so I was wondering, could you take us through, what was your super spike call and what led you to make it?

Arjun Murti (07m 01s):

Yes and you're absolutely right and so I think the attention it got beyond our core client base is what surprised me. So I was earlier in my career at Goldman. I'd probably been covering energy, I guess, for, by the time you made the call 12 years, but still in my young 30s and so forth and when you're at Goldman, you're dealing with essentially the top pension mutual hedge fund, hedge fund clients and that's it that's all who I'm talking to and then some of the CEOs for the companies I covered and it's really a very niche narrow group. So you're used to intensely debating your outlook with this very sophisticated high end group of very well regarded clients when the media suddenly got ahold of it and of course this is early in the days of the internet and it suddenly gets global attention from people well beyond this sphere of really high end institutional, that caught me completely by surprise.

Arjun Murti (07m 53s):

So part of the job and part of the fund of the job was the debate with the clients and when they say origin, that's a terrible call and or you're missing this or that used to be a blast to debate with those folks when random people in the media and random people on the internet are, are saying, you're gonna destroy. This is no joke. A woman from Czechoslovakia called and said, you're gonna destroy my chimney business because we can't afford these prices here and I'm thinking that's, we're not making a call on your chimney basis. I'm

just looking at the supply fundamentals, the demand fundamentals, and, and believing based on our analysis that prices have scoped to go up. We're not wishing either good or bad on anyone. We're actually just trying to make a fundamental oil call and I'd say it really caught me by surprise something. I don't think I adjusted to till I retired from Goldman and now come back on and I am now on Twitter and social media. It's probably taken me 15 years to come to terms with that initial attention we got back in 2004, 2005.

David Greely (08m 53s):

Yeah. And when you were talking with the institutional clients who were, you know, your main clients at the time out, outside the broader universe, what was it that you wanted them to take away when you tried to frame the issue as we could be in for a super spike?

Arjun Murti (09m 10s):

Dave, I love the question and of course you were at Goldman so you understand the perspective. Your question is the point of being an equity research analyst. It wasn't to convince people that you should buy XYZ stock or sell them. It was to provide perspectives on what you thought the outlook was gonna be so that they could make hopefully intelligent investment decisions and so the framework was one of, hey, that 1990s, \$15 to \$20 environment of easy oil and limited demand, we're going to continue. Forever point I was trying to make is yes, it's aversion to the mean business, but that mean is going to change. We used the term super spike very specifically. We didn't want to just use the term spike because in any given day oil can go up and down or any given month. It was meant to connote a longer term cycle that really investing in Greenfield oil and gas fields that is not short cycle debottlenecking, an existing field where you're just drilling around core infrastructure.

Arjun Murti (10m 05s):

That can be quick, that can be happen in a year or two, but if those opportunities were done and we were gonna have to do deep water or oil sands, or who knows what that was gonna be at least five to seven years and if at the same time, something did change where China joined the WTO and they were going through a major infrastructure, boom, and frankly, a lot of the analysis and a lot of the confidence that came from yourself Dave, from Jeff Currie, from our economist, from the team that Goldman had in China. I relied a lot on them. I was a oil equity specialist, not a global macro person, but recognizing the bricks call that Jim O'Neill made and what that would mean for oil demand and how in elastic demand is and how small oil was as a percent of global economic output.

Arjun Murti (10m 51s):

All of that contributed to us wanting to say, it's basically a super cycle, but I wanted to use the spike to represent the fact that it does not just go up and so in those days you were usually in one of two camps, oil will never rise again and be flat forever, or it's bullish and up into the right from now and forever. That was more the mindset of the classic wild cater and EMP management and some of the legacy bulls in the sector. Our point was, this is a cycle I had guessed. It would be five years in duration but after that five years, there was an expectation it would roll over, hence the word spike and the use of the word super meant to be it's not a day or a monthly type call.

David Greely (11m 34s):

Yeah and those are great points in you. I think often when an analyst makes a call like you did, people are interpreted as you're hoping for that outcome and I think more often than not, it's often you want to be accurate first, but it can often be a warning of, hey, look, given that we're not seeing the investment, we need to produce the supply. That's needed to meet the demand that's out there. We're prone to not having enough to go around and that's gonna hurt investors who are on the wrong side of it and it's gonna hurt people who are reliant on energy. Like the, the woman's chimney business in Czechoslovakia and I was curious, because you know, as we said, you are running the equity coverage of oil and gas companies at the time and how were they thinking about it. How were they experiencing it you know, you brought up a bit of, you know, how the wildcatters were thinking about, you know, oil prices up into the right forever, but were they realizing that they just weren't able to produce enough for what was needed. Were they seeing the investment problem?

Arjun Murti (12m 32s):

You know, it's interesting. So the companies almost to a company on the larger side of things, the super majors, they all have 5% plus or minus production growth numbers and I think like a lot of the investment community, both on the sell side the part of the business I was on or the buy side, the investor side, they were willing to make excuses for why they missed. I mean, it's one thing to forecast 5% and come in at 4% or 3.5 and a half, they were coming in at zero. They were missing it by the entire amount every single year and you could always make an individual excuse that there was a Nigerian disruption, once year, a hurricane disruption, another year, some

unexpected delay in startup, but at some point you have to look to within yourself and say, what is it about my modeling that does not allow for in this case, seemingly one off events.

Arjun Murti (13m 19s):

But when you add them all up, it's a material hit to the forecast. What does it say that you are telling us the costs were gonna be \$5 or \$6 a barrel for finding and development and they're now seven or eight or nine or 10 or 12 and I think I was willing to recognize that our analysis that we had previously done was just not correct. We had forecasted 4% growth. It came into zero. We again, forecast 4%. It again came in zero. We thought oil wouldn't go above \$20, but suddenly at \$35 of barrel, we have 3 million barrels saved, demand growth and then the next year, another one and a half, I think that inability many people have to look to themselves and say, where have I been wrong and what am I gonna learn from that. I do believe that was a feature of all of us on both the equity research side and the commodity side. It's one of my things I most appreciate about my time at Goldman.

David Greely (14m 09s):

Yeah. I was the similar conversation with Jeff Currie once around that, where we realized, you know, a lot of people when their model breaks is when they get really nervous and stressed and for other people, when the model breaks and they start being wrong, they're like, oh wow, this is really interesting. I wonder what's going on here. Like that's when the job actually becomes exciting and when you can kind of plug in your numbers into the process you have and get your forecast and make your recommendations and you know, things get a little boring.

Arjun Murti (14m 39s):

I love the point. It's most exciting when you're wrong because then you're a chance to figure it out and ask some questions. I love that point.

David Greely (14m 46s):

Yeah. Maybe there's something wrong with us, but it did make it a really exciting place to work at the time. So now I wanted to focus on that actual period that summer of 2008, because I'd love to hear some of your memories about it, you know, for myself, I remember, you know, for a while with oil prices, even though they had gone from that \$28 environment and, and marched up to a hundred and it was painful for many people, many consumers, but it also felt like it was somewhat orderly. You know, it wasn't a chaotic market. Certainly wasn't the way consumers wanted, but you know, you had this kind of trend that was unfolding, but you know, in the summer of 08, to me it felt almost viscerally like something snapped you know, like something broke and prices in that last leg just kind of flew.

David Greely (15m 32s):

It was like a \$100, one day, \$120 the next and you know, we hit the \$147 in July and you know, at the time I remember producers were trying to buy back hedges that they had put on consumers were trying to get hedges on because they were panicking. So you had this, you know, wild situation where the producers and the consumers were both buying, everybody was buying and in retrospect, you know, found out that, you know, some group had collapsed when it was caught in a short squeeze and lost around \$2.5 billion. So there was just a lot happening in that last leg up and I was curious, what was your experience of that spike period itself and what were the companies you covered going through and talking about?

Arjun Murti (16m 16s):

So I'm gonna give you two reflections and a regret from the going into the spike period. So the first one, and I agree with your, how you framed it, which it was orderly and, and move up to the right and then kind of went a little crazy in the spring and early summer and I remember having a meeting and it was about the may timeframe in New York and someone from one of the Macro Desks who would not have been a core salesperson for me, I'm an equity research analyst asked me to meet with some of the leading macro portfolio managers. Again, I was excited to have that meeting. It's a group of, you know, well, in some cases well known people who I would normally not meet with since they weren't the energy equity specialist at, at their corresponding firms and so because they weren't my core clients and vice versa, it was just a different kind of meeting where it, wasn't the sort of intense debate.

Arjun Murti (17m 03s):

And let's talk about why you're dumb or smart or anything, that kind of stuff. They asked me to present my latest views and I remember a couple of them speaking up and saying Arjun you've had a really great call here, but what I'm seeing in a couple different areas says there are things that are making me nervous about the broader market, about the broader economy and therefore oil as well. I think if housing or financials or whatever, struggle oil is gonna struggle with it and especially after such a good run, I'm just nervous and I

remember it didn't upset me to hear that and I think I was still early enough in my career and didn't have maybe the broader perspectives that I've hopefully gained since then that I took it in, but my reaction was while these guys are some of the most successful, most prominent macro people, they don't know oil.

Arjun Murti (17m 46s):

And you know, you know, this Dave, when you've battle kind of the bears throughout and you've been right, like I was right, the whole, we were right. I was right the whole way up, you start becoming, I think overconfident in the view and not even just overconfident, you get too caught up in the short term heat of the battle. Here's another bearish guy and I got, it was very friendly and polite, but I'm gonna beat this back and I'm gonna just say that he, you know, he's not an energy special, so he's gonna be wrong, but clearly with hindsight we are right, the second reflection was it was late June just before that absolute final spike to 147 and Jeff Currie and I were in Rio de Janeiro a senior person from Goldman very senior person had flown down to introduce us at the event, which is frankly ridiculous with hindsight, but person might have had some other business there, but introduces us welcome to the Jeff and Arjun Show.

Arjun Murti (18m 37s):

And when oil analysts are being treated as rock stars, probably a sign you're closer to the top than you are to the peak and I remember thinking this is a crazy introduction and the place was sold out and I, you know, I think me and Jeff can both be reasonably engaging and entertaining when we speak and so it was a another fun event, but clearly that was the peak and when you're being introduced in, in rock star type terms you better run for the hills as an oil guy, but my regret Dave actually extends to kind of the year and a half leading into that peak where I'm an equity analyst and I feature this on my Substack. I talk a lot about returns on capital and it's \$65 oil in 2006, we actually had our peak return on capital and in 2007 and into 2008, as oil prices were doubling plus returns were actually stagnating and even falling back of it because CapEx had finally sort of caught up the capital.

Arjun Murti (19m 33s):

So even if let's just say, even if the bullish sort of oil call had continued and we hadn't rolled over because of the great financial crisis, the sector had clearly peaked and that was my job. My job actually wasn't to forecast oil prices. It was to provide a framework for looking at the companies and it is my regret because while maybe I'm not a housing expert, maybe I'm not a financials expert who didn't have the macro expertise. Those other folks did. I did have expertise on capital intensity returns on capital, and it is who I am. It is my ethos in looking at companies. There is nothing I care about most and I missed the core signal. That was the basis of my analysis and that is my regret that I ignored my own fundamental framework not that I didn't forecast something that was sort of beyond my scope and I should have, I might not have timed the exact peak, but it was time to start being much more cautious in the equities and I do regret missing that.

David Greely (20m 25s):

Wow, I might accuse you of excess humility, but that is impressive. So I won't because like when you go back, I mean, even I was just, re-looking at some of the data and I always thought of, you know, two months after the oil price peaked, you had the, you know, Lehman Brothers collapse, the reserve primary fund broke the buck and the global financial crisis hit its most tumultuous phase. So like, yeah, the economy fell apart and oil prices went with it, but even before then, I mean, I think the US was in a recession starting it in late 2007 and we had had the Bear Stearns problems back in 07 and yet oil prices kept climbing and I think it's part of what you said earlier you know, it's about the levels to some extent that we just added so much demand and fallen short on so much supply that even as things were slowing, that price pressure kept up but I will agree. I think there is a lot to be learned, you know, probably from younger analysts and younger traders that sometimes when you've been fighting the market for so long and, and fighting other people's opinions that when people start to line up behind you, it feels good to be in the front of the parade <laugh> for a little bit. And this is probably the time when it's most dangerous.

Arjun Murti (21m 35s):

I think you said with some of today's tech analysts, right and so you see it, especially for the real high flying, I think Goldman calls them the unprofitable tech companies, some of the, the most prominent proponents of that they've battled the Bears throughout and now they're on their side of it and it's, it's tough. It's tough lesson to learn. Is it tough to step away from having been kind of a rock star if you will, to realizing things are changing and you can see it in the market today.

David Greely (21m 58s):

Yeah and it's I remember, you know, at Goldman, we got slapped with that label of like permabull and I remember at the time I retort was, well prices have been going up for five years what should we have been, but you to really like, you go to keep that in your mind like I'm not always the bullish person. I'm not always the bearish person, like I don't have to play that role. I can be the person who's trying to be accurate and do right by, you know, my clients and the people that listened to me and, you know, you explained what you meant by the spike and I think that's like what people often don't focus on is that when you say prices are gonna spike or hit a super spike, you're implying that they're not gonna stay there for long you know and that's typically what we see in commodity markets prices move that creates a lot of demand destruction and then the prices collapse back. I was just curious, you know, what did you make of the swiftness of the collapse of how quickly things came apart?

Arjun Murti (22m 52s):

Right. I'm gonna, I'm gonna actually adjust if you don't mind, one word you said, is it wasn't that prices aren't gonna stay there for long. I don't think long's the right word. I think forever would be the, with the people of the word that it was never a call that prices are only going to stay high forever or go up forever and that some combination of demand and supply would, would change things down and that it would be swift. Now I want to be clear, we missed, I missed the peak and, it is what it is. We cut our forecast three times in pretty quick succession and the first cut, I will call the still defending the bull call cut where there's some excuse for why we've pulled back, but kind of still sticking with the old paradigm and people can critique that and we deserve whatever complaints we get.

Arjun Murti (23m 35s):

I will say from that, after that first cut the next two, I feel, I think intellectually better about because we quickly realized once you go from one barrel too little to one barrel, too much, you're going to the other extreme and in a world where you still had limited OPEX spare capacity, no real non-OPEX supply growth, but that it was very evident the global economy was collapsing. You were actually going to fill short term I pretty quickly and you might actually have to go from what had been demand, destruction pricing to supply destruction pricing, even though your long term supply outlook hadn't really changed and so I will say people probably don't and won't want to give us credit, but I think the kind of after that first cut the next two cuts getting very quickly to what is the other end of the cycle?

Arjun Murti (24m 21s):

Because this business is elastic, Dave, and you obviously know this, that it's a physical business. It's not a business of expectations. You have to clear supply and demand today. It's very hard to bring on new supply quickly. It's very hard to knock out demand on the upside, but the opposite is true on the downside. Once you start taking away demand, it's really hard to get a producer to stop producing and it's a really low price and so I think week very quickly pivoted down to this, the, what is our shut in price that can re keep this market and balance in what was then a very uncertain circumstance on the global economy, so the second two cuts, I feel like we did a better job of.

David Greely (24m 59s):

Yeah. And I think you've, you know, I want to get into some of the, the language that you're using now around the environment that we might see ourselves in because I think it's really valuable. But first, like when we talk about, you know, the, the super spikes and demand destruction, one thing I think that I've observed is people often fixate on the number of the forecast too much where I think what's the, the most important thing that you know, can be conveyed sometimes is that we're in that zone where supply isn't gonna be able to respond in the period that we need. So, okay we haven't made the investment over the last 3, 5, 10 years. We're a limited supply. Maybe something's taking supply off the market demand looks like it's gonna still be running well ahead. We've run inventories down. So we're kind of at the break glass, like what's the last lever to bring supply and demand into balance.

David Greely (25m 52s):

And that's typically demand destruction. So who's gonna stop using, who's gonna stop driving their car. What company's gonna shut down. You're basically at this point where it becomes very hard to predict what price is gonna get somebody to stop using because most people's use of energy is really important to them. They don't wanna close their business, they don't wanna stop heating their home, all those things. And you know, for me, when I go back to the super spike, it was a bit of the way I internalized it was we're hitting a period in the market where their supply isn't gonna be able to adjust and we're gonna be dependent on demand going away and the price is gonna go to where the price needs to go to make that happen and it's gonna be high and I think at the time, you know, the way I internalized what you were saying was, if we look at what's gonna take gasoline demand out of the market, you know, let's look at when people cut back on their driving in the past, that's probably gonna be the margin.

David Greely (26m 46s):

And here's a reasonable price where people will, you know, decide to, to carpool or, you know, just cut back on those miles driven, but I was curious, you know, you can correct me if I'm wrong in my own recollections of it, but I wanted to get into that point a little bit, that when we enter these periods where we have to rely on demand destruction, because the, the investment side hasn't kept up, I think we're seeing that, you know, developing in markets again today maybe a little bit more in the natural gas markets at first, but I think you're, you know, with diesel prices where they are, it's flowing through to oil and it's probably something we should anticipate and you've been talking about it in terms of, you know, super vault. And I was wondering if you could walk us through what you call the super vault mindset and how we should be applying that to markets?

Arjun Murti (27m 34s):

I'd love to talk about that. I want to touch upon one thing you just mentioned, because I think it's a really critical point to bring out, which is, I didn't know, you don't know, none of us know that exact demand destruction price, and it's not a price. So the initial call in 2004, 2005 was actually a range from 50 to 105 with that range representing getting partially back to the percent of gasoline spending is a percent of consumer spending that we got to in the 1981 peak 150 to 200, which was a subsequent call that was getting back towards the high end of what we peaked at in 1981, 105 would've been partway there, 50 would've been below that and the point was actually don't know what the price is there, isn't a price quote, unquote, it's more the dynamic and the framework of here is somewhere in this range is where I think we'll end up.

Arjun Murti (28m 23s):

And that was very different than the \$15 to \$20 per barrel environment. So I appreciate your mention it, of course in the world we live in the media's gonna pick up only one number that it likes the 105 and I, you know, I can blame, I think I can blame the media back in 2005. At some point you recognize they're gonna do that. So at some point I have to take responsibility for knowing they're going to do that, but I think it's a real disservice and it is frustrating that you cannot explain nuance and I think people are capable of understanding it. So again, one of the things I try and do with my current Substack is to speak about things in more nuanced terms, whether that's gonna have any effect or not. We'll see, but there it's a range and we don't know the price in terms of the super vault language today.

Arjun Murti (29m 04s):

A couple underpinnings to that. I don't think we're in the type of global GDP. China just joined the WTO booming emerging market demand growth. That's very price insensitive that we had in the 2000s. So the core economic outlook is different. I actually think we're tighter on the supply side than we were then, meaning you are completely out of OPEX spare capacity. That was more of an estimate. I think that was pretty much true back in the 2000 cycle now it's definitively true, including being admitted by some of the leading OPEC countries, there is zero appetite for CapEx and so back in the 2000s you had the kind of normal supply response. Now our call was, it's going to take time. You're going from Brownfield to Greenfield. So from a one year supply response to five to seven years plus, but at least you had people trying to spend money.

Arjun Murti (29m 53s):

And that was my point on returns on capital peaking. Well, before the broader cycle peak, this time around for a variety of reasons, companies are returning all companies, not just the super majors, almost all of their excess cash flow back to investors in part because, and really because profitability was really poor last decade in part because of concerns that decarbonization policies could limit demand growth going forward and for all these reasons, you do not have the CapEx impulse yet, which is pretty, pretty remarkable, but you still have the physical realities of this business, Dave and so I don't, I don't like the term Supercycle, because I think it connotes a kind of smoothness that you articulated that 04 to 07.5 really experience that I don't expect this time when you don't have spare capacity. When you don't have inventories, you go to demand destruction prices.

Arjun Murti (30m 45s):

Like maybe we saw in the May, June timeframe of this year, but once you start destroying demand you very quickly can go the other way and so whether we need to go back to shut in prices, I think I'll leave for others to kind of debate and pontificate on, but I think we're gonna keep going back and forth and hitting upon demand destruction prices. Once you hit them you back off, you get one barrel, too many you're in, elasticity's kind of work in the other direction. That's the type of environment I think we're gonna be in. Now, if you average that or add up all these peaks and troughs that we'll have over this coming decade, it probably does work out to a Supercycle for those that use that language but I believe that super vault is the better mindset. This is not going to be a smooth cycle.

Arjun Murti (31m 31s):

There's nothing pleasant or good for anyone about demand, destruction, pricing. There's frankly, nothing good about vilification of this industry and this demand that they stop investing. If you have policies to correct demand, that's one thing, but you can add have policies that only aim to limit supply and it's kind of the world we're in right now and it's unfortunate and we need to decarbonize, but you're not going to successfully decarbonize by only trying to limit supply and by the way, only in the United States, Canada, and including Alaska and not in other parts of the world that is leading to a worst of all worlds, what I'm gonna call a super vault environment that I think persists through the 2020s.

David Greely (32:11):

Yeah and, I like the super vault language because just when people go to apply things to their everyday life, right, we've seen, you know, gasoline prices were up over \$5 a gallon in the us and you know, now you can see them below four in some places. So I think there's immediately, people just want to breathe the sigh of relief and say, oh, well I guess that's over and just say like, no, you're actually still in the same environment.

Arjun Murti (32m 32s):

And I think it's a critical point. So we got to whatever it was on WTI terms, \$120 a barrel. I don't think that means that that is necessarily the forever now demand destruction, price. Maybe next time we only need to get to 102 in WTI terms. Perhaps a third time we have to get to \$150. You can make up whatever numbers you want. I actually think it's a disservice for me to put out specific numbers. People can say, well, you just don't want the media to, you know, skew you for your predictions and that's not it. You want the pragmatism and the framework to come through, which is, it might have been \$120 in May, it could be \$95, next time it could be \$175 the time after that, but it is going to vary because it's not a number.

Arjun Murti (33m 15s):

It depends on a whole host of circumstances. You've got whatever, 7 to 8 billion people on earth, all of whom well unfortunately only five to 6 billion of that actually get to use energy a lot of people are energy poor, and that's a much bigger issue. That's probably beyond the scope of our discussion but for those of us lucky enough to have modern energy, you can't do anything in your life and if you go back to 08, when we had a housing crisis, the choice was always, you can live in your car you cannot drive your house. So gasoline is going to be the last thing to find maybe mole bubble homes, the exception, but you understand the point. Gasoline's gonna be the last thing to really roll over in the crisis and it's people forget how fundamental energy is to our life and it's a physical business. It has to be there. You can't anticipate it's gonna be there. You can't forecast. It's gonna be there. It actually has to be there in physical volumes and that is something that's a big issue today.

David Greely (34m 09s):

Absolutely and I want to pull back in, cause there's something else that you said earlier that I wanted to get back to because I think it's so critical and it ties in a little bit with the point of like the number versus the framework, like obviously the number is important, particularly if you're looking at trading or investing in a market, but I think when, what you're interested in is the larger question of how do we get out of an environment like this, you know, how do we make sure that people have reliable low-carbon energy, how do we deal with both supplying reliable energy and being environmentally responsible. You have to kind of have the conversation more around how the market works and how we can keep it working and keep it from breaking and you know, you brought up a, a point earlier that I think is often lost on folks, which is time is so in such an important element in these markets that, you know, if you ask someone to adjust their oil, use their energy use today or tomorrow, or you ask a company to bring on more energy this week or next quarter, they really can't and you would require an enormous move in price to force them to do that.

David Greely (35m 16s):

You know, you're forcing a consumer essentially into bankruptcy and just, they have no more money in their wallet, a company, you know, there's not much they can do once their inventories are low, but if you give people time, there's adjustments that can be made. Companies can invest, they can up their CapEx plans, consumers, you know, given a, a lead time, you can buy a more fuel efficient car. You can buy a home closer to where you work. You can, there's lots of things you can do given time. But, and this reminds me of a point, Jeff Currie brought up that all over and over and over. We don't like to deal with problems till they're sitting on our doorstep and so when I look at the challenges we have in the energy markets, I look at, you know, this pension to not deal with things until they're right in our face, versus when they're right in our face, it's too late to deal with them. And we need to, you know, put plans in place of 3, 5, 10 years or more in order to be able to get those adjustments without huge price moves. You know, you work with a lot of energy

companies, you know, you work with lots of folks that are trying to figure out how to invest well. Does any of this feel like it comes up for you a lot. I'm like struggling with like how do we actually make this work and get people to realize the contradictions?

Arjun Murti (36m 30s):

It's something that is discussed a lot and I think the way I'd summarize a few of those points is the cycles tend to be 10 to 15 years in duration kind of up and then down where you go through this period of generally tight oil and gas markets to one that is looser and the change always surprises people. As people live quarter to quarter and year to year, not just in financial markets, but in real life as well, so when you've had 10 or 15 years of what we're low oil prices, whether it's coming out of the pandemic, the previous decade have been low prices or coming out of the 1990s, you tend to kind of forget that these cycles are long term and duration to invest in new oil fields to invest in new gas fields. These are all five to seven years from the point you start.

Arjun Murti (37m 11s):

So to get to a point of having surplus supply, that then adds another five plus years to whenever, you know, you started and the first fuel start coming on, it gets you to your 10 to 15 year timeframes. So do things like making adjustments to the nature and mix of energy. So coming out of the 1970s, people did actually, it's the only time in our period, we actually had real fuel economy gains. This was the, you know, Dave you and I were both somewhat young at the time, but the advent of quote, Japanese imports and the small fuel efficient import, and you know, my parents who live through that crisis, they're in their 80. Now they still turn down their thermostat, right and that is that that's a lesson that they live through those energy crisis. Years is immigrants to this country and, you know, trying to ensure they could provide for me and my siblings that I think has been forgotten today.

Arjun Murti (37m 59s):

And it, it all starts with, you need to provide energy for all that has to always be first, foremost and final as you're doing that, we should do it with a small of a climate and environmental footprint as possible. No question about it. My issue today is you can't start with your solving for CO2. You will not succeed. In my opinion, if that's what you're solving for, that is not to say, we're not taking it seriously. I do believe we need to decarbonize, but you will never decarbonize if you take energy away from people, if you don't provide energy for all. So how do you do all of the above. How can it be that you are going to start by attacking companies in the United States and Canada, these should be the last barrels produced in the energy transition. They have a responsibility to do their part of cleaning up their methane and trying to decarbonize, but there's no way it makes sense to only shut down us and Canadian oil and gas companies and then make the rest of the world dependent on.

Arjun Murti (38m 58s):

I'm gonna call them as an American, less friendly countries in the world and I think this is where to me, you have to evolve the discussion. It can't be that I'm only care about climate, or I quote only care about fossil fuels. You need to be able to walk, chew gum, but you have, the starting point has to be energy for all and then how do you do that in as environmentally and climate friendly manner as possible and I would argue, you have to be able to see the betterment of Shell Oil, Canadian oil and gas over various middle east and Russian producers. I don't understand how that's even a question that isn't Americans' perspective for sure, but is something that I certainly support.

David Greely (39m 35s):

That's great. And as we wrap up, I wanted to ask you, you know, as I said, in the introduction, you know, you're publishing your own super spiked on Substack. I've seen, you've got some YouTube videos out as well. Love following what you do. What are you gonna be writing and talking about over the next couple months do you think?

Arjun Murti (39m 53s):

You know, the core mission of Super Spiked is to essentially have a more pragmatic discussion about how you have more sensible energy policy and again, while still caring, ultimately about environmental and climate outcomes, I'm clearly not a left of center person, but I also do not want to be a hard right person either and one of my proudest moments since I've started publishing Super Spiked was to have this an oil company CEO, who I know to be pretty right of center, tweet out a report as did someone from the environmental community and that that's what I'm target for. How do you get each side to understand, to speak to a common goal of everybody needs energy and we are do definitely trying to do it with a small of environmental and climate footprint as possible. So I think these core themes of we need more us and Canadian oil, but it should come in my opinion, methane free.

Arjun Murti (40m 44s):

And the engineers out there will push back on the zero methane language I use, but I'm just call effectively methane free. What are the things us oil and gas companies can and should be doing to clean up orphan wells. It can't be okay that they're wells that have just been abandoned perhaps by companies that have since gone bankrupt. So it's technically not any current company's responsibility, but I do think cleaning up the mess, taking care of methane should be a requirement to otherwise maximizing US and Canadian oil and gas supply and I think that ends up with better outcomes. We should be looking to displace oil and gas from Russia and Iran. If I may use those countries specifically. And those are my personal opinions, not the views of any of my affiliations. And I'm not gonna blame you Dave, or any of your colleagues for those views, but we should be trying to essentially ensure for the US and its allies that our oil is produced in is environmentally friendly of the manner and these will be kind of some of the key themes I'm gonna continue to focus on. We're trying to, we're trying to walk and chew gum. We're not trying to be ideological about this. We're trying to have pragmatic outcomes.

David Greely (41m 50s):

I really look forward to reading it and keeping up. It's terrific to be able to have you in. Obviously we've shared a lot of time in the markets and I think we share a passion for trying to find that pragmatic middle ground where you know, people on both sides can see something valuable. So thanks so much for coming in today Arjun.

Arjun Murti (42m 06s):

I love and miss our time working together. So it's really great to join you on this podcast and love all that you're doing here as well, and all of your colleagues and thank you for having me on.

David Greely (42:16):

Thanks again to Arjun Murti, the Former Head of equity Research on the Energy Sector at Goldman Sachs and the publisher of Super Spiked on Substack. We hope you enjoyed the episode. This wraps up our when markets break series, please join us next week when we kick off our next series, winter is coming with the outlook for natural gas and LNG. This winter, given all that has happened and is happening in Europe.

Announcer (42m 40s):

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Announcer (43m 17s):

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