

SM104 | 1.14.2023**A Smarter Way | Episode 1****Craig Pirrong, Professor of Finance, University of Houston**

This week, we kick off our new series, A Smarter Way, exploring better paths forward to solve our concurrent crises of commodities and climate. Our first guest in the series is Craig Pirrong, Professor of Finance at the University of Houston. SmarterMarkets™ host David Greely sits down with Craig to examine both the implications of and alternatives to Europe's recent decision to move forward with energy price caps.

Craig Pirrong (01s):

So I guess the main lesson that I would draw from the California experience is that, yeah, sort of government designed markets in some respects is almost an oxymoron. And they tried to create a structure that looked like textbook competition, but they put constraints on it that made the market that they created extremely vulnerable to adverse shocks. So the main lesson that I would draw is trying to be too clever by half in designing a market is frequently a recipe for disaster.

Announcer (39s):

Welcome to SmarterMarkets, 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 (01m 05s):

Welcome to a Smarter Way on Smarter Markets. I'm Dave Greely, Chief Economist at Abaxx Technologies. Our guest today is Craig Pirrong, Professor of Finance and Energy Markets, Director of the Global Energy Management Institute at the Bauer College of Business at the University of Houston. We'll be discussing the European cap on natural gas prices and smarter ways to deal with energy shortages and high energy prices. Hello, Craig, welcome back to Smarter Markets.

Craig Pirrong (01m 34s):

Hi, nice to be back.

David Greely (01m 35s):

It's great to start the year off with you. I know before the holidays, the European Union agreed on a natural gas price cap that will go into effect on February 15th. Now, since then, it's been extremely warm in Europe and that's greatly reduced the demand for natural gas and lowered prices making the price cap less relevant perhaps in the near term and while it's very fortunate that Europe isn't having a cold winter right now, hoping for favorable weather isn't the basis for sound energy policy and neither are price caps. So I'd like to take this respite from this kind of ongoing European energy crisis to explore with you why price caps are not the right answer and what could be a smarter way to deal with high energy prices. If you'd forgive a little bit of the extended preamble here for the benefit of our listeners who may not be as familiar with the, the price cap in Europe, I'd like to start off hearing your thoughts on the nature of the price cap.

David Greely (02m 30s):

And it has a number of features that seem unique to me, though you may have seen features like these before, and these include, of course, you know, the cap is triggered if prices exceed a certain amount. And this case 180 euros per megawatt hour over three days at the Dutch title transfer facility, the TTF on the front month contract, which serves as Europe's benchmark right now. Now interestingly, the TTF price must also be 35 euros a megawatt hour higher than a, a reference price based on existing L n g price assessments for three days. And once triggered trades would not be permitted on the front month, three month or front year. TTF futures contracts at a price more than 35 euros per megawatt hour above the reference LNG price. So when I look at it, you know, the price cap is being imposed by a region that's highly reliant on imports. It's on futures contract prices, not just physical market transactions and the price cap is a spread to another market, in this case, an LNG reference price. So you're capping a previously liquid market like TTF to an illiquid market based on only a price assessment. So, you know, looking at these features, what do you make of this structure?

Craig Pirrong (03m 46s):

Well, so first of all, a lot of it is unique. Yeah. In some respects it's like a limit up kind of structure. You know, limit up and limit down are not uncommon on futures markets price limits but usually they're based on daily price movements as opposed to a level over a three day period. The main unusual feature is what you noted is it's basically in addition to being triggered by the flat price, it's also triggered by a basis a spread and I'm not aware of any other, you know, similar sort of price gap, but overall my assessment of this is the following. You know, it's sort of a, an example of sort of the political dysfunction and disarray in Europe in the sense that there was obviously a group of countries that wanted sort of a traditional hard cap on gas prices in order to reduce energy prices to consumers.

Craig Pirrong (04m 48s):

And that shocked and horrified particularly the Germans and the Dutch, who realized that such a traditional price cap would wreak havoc and lead to shortages and outages and so that this was, you know, sort of a classic, you know, giraffe being a horse negotiated by a committee sort of mechanism where they put in place a price cap, but there were so many sort of caveats and requirements that it will be unlikely to be triggered and it wouldn't have an even been unlikely to have been triggered even if the weather hadn't been so favorable to them and on the one hand, it sort of recognizes if you lead the read the underlying document, their justification, you know, sort of it reflects economic realities, but at the same time it tries to deny them. It's a very odd beast and again, just as, as it looks like this the classical result of a political compromise, particularly in a jurisdiction, the European Union, which is highly fractured particularly on energy issues

David Greely (05m 59s):

I like that look at it as a, you know, being designed by committee and just say a giraffe is a word designed by committee, because it does have that look of like almost, you know, you have to ask yourself, is it designed to be ineffective, correct. Sounds like a, so certainly was part of the outcome. And I want to talk to you about some of the, perhaps unintended but entirely predictable consequences. You know, exceptionally warm weather may keep the cap from coming into play this winter, but caps create shortages when they do come into play, when they do bind, and when they are effective. And I was curious in your experience, you know, when the price isn't allowed to go up to balance supply and demand, obviously there's some other way people have to get rationed out of the market, right and how does that typically happen? Is it first come, first serve or does it become a political decision at that point?

Craig Pirrong (06m 49s):

You know, in the absence of a political decision, it usually becomes, first comes first serve, or basically market participants themselves make a sort of ad hoc judgments as to who's going to get the stuff and who isn't and the chaos that typically results from that kind of process typically results in politicians and regulators coming in to intervene with a more formal rationing scheme. But you know what's interesting yeah and again, this is sort of a representation of the political compromise involved. As you noted, the price cap applies to futures, but explicitly, if you read, the underlying document does not apply to sort of the day ahead mechanism and the spot price or the cash price mechanism where actual physical supplies are allocated. So what you could have is this sort of weird outcome is that the future's cap could be hit and then cash prices could soar way above that and so basically what it would do is it would shut down the future's market, but it would still rely on the fiscal market and particularly the day ahead market, the short term market in order to allocate physical supplies and I can guarantee you if that happens, that would just lead to another entire freak out in Europe, yeah that the price gap isn't working, it's not really containing prices. Yeah, on and on and on. So it's you know, again, it's just a very odd beast.

David Greely (08m 21s):

Yeah and I'm glad you brought up some of those complications because you know, I think you just pointed out that it, it binds on the futures, but not necessarily the cash underlying market also, the fact that it's based on this differential that there's a spread component and all this to me suggests that some clever trader could make a fortune by, you know, manipulating some of these complications in the structure and I'm curious, like when you look back historically, do you tend to see more manipulation occurring when you've got price caps or complicated structures like this in place?

Craig Pirrong (08m 54s):

Well, yeah, interestingly you mentioned the word manipulation because I wrote a book on manipulation in the introduction to the book. I said you know, had the devil's dictionary of finance definition of manipulation, which is something that somebody does that caused me to lose money. So, you know, so yeah, manipulation is a phrase that's frequently used quite promiscuously and imprecise just to basically to demonize things that don't, people don't like and in the price structure context and the price control context and particular price controls that don't apply uniformly, that brings to mind what happened in California, in the California electricity crisis

of more than 20 years ago. At that time, Enron and other energy merchants were accused of manipulation. There were cases brought in front of the Federal Energy Regulatory Commission, which resulted in fines being levied for manipulation.

Craig Pirrong (09m 58s):

And a lot of the so-called manipulative strategies that Enron and others engaged in were really ways of exploiting the opportunities created by price caps. So basically what California did was cap prices within California, but then said, Hey, if you import energy, that can be at an open market price. So what entities like Enron allegedly did is that they'd schedule electricity to be exported out of California and then imported back and so there was no physical flow of electricity, but they were able to export, buy it at the cap price in California, export it, and then schedule it for an import at an uncapped price and make a lot of money and so whenever you impose price controls, essentially you can't fix the relative prices in the market such that such arbitrage opportunities will not be available and highly motivated traders, they will find any arbitrage opportunity that's available. So it's guaranteed that if you, if you put you know, differential on, so you cap one market and don't cap another market that people will try to figure out ways to exploit that in order to make money. And whether you wanna call that manipulation or not, depends.

David Greely (11m 22s):

I probably in poor forum introduced a term that has legal aspects as well to it. So yeah. Yeah. Sorry about that and thank you for treading earlier.

Craig Pirrong (11m 31s):

I understand. Well, I, so one of my favorite quotes is if there's a cotton broker that was brought in hauled in front of the Senate committee in the 1920s and he was accused of manipulating the market than he rather replied, I won't try to imitate the East Texan accent, but he says in, in his experience the word manipulation was used to describe any practice that that does not suit the person speaking at the moment.

David Greely (11m 57s):

Seems fair enough, and I wanna come back to the California experience, I think that's so important and you have such a great perspective on it but before we go there, I wanted to ask you, you know, obviously part of the political appeal of price caps is their immediate impact on high prices. Okay, we're gonna, right, we're gonna do something about the bad thing, but they also create damage to how markets function over time, which often isn't considered in the, the heat of the moment and so I wanted to get your thoughts on how much damage can price caps like this do to how markets function over time, in particular, you know, it's been reported that futures exchanges, exchanges like ICE and EEX may relocate or withdraw from the market altogether in response to the price cap and I was curious for your thoughts on how much does this potentially damage market infrastructure?

Craig Pirrong (12m 46s):

Yeah, it potentially damages market infrastructure very much and perversely could deprive market participants or limit market participants access to the very kinds of tools that are intended to allow them to manage price risk and so particularly in some respects I would characterize it as the discriminatory application of these price limits to the futures market, basically makes it more likely that futures markets will not develop or they will limit their liquidity. So for example, hey, am I gonna enter into a futures position, let's say as a speculator, essentially providing risk-bearing capacity to other market participants if basically somewhere along the line when that transaction is gonna turn out to be profitable, basically I'm not gonna be allowed to profit from it. And so I think that even if ICE and EEX you know, continue to operate in the market, I think that this will have detrimental impacts on liquidity and make it costlier for market participants to manage their risk. So, you know, it's one of those no good deed goes unpunished sorts of things.

David Greely (13m 59s):

Yeah and I was really surprised, you know, coming back once again to the application of the cap to the, the futures contracts, including not only the front month, but the three month and the one year thinking of the distortions that creates and trying to hedge when a cap may or may not apply to something that's like a yearlong futures contract is.

Craig Pirrong (14m 17s):

Yeah, absolutely.

David Greely (14m 18s):

So I wanna take it back to California because you've got a great historical experience with the price caps on energy there and their role in that California power crisis of, as you said, wow 20 years ago, 2000, 2001. How does what we're seeing in Europe now compared to the price controls in California and how are those price controls related to the power crisis. There's always a bit of a chicken and egg thing between the price controls and the crisis.

Craig Pirrong (14m 46s):

So partially for the things that we talked about earlier, there's so many sort of escape valves and caveats and requirements that must be met before the European price caps take effect, that they're less likely to be binding than what happened in California where they definitely were binding. Yeah, so here's the similarity. The similarity was, is that the high prices in Europe and the high prices in California were both as a result of fundamental supply and demand conditions. Now in California, they might have been exacerbated by, you know, sort of the exercise of market power by some market participants, but most of the, yeah, the problems in California were fundamentals driven. Similarly, the situation in Europe today, and again since time and Memorial, I mean, again, you can go back to the Code of Hammurabi where there were price controls, then whenever there are high prices on goods that are, you know, sort of salient to individuals, whether there be food or energy or things of that nature, the sort of the default political responses to impose price controls and then there are all the bail full consequences of binding price controls you follow in the wake of their imposition.

Craig Pirrong (16m 01s):

So I think what California demonstrates is the, you know, sort of the negative consequences of binding price controls and the two things that I would note are, first of all, it does not address and in fact exacerbates the fundamental shortage of supply that is driving the higher prices. So it, it makes the problems worse, not better. So one thing you saw in California was, is that the position of price controls led to the exit of some capacity from the market, which actually exacerbated the shortages situation. The other thing is that it creates, as we just discussed, the incentive and the opportunity to expend real resources to try to figure out ways to profit from these price controls and particularly when you're talking about in California as part of a regional market and imposing price controls and just part of that, or if you talk about Europe or they're part of a world market for natural gas and you're trying to just impose price controls on part of that, that creates all sorts of opportunities to gain the system, if you will, in order to make money and expecting market participants not to game it.

Craig Pirrong (17m 18s):

I mean, that's just, yeah, sort of traders like money and you know, if you leave money lying around on the sidewalk, they're gonna pick it up, you know, they're gonna expend real resources to do that. So I think that the, you know, the California situation is sort of, it should have been a cautionary tale as to the negative consequences of imposing price controls, particularly ones that bind.

David Greely (17m 39s):

Right. If you had to pick like one or two lessons to take away from the California experience, what would those be?

Craig Pirrong (17m 45s):

Yeah, so the joke I like to say about California was, is that they wanted, wanted to restructure their electricity markets in their worst way and they did, they succeeded, you know, so basically going in, in the mid 1990s, California restructured its electricity markets in an attempt to create you know, sort of a competitive market, but the way that they designed the system was completely counterproductive. So the main takeaway is that they tried to create a competitive market or what appeared to be a competitive market, but they imposed so many constraints that it was destined to run into serious problems in the event of adverse fundamental supply and demand conditions and within a few years after they're restructuring these conditions appeared and the entire system broke down so I guess the main lesson that I would draw from the California experience is that yeah, sort of government designed markets in some respects is almost an oxymoron and they tried to create a structure that looked like textbook competition, but they put constraints on it that made, you know, the market that they created, you know, extremely vulnerable to adverse shocks. So the main lesson that I would draw is yeah, trying to be too clever by half in designing a market is frequently a recipe for disaster.

David Greely (19m 21s):

I like that and I wanted to ask you, you know, I think people who have been around markets long enough know that price caps are counterproductive, and yet, you know, typically every time, as we said, there's an energy crisis, price caps is one of the first go-to tools in the, the policy tool bag. So I was wondering, you know, what do you think is a better way or a smarter way to deal with these energy crises?

Craig Pirrong (19m 46s):

Well, yeah, so part of the problem is, is that the responses occur when it's really too late to do anything. So Europe's energy situation is the consequence of a variety of different decisions that have been made over recent decades. You know, so for example, if you look in Germany you know, closing down nuclear power plants if you look at Europe, generally it's relying on Russian imports of gas, you know, a lot of the price controls of the result of decisions that were made for a variety of political reasons that just clash with reality under certain conditions and so what's happened in Europe in some respects is rather, you know, extreme, you know, war in Ukraine leading to the loss of, of Russian gas and so on. But you have to remember that a lot of what's happened in Europe with gas predates the actual invasion.

Craig Pirrong (20m 46s):

So you can actually go back to September, 2021, is when the first price spikes in Europe took place, which is about, you know, what, five or six months before the, the Russians invaded Ukraine. Yeah, so a lot of this is the result of sort of decisions made for various political reasons, like Merkel panicking over the Fukushima nuclear problem in Japan and deciding to shut down all nukes in Germany and so I think that the, the basic lesson is that it's, yeah, shortsightedness in making decisions particularly about energy, which is a very infrastructure intensive, long-term cycle, investment cycle, intensive industry, making short-sighted decisions that later come to bite them in sensitive places and that leads to panic responses. Like, oh my God, what are we gonna do when we can't really do anything that will address the problem.

David Greely (21m 50s):

Well, I was afraid you were gonna say that and that's always the problem, right? Like the first rule of dealing with an energy shortage is don't create an energy shortage, right?

Craig Pirrong (21m 59s):

Yeah.

David Greely (22m 00s):

And I think we can all be grateful that, you know, the weather is keeping the, the issue in Europe from becoming a real humanitarian crisis so far this winter. So we can all be grateful for that. But I want to ask you the, I guess the hardest question before I let you go, which is, given that we're gonna find ourselves in these problems, once a policymaker finds themselves in a crisis, you know, even if it's of their own making, what do you think they should do at that point?

Craig Pirrong (22m 26s):

So it's one of those kind of things is that they're expected to do something and it's politically suicidal to say, well, there's really nothing that we can do, you know, so there's a quote by Hayek something the effect that, you know, it's the unpleasant task of economists to tell people that there are things that they can't control and that's definitely a lesson that politicians don't want to hear and so it would take yeah, incredible political fortitude and intestinal fortitude to come up and say, hey, look, you know, we're reaping what we sowed over the last 10, 20, 30 years in terms of our energy policy in the short run. There's really nothing that we can do to ameliorate the situation except, you know, for example, like some things that the Germans have done, say, hey, let's, let's embark on a crash expansion of gasification LNG import infrastructure. You know, sort of say, hey, the fundamental problem is this. Here's what we can do about that. In the short run, be realistic about what we can do.

David Greely (23m 38s):

Thanks again to Craig Pirrong. We hope you enjoyed the episode. Join us next week as we continue our series A Smarter Way with guests, Keith McCullough, Founder and CEO of Hedgeye Risk Management. We hope you'll join us.

Announcer (23m 51s):

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