

All the Credit® Episode 26

Transcript

[Music]

Female Voice: You're listening to All the Credit, a monthly podcast series brought to you by PGIM Fixed Income an active global fixed income investment manager. And now your host senior portfolio manager, Mike Collins.

Mike Collins, CFA, Host and Senior Portfolio Manager: Hello. Welcome to Episode 26 of All The Credit, PGIM Fixed Income's monthly podcast. I'm Mike Collins, just one of the many investment professionals at PGIM Fixed Income and your host of All The Credit. Russia's invasion of Ukraine has already produced thousands of casualties, countless traumatic injuries, tremendous destruction of property and infrastructure, and obviously brutal hardship for so many Ukrainian families, and of course, the biting sanctions against Russia have also caused much damage to the Russian economy and its people. However, the negative impact to the entire European continent and the global economy is just starting to be felt. While European countries rely heavily to varying degrees on Russian oil and gas, there are actually close to a hundred commodities for which Russia and Ukraine combine to account for more than 5% of total global exports. The supply shortages that were initially caused by COVID-related lockdowns and the shift away from traditional fossil fuel-based energy investment have now been exacerbated by these events in Russia and Ukraine. Sharply higher energy prices across Europe and much of the world, combined with higher prices for housing, travel, many food items and you name it are leading to tighter monetary policies and are just beginning to have negative consequences for global demand for all kinds of goods and services. In this podcast, we're going to review the key facts around Europe's reliance on Russian energy, discuss the geopolitical and energy policy alternatives available to the different countries including the status of the many green energy initiatives, share our views on the fiscal and monetary policy implications of this new landscape, dive into the implications for other global and U.S. energy producers and distributors, and finally, discuss some of the key investment positions that we at PGIM Fixed Income have taken to combat these elevated macroeconomic tail risks and generate alpha of course for our clients in this uncertain environment. I am really excited to have two experts on economics, monetary policy and the global energy industry, both of whom are my colleagues at PGIM Fixed Income, as today's guests of All The Credit. Katharine Neiss has a master's and PhD in Economics from the University of British Columbia, and spent over 20 years at the Bank of England in a variety of roles. Katharine is PGIM Fixed Income's Chief European Economist based in London, and is now participating in her third episode of All The Credit. Dave Winans, received a Bachelor of Science from the United States Air Force Academy, and an MBA from Brigham Young University. Mr. Winans was a captain in the U.S. Air Force and served as a flight commander and intelligence officer assigned to U.S. Pacific Command. Prior to joining PGIM Fixed Income about 16 years ago, Dave was an energy credit analyst at Bear Stearns, where his team was ranked number one in America by Institutional Investor magazine for two consecutive years. Dave is currently a senior credit research analysts on PGIM Fixed Income's investment grade team covering the U.S. and non-U.S. energy sectors for us. Katharine, Dave and I

are here to give you All The Credit. Welcome back, Katharine. You're now our only three-time guest on All The Credit. Congratulations.

Katharine Neiss, PhD, Chief European Economist: Thank you. Thank you for having me. It's good to be here.

Mike: And Dave, thank you, of course, for your tremendous service to our country. All the great insights you provide not just on the energy sector but based on your experience in the intelligence sector the within the Air Force, and thank you and welcome to All The Credit.

Dave Winans, Global Energy Analyst: Thanks, Mike. It's great to be here. And the military experience lately it's come in a little bit handy, I must say.

Mike: Yeah, it's really interesting. As we've gone through some of these war-related events, Dave, you've been really helpful in analyzing some of the events on the ground and the military maneuvers. That's really kind of a neat aspect you bring to the table, so thank you for that.

Dave: You bet.

Mike: So, Katharine, let's start with the big picture. All right? I mean, obviously, everybody has seen the stats, and, like 40% of Europe's energy is coming from Russia. Why don't you just summarize really the extent of Europe's reliance on Russian energy and how it impacts maybe different countries differently?

Katharine: Absolutely, and let's start with the headline and then drill down. So about 25% of Europe's energy comes from Russia. It's most reliant on Russian gas, but oil and coal are pretty important too. The exposure, however, differs quite a lot across different European countries. So, we've looked, for example, at Italy. About 35% of their energy comes from gas, and of that 35%, nearly half of it is coming from Russia. In Germany, the stats look, by and large, similar to what I just set out for Italy. So clearly, those are two large European economies that are particularly exposed to these hostilities. Then you've got smaller European countries like Austria or Slovakia, only 20% of their energy comes from gas, but nearly all of it comes from Russia, so they too have a particular exposure. And then a third group of countries, France, Spain, they're far less directly exposed to Russian energy, so quite a differentiated picture across the region.

Mike: Yeah, so that makes it challenging for a European-wide solution or energy deal with Russia, because so many different countries are impacted differently. You see some of the countries saying yeah, we don't need it and let's embargo it. And other countries like Germany say, well, actually, we really do. So, I mean, how does this game of chicken play out in your mind? I mean, Russia needs the money, obviously. Right? I mean, gas and oil is a huge part of their economy, and obviously, Europe needs the needs the energy, so they're each threatening each other to cut it off. How do you envision that playing out?

Katharine: Well, I think you're making a great point, because the flip side to the stats that I just gave you, in terms of Europe's reliance on Russian energy, is there for Russia, and I think the headline is really quite compelling. Russia is the largest natural gas exporting country in the world, and 75% of those exports go to Europe. So clearly, Russia is quite reliant on Europe, just as Europe is reliant on Russia. I think the key point, though, is that it will take time for Europe to find alternative sources of energy, but likewise, it will take time for Russia to find new customers for its energy exports. This is not going to happen instantaneously, and probably will take a couple of years. However, that threat of a sudden stoppage for whatever reason, whether it's because Europe says we're not going to buy it anymore, Russia says we're not going to sell it, or maybe a third, chaos, some disruption to the pipeline in Ukraine, given what's happening there, but for whatever

reason that risk, I think, is very much on the table, and it's not likely to go away anytime soon, but of course, that sort of benefits Russia, because even as the volumes of exports are declining to Europe, its total revenues are still high on the back of these elevated prices that reflect some of these risks.

Mike: Yeah, that's really interesting, right? These high oil prices are benefiting oil producers and exporters around the world, and certainly Russia is a big beneficiary, so everybody's talking about cutting off the spigot, not funding their war machine, but that is exactly what's happening, and we'll talk a little bit more later, Katharine, about the economic impact on Europe and how we're changing our GDP and inflation forecast, and then obviously, we'll talk about the central bank's reaction function. But, Dave, there has been some restrictions Katharine mentioned on sales of Russian oil and gas to different places in the world, for sure, but it seems like Russia keeps producing and shipping. I mean, where is this oil and gas going? Are there other places that are secretly taking it in or is it going to Asia? I mean, who are the buyers and I know there have been some big multinational oil companies who have continued to buy some of this stuff because they do have contracts. How's that playing out?

Dave: Yeah. Well, let's talk about the gas first. Then let's talk about the oil. So on the gas side, back in early March, the EU, they put out a plan. It's called Repower EU. All right? And the idea is to wean themselves off Russian gas. They want to get down -- take away two thirds their imports of Russian gas by the end of 2022. Now, as Katharine said, you got about 45% to 50% of your gas supplies coming out of Russia, right? So that's a tall order. Okay? Now the plan here is half of that. Half of their plan is to just basically take every drop of U.S. LNG that they can get, okay? The other half of the plan is things such as they got energy efficiency in there. They've got more imports from Norway and Africa. They've got install more renewables and such, but it's a very ambitious plan and getting the LNG, that part, might be the easiest. That might be the easiest part of the plan. All right? One thing I noticed is the plan doesn't say anything about turning on coal-fired power. All right? But that is quietly happening. You're not hearing a lot about it, but that's happening as well, too. So, in a sneaky sort of way, coal is making a comeback, and that's driving coal prices higher. Now, on the oil side, it's a different situation. It's harder. Europe's getting about 25% of their oil supplies coming out of Russia, from Russia, 20-25% call it, okay? Russia exports 5 million barrels a day. A big chunk of that goes to Europe. They don't have anything in their Repower EU plan to wean themselves off that oil right away. Now that oil, I met with the oil industry executives about two weeks ago, maybe a half a million to a million barrels of the day is being self-sanctioned. Okay? It's going no-bid, right? Some of the rest is being blended in the Baltic states, and once it's blended, now, it's not really Russian oil anymore, and anybody can take it. Some of the oil is being bought under contract. Okay? And then some of the oil is starting to flow to more Asian buyers, so a combination of all these things has created kind of a mess in the oil markets. And then Russian production is down too, maybe about 400,000 barrels a day or so month after month. And then the one sneaky piece of this too, that people don't really realize is diesel, Russia exports about 2 to 2.5 million barrels a day of products. Most of that's diesel and unfinished oils that gets turned to diesel. The bulk of that would go to Europe, and some of that is going no-bid. Some of that because the gas prices are so high in Europe that the refineries had to cut runs so they can't produce as much diesel, so you've seen global inventories of diesel go to all-time lows, and it's having knock-off effects, such as jet fuel in New York Harbor has more than doubled in price in a couple of weeks because you've had just this crunch in diesel demand, because there's questions about the Russian supply of diesel too. So all these things, the gas, the oil, it's all interconnected, and it's just created a huge mess, right? -- a huge mess.

Mike: So what is the timeframe the EU, Dave, is looking at it to, as you said, wean themselves off of this Russian oil?

Dave: They say they want to have the bulk -- they want to be two-thirds of the Russian gas imports done by the end of 2022. That's really ambitious, and that requires them to take every drop of U.S. LNG, so that means Asia, who traditionally buys U.S. LNG, they go begging and they have to go to other alternative sources of LNG, or they have to do things like turn on oil-fired generation, which increases oil demand, which increases the oil price, so you're seeing that happening too, in places like Japan, Indonesia, more coal in China, all of these things to displace lost Russian energy supplies. So, it's just ripple effects across the world.

Mike: Yeah. It's obviously, oil and gas is a huge global commodity, and adjustments will be made. Let's talk a little more about LNG for a second, right? I mean, I was an energy analyst decades ago, and a lot of these LNG facilities were just being built and put online, and now in the U.S., we have a bunch of these large liquification facilities that takes the gas, cools it down, turns into liquid and then puts it on ships and sends it all over the world. How much of supply of U.S. gas and LNG are we producing and how much of it are we exporting?

Dave: Yeah. Well, the one piece of good news in all this is U.S. LNG export capacity has come up a lot, just in the last couple of years. You went from 3.2 BCF a day back in 2020, and this year, you could maybe do 12.5 BCF a day. It's come up a lot. Now, that being said, European imports of Russian gas are 14, 15, kind of depending on the weather, BCF a day, so even if every drop of U.S. LNG went over to Europe, it still wouldn't be enough to offset the Russians, but it's giving the Europeans this new wave of LNG is giving the Europeans some breathing room to put forward this Repower EU plan. Right? So that's, I mean, it's helping matters for sure, but unfortunately, it takes four years to build one of these plants, and we don't really expect another one to really come on stream until late 2024, 2025, so after this year, there's going to be an air pocket of delivery of these facilities, and that makes it difficult. Also, there's logistics involved. When this LNG gets over there, you have to re-gas it, which is less challenging than building an LNG liquefaction facility, but Germany doesn't have any re-gas facilities, so if I re-gas in Spain, or I re-gas in the Netherlands or something, how do I get the gas from there to the customers in Germany? It's another logistical mess. So, U.S. LNG, it's helping, but it's not a panacea.

Mike: And a lot of it's going to Asia already. Isn't it the lion's share?

Dave: Yeah. The last couple of months, that's flipped. More and more of those flows just in the last couple of months have been directed to Europe, but once again, because those flows are getting directed to Europe, now Japan has to go begging, and they've fired on oil-fired power plants that they normally wouldn't have, so you're getting a boost oil demand as a result, because if I can't get the LNG, and I'm in Pakistan, now I fire up the oil-fired power plant instead. Or if I'm in China, I fire up the coal. I run the coal harder. So turning off Russian gas, how does that affect my diesel price in China? It's just the invasion of Ukraine is like a big rock thrown into the middle of a pond, and the ripple effects are just going everywhere across the world, especially in energy.

Mike: So, Katharine, I'd love to hear your perspective on that. And the ability of Europe to make this adjustment. They already had this big investment in green energy and this big program, and they've actually been limiting over the last few years, to their detriment now, investment in traditional fossil fuels. Do you see that changing? And how can Europe adapt to the situation Dave just painted?

Katharine: Well, before we turn to that, I wanted to just pick up on a couple of points from Dave, because I think they're really worth emphasizing, and that is that before these hostilities began, Europe was already looking for alternative sources of energy. We were seeing deliveries from Norway, for example, of natural gas maximum capacity. We saw U.S. exports of LNG at much higher levels than what we've seen in previous

years, but the bottom line, and Dave mentioned this, but worth emphasizing is, it's not enough to replace all of the Russian energy in short order. It will take some time. That is a couple of years, and this is the message that we're getting from the economics ministry in Germany, from the Italian minister for energy, where they're coming out with timelines, like in Germany, we can get off Russian coal by the end of this year, oil by the end of 2023, and gas by the end of 2024. In the case of Italy, the ministry there is saying by 2025, so it will take a bit of time in these investments that they said. And the Repower EU plan, we're hoping to get more detail on exactly how this plan is going to manifest itself when it comes out sometime in the middle of May, but in the meantime this risk, as we discussed before, of a sudden stoppage, it's there like a dark cloud over your shoulders, and that has a cost. Now, what about this green transition? So, the green transition in Europe was happening before Russia invaded Ukraine. One of the big things that we saw in the pandemic was Europe came out in the summer of 2020 with a huge, unprecedented commitment of fiscal support funded by debt, with most of that money or much of that money earmarked for this green transition, and that money has now started to flow to countries like Italy. Now, since these hostilities began, the President of the European Commission has said that this is going to accelerate Europe's plans for the green transition, but the bottom line, and I think this is really consistent with what Dave said, is that so far, we have not really heard very much in terms of specific commitments. Maybe we'll get more when this detailed plan comes out in the middle of May, but for now, all the fiscal updates that we're hearing are really from individual European countries, and it's largely aimed at supporting households, small and medium-sized enterprises, to cope with these higher energy prices, and not really anything on accelerating this green transition.

Mike: Yeah, but certainly the fiscal purse strings in Europe are loosening, right? I mean, I think I've heard you in the past talk about how budget deficits, generally, in Europe might actually be a little bit bigger this year than last year, which is the exact opposite of what we're seeing in places like the U.S.

Katharine: That's right.

Mike: So, Dave, on the U.S., we have the Strategic Petroleum Reserve release that that Biden announced very recently. Does that help, or is that just a band aid in this global energy shortage?

Dave: We'll, it's certainly helping in the near-term, it's giving U.S. refiners an alternative supply. That announcement will take some pressure off inventories, and it's pushing the spot prices down, but when the President announced that, there was really no plan articulated to refill the Strategic Petroleum Reserve, so what you saw as the back end of the oil futures curve, either didn't sell off, or in some cases, even kind of rallied a little bit, so that whole curve is kind of flattened out, because you're really taking oil from tomorrow to make due for today, and I guess in the near term, this is probably justified, considering the circumstances, but longer term, like I said, there's no plan to really refill it yet.

Mike: And U.S. energy in general, I mean, this whole cycle, cycle meaning really the last decade or so, since we've had the last energy debacle, the big giant U.S. and even multinational producers have exhibited a lot of discipline, right? And I think shareholders and bondholders, folks like us have been encouraging them to take their free cash flow they're generating at higher oil prices and, and pay down debt or in some cases give it back to shareholders, but don't reinvest, don't over produce, because it always ends up in tears, at least in the past, and that's been the story here, the cycle. Is that about to change? Are these companies going to start investing more in production and cap backs? It almost seems like it's inevitable again.

Dave: Well, there's three categories of producers in the U.S. There's the big independents who kind of lead the way in U.S. production growth, and that crowd is definitely being disciplined. Okay? Those guys are guiding zero to 5% production increases, and they lost money for years, and their capital returns were pretty

poor, so they're under a lot of pressure from shareholders to say, hey, we want some goodies now. So that crowd is definitely being disciplined. Private producers are being more aggressive. The bulk of the production increases this year will be from the smaller private producers, and that's more of a what -- they're not subject to the shareholder constraints or ESG constraints, but they also don't have the quality of the asset, so their runway to continue to add is limited. And then you've got Chevron and Exxon, two pretty big producers, they've got pretty ambitious targets for the Permian this year, but whether or not they'll be able to carry this momentum into 2023, I'm not entirely sure. The oil company executives—it was pointed out to me and I already knew this—but it's not that easy to just go out and add production, add another million barrels a day of production in the Permian. There are labor supply issues. Steel prices are higher. Fuel prices are higher. Some of this drilling out in West Texas, it's in very remote areas. I mean, a rattlesnake takes a sack lunch out there in some of these places. It's not so easy, right? You're not going to be able to just flick a switch and add barrels.

Mike: So, I know the big catchphrase over the last few years, certainly in Europe, and as Katharine mentioned, the whole kind of green revolution over there, and investing in almost solely green energy sources is just kind of coming on to the U.S. shores here. How do you see that changing? I mean, are we going to pull back on some of the regulatory hurdles we've had for new production and new pipelines? Is that going to get pulled back? Is the Biden administration going to be more supportive, possibly of traditional energy?

Dave: As far as the drilling goes, the regulatory environment has been pretty good. The problem has been the pipelines, especially getting any pipelines out of the Northeast where you have the second-largest natural gas field in the world outside of Qatar. It's been almost impossible to get a pipeline laid. I mean, there's one called Mountain Valley. I think it's -- they only have three miles left to go on it. The cost of that is more than six billion at this point and it's stalled, held up in the courts. So you got to get some kind of regulatory reform if you're even going to get this gas supply to the LNG terminals, and some of the companies are really pitching this to Congress, and time will tell if they get it, if it catches on, but something's got to change if you're going to get some of these gas supplies to the places they need to go. And aside from the regulatory reform, the ESG, that has definitely dampened the spirits, the animal spirits, I guess, if you will, for the whole industry. We've seen big companies BP, Total, and Shell basically saying we don't want to be in the oil and gas business anymore. We're going to be more of a green company. We're going to take our capital and we're going to invest it in green projects. In the oil industry, there's the adage that high prices always cure high prices, because it goes in cycles. Every time the price goes up, you get more supply, right? It's been that way historically, but ESGs kind of had this wrinkle where you get these high prices, but you just ignore them. So, to me, ESG adds up to a higher commodity price, in my mind.

Mike: Yeah, certainly in this environment, for sure. So, Katharine, just a quick word from you on ESG in Europe, I know it's a huge interest of all of our European clients. Are any of them starting to ease up and say hey, listen. We realize we're in a wartime period here and we need to be more flexible? Did you see any changes on the horizon? Or is it, as Dave said, this is kind of a permanent shift that's happened?

Katherine: I think it's a bit early days, and I think also that maybe we need to look at the short term versus what the implications of this are over the more medium term. At the minute, the risk that these energy supplies could stop really, at any moment, has focused minds. It's all hands on deck. I'd let's get this energy, and even crossing red lines, as Dave mentioned before, like using a lot more coal in Germany, because that is looking like it's going to be a big part of solving this problem of less energy from Russia. So that's one

benefit, because we're -- I think Europe is in crisis mode. Further out, it's not clear to me that we are going to see a shift away from this green transition, and I think it's because Europe is now seeing this as part of achieving strategic autonomy for itself, because even if it can find substitutes for fossil fuels from other countries, it's still dependent on other countries, and I think what Europe wants to see is that it can be more self-sufficient, and it sees green energy as a way of achieving that, and green energy is supplying quite a lot of energy to Europe. It's just that the marginal cost of energy is still linked to fossil fuels, and so these prices are very vulnerable to any shocks in the fossil fuel industry, very much short term, all hands on deck crisis mode, they're even going to be burning coal. Further out, I think they're quite focused on this green transition.

Mike: That's great. That's really interesting. I know a lot of our listeners are really focused on this, so thank you for those thoughts. So, Katharine, let's stick with you, and I really want to touch on the broader macroeconomic implications. Right? I mean, is this going to plunge Europe into recession? I mean, what if there is a full embargo, I mean, instantaneously? That sounds like that would be such a shock that it would be tougher for Europe or some of the countries to avoid a recession. What's your outlook? Or are we lowering our GDP forecasts and do we have scenarios around that for Europe?

Katherine: So, it absolutely hinges on the flow of energy from Russia to Europe. It's not something that they can adapt, that they could plug instantaneously as we've been discussing, and so if this risk were to crystallize, I think we're looking at negative GDP growth for the Euro area, which says a lot because the base effects coming out of the pandemic before all this happened, it looked like growth was going to be around 4%. So if you're talking about a negative number, like, let's say minus 1%, that's a huge, huge hit to growth, given where you were starting from. I wouldn't say that's the base case, for the reasons that we discussed. Both Russia and Europe have skin in the game here to keep these flows going over the foreseeable future, but that risk is going to have a dampening effect, and of course, what we're seeing in the price of energy has a dampening effect, and the bottom line for Europe is that this is a clear negative supply shock that is going to weigh on economic activity and push up on inflation. We know that energy has a very high and quick pass through to inflation, so we're seeing it already in the March numbers. Even though the invasion only happened at the end of February, it was very fast feeding through and hitting households and firms, and it's squeezing them. It's squeezing their real incomes. It's hitting businesses' costs, and that in turn, is going to weigh on private consumption, on private investment, which was already weak because of the pandemic. It hadn't yet in Europe recovered to where you would have expected it would have been had we not had the pandemic. So, this is a double whammy that I think is very painful for the region, and potentially could have long-lasting effects if policy isn't smart and forward-looking. Again, it's going to have a differential impact across the region. You have very energy-intensive manufacturing hubs, Germany, Italy. Clearly, they're going to be impacted by this price shock. And then you also have a differential inflation impact across the region. This is something that people who are not looking at it closely might not realize, but for example, in France, they've actually managed to do reasonably well on the inflation side. It's only gone up to four and a half percent in the latest data, whereas in Spain, it's more than double that, very close to 10%, so quite a differential inflation picture and therefore quite a different picture in terms of the squeeze on households, but overall, we're not at 4% for growth for Europe anymore for 2022, and you're probably looking at something closer to 2.5% growth, with that ever-present risk that we could go all the way to this energy stoppage, and that really tips us well into negative territory.

Mike: Yeah. I'm really fascinated by the central bank response to this dilemma, right? And it's not just the ECB. It's the Fed for sure, so I want to delve into that a little bit. Obviously, being a multi-sector bond portfolio manager, it has big implications for rates and for curve shape and for risk-taking, so it's interesting. The ECB is in a really tricky situation, because like you said, their economy is taking more of a direct hit from

the problems in Russia and Ukraine, but just recently, as you've said, they've had some pretty big inflation prints. Right? I mean, my guess is the ECB is probably a little more focused on the growth problem than the inflation problem, but it seems like they're -- the sands are shifting there. Right? And it seems like every few weeks, they go from being hawkish to dovish, and now maybe starting to tilt back hawkish. What's your view and how should they—you were a central banker with the Bank of England—how should they respond to this?

Katherine: They are undoubtedly, in a very tricky spot. I mean, this is the proverbial rock and a hard place, but they do appear to be pretty determined to stop asset purchases before the end of this year. We could also see them raise rates out of negative territory, but that said, I do expect that this ongoing conflict, that the threat of these bans on Russian imports of energy, could give the ECB cover to go a bit slow thereafter. I think it is worth remembering that these open-ended asset purchases and negative rates were not really tools that ECB used to any effect in the pandemic. Rather, they created a whole separate bespoke pandemic emergency package, and that was the real game changer. So my sense is, is that they see a window of opportunity here to get out of these open-ended asset purchases, out of these negative rates, which are unpopular and didn't help anyway when the crunch came, and quietly along the sidelines, we saw some news release, just today on Bloomberg, of essentially creating a bespoke package should really some of these worst risks crystallize in in Europe, but it's very tricky for Europe and so different from the experience they've had in the decade before where inflation just was sinking lower and lower and looked like it was getting stuck at close to 1%.

Mike: Yeah. I saw a report just from a Wall Street firm in the last day or so, Katharine, at least some folks project the ECB, their deposit rate, which is negative 50 or so, to basically implement like three hikes of 25 basis points each and get into positive territory this year, and then another 100 basis points in next couple of years to end up above one. Is that our forecast or do you think that's a possible scenario?

Katherine: It looks pretty punchy and aggressive to me. If I compare that also to what's happening to the domestic underlying economy in Europe, it's not like what we're seeing in the U.S. where the economy is clearly sort of firing on all cylinders. We're just not seeing it to anywhere near to that degree in Europe, so I do see them getting out of some of these, but beyond that, I don't see this really aggressive pace of tightening as for example, in the U.S., and I think the market is probably gotten just a little bit ahead of itself for the Eurozone.

Mike: Yeah, and you're part of a larger economics team at PGIM Fixed Income, and we've downgraded generally, our views on global growth and U.S. growth as well, alongside the reduction in expectations for European growth. And the Fed is in a really interesting situation as well, like you said. I mean, the U.S. economy is really strong right now in almost all measures but the question is, what do we look like in the next six-to-12 months? Do we start to see demand destruction from consumers in the U.S.? My view would be that that's possible, right? These higher prices, I think are just starting to bite and starting to be felt broadly, and what does the Fed do, right? I mean, if inflation in the U.S. at the end of this year is seven, but growth is moving toward one, what does the Fed do, right? I mean, the ECB can probably err on the side of being a little more cautious, but I'm not so sure. The Fed seems like they're so focused on fighting inflation. Do, you have any thoughts on that?

Katherine: Well, in terms of growth, clearly the conflict with Russia invading Ukraine, it's a negative, but for the U.S., the direct implications, for example, this increased demand for LNG from Europe, not just in the next couple of quarters, but likely for years to come. This is a strategic shift that is going to persist well

beyond the foreseeable future. This is a big, positive demand shock for the U.S., and of course, it's coming on top of really a phenomenally strong labor market. We've had payrolls data coming in strong month after month after month, that really a sense of momentum there. And the final point is that the U.S. is just far more insulated from what is going on in Europe. It's not exporting or importing to a degree with Russia or the Ukraine, and it's largely energy self-sufficient, so it's a much more manageable situation, and so my sense is that the Fed is likely to remain on this much more aggressive tightening track, despite the fact that clearly this is globally a very negative shock.

Mike: Yeah. That's really going to be fascinating to see how this plays out. And Dave, I mean, 20 years ago, this would have been a disaster for the U.S., higher oil prices, right? We basically take all the money and send it to the Middle East, and now that's not the case. Right? We are basically effectively reinvesting a lot of these petrodollars back into U.S. producers, and these LNG facilities and gas companies, and so net-net it should be a wash for the U.S. economy. Is that your view?

Dave: Yeah. Net-net, I think it's just maybe a slight negative because we still have to import some various grades of crude and there's still things that come down from Canada, but you're right. Compared to what it was 20 years ago, completely different situation.

Mike: Yeah, so let's wrap up here talking about what we're doing about all of this, right? And a big part of all of our jobs, obviously, is managing our clients' money to the best we can as the facts on the ground change and being flexible. And I know and with regard to positions in Russia and sovereign debt, and even some quasi-sovereign debt, like Gazprom, etc., and some Ukrainian sovereign debt six, 12 months ago, we were actually pretty constructive from a macroeconomic standpoint, a fiscal standpoint. These countries are actually doing really well. They did not have a lot of external debt, and we did have some small positions across different portfolios to varying degrees, particularly in some shorter maturity paper, and obviously, those prices are down, but to this point, all the coupons and maturities have continued to be paid, so it's really going to be interesting to see how this plays out. Our view on the Ukraine was that, hey, one of their strengths was that they had a growing linkage to the West, and of course, that turned out to be their downfall. Right? It's one of the problems with being an analyst. Sometimes you get surprised by what seems to be a strength. On the energy sector, Dave, I know one of our biggest overweights across all of our portfolio, certainly the multisector portfolios I co-manage and our investment-grade, and even high-yield corporate portfolios, we have a decent overweight in the energy sector. Why don't you just kind of summarize our position there?

Dave: Yeah, we had an overweight on that last year and then coming into this year, and it worked out great, and my thought coming into this year was like, well, maybe we need to fade this a little bit because you got COVID coming in China. There were worries about that, which have materialized. U.S. production is increasing. And OPEC barrels are still coming back, so I thought maybe it's a time to kind of fade this a little bit, but the Ukraine-Russia situation is just, I think, has put just a new floor under energy prices. Aside from the near term geopolitical risks that the supply could get cut off, there's ongoing this LNG shortage. That's going to have knock-on effects in the oil market, so that's going to put a bid under things, but even more importantly, is these oil services companies Schlumberger, Halliburton, Baker Hughes, they've all left Russia. How is Russia going to get the equipment and the capital to reinvest in their fields? Some of these oil industry executives have said, is Russia Venezuela 2.0? Whereas Venezuela went from putting out three million barrels a day to their production, just almost cratering. Well, if Russian production just starts to fade dramatically, that's an 11 million barrel—I mean, they're the second-largest exporter in the world—that's a big hit, so does that just -- those barrels just start managing overtime because people won't invest in them? Nobody's going to

go over there. Nobody's going to go do business with these guys, so I think that's a real risk that in the long term is being underestimated and makes me feel better about our call in energy. I think if you've got bonds, and your asset is oil production held by a nice independent out in the Permian, that's some pretty great collateral in this environment, so I feel pretty good about that overweight.

Mike: Yeah, certainly, from a macro standpoint with inflation going up around the world and central banks getting more hawkish, I mean, having an overweight to some of these commodities, energy and even metals and mining, it's been a real help.

Dave: Yeah, if you're in an inflationary environment, fixed income, this is one of the few hedges you can get, right?

Mike: Yeah, the other thing we've done, fortunately, again, for a lot of our clients, is, at least in some of our multi-sector portfolios, is we've had a pretty big curve flat runs. So we've effectively been short or underweight the two-year note or the front of the Treasury curve, and long the back end. And that curve, the curve is flattened like a pancake, right? I mean, it is flat. The forward rates are actually inverted at this point, so that's actually been a big support for alpha generation, certainly over the last year or so, so we're holding on to that for now, but at some point, if growth slows dramatically, you do run the risk of a kind of a whole steepening, right? -- all these rate hikes, not coming to fruition, so that's, again, it's a really challenging environment for all of us. In terms of overall credit risk, generally across the shop, we have become a little more defensive, have taken credit risk down, thinking that these tail risks are more elevated, the risk of a policy mistake is elevated, the risk of recession, right? -- has to be a little bit higher today than it was before the invasion, so just keeping a lot of dry powder on the credit side has also been a strategy. So, Katharine, thank you so much again for continuing to be one of our star guests on All The Credit. We love having you and I look forward to having you again. And Dave, congrats on your inaugural podcast episode of All The Credit. It's been great having you on and all those great thoughts. I just want to remind our listeners we have a great website that's been updated PGIMFixedIncome.com. There's all kinds of thought leadership, weekly views from the desk. We have a bond blog. You can just type in the bond blog and it pops up on our website as well. Some really interesting kind of hard-hitting, easily digestible thought pieces coming out. In fact, several of them in the last few weeks have been related to the topic we're discussing today. Francisco Campos Ortiz, our Latin American economist, put one out recently on the impacts of energy and higher prices on Latin America. We also did one on the hawkish leanings of central banks. And Katharine, you are pretty prolific and posted one recently on Russia's invasion, a watershed for Europe, but not the ECB, talking about the implications for monetary policy. So thank you for all that, and until next time, thank you.

[Music]

Female Voice: We hope you enjoyed today's podcast. Subscribe to keep up with the latest episodes of All the Credit. For more information, insights, and thought leadership, visit pgimfixedincome.com.

Male Voice: Do you have an idea for a podcast guest or a topic? Email us at fixedincomerequests@pgim.com or email your account manager or sales representative at PGIM Fixed Income.

Male Voice: This podcast is intended solely for professional investor use. Past performance is not a guarantee of future results. All investments involve risk, including the loss of capital. This material is not for distribution to any recipient located in any jurisdiction where such distribution is unlawful. This podcast includes the views and opinions of the authors and may not reflect PGIM Fixed Income's views. PGIM and

its related entities may make investment decisions that are inconsistent with the views expressed herein. This podcast should not be reproduced in without PGIM's prior written consent. No liability is accepted for any direct, indirect, or consequential laws that may arise from any use of the information contained in or derived from this podcast. PGIM Fixed Income is not acting as your fiduciary. The contents are for informational purposes only, are based on information available when created, and are subject to change. It is not intended as investment, legal, or tax advice and does not consider a recipient's financial objectives. PGIM Fixed Income is a business unit of PGIM, the global asset manager of business of Prudential Financial, Inc., which is not affiliated in any manner with Prudential plc, incorporated in the United Kingdom or with Prudential Assurance company, a subsidiary of M&G plc, incorporated in the United Kingdom. Copyright 2022. The PGIM logos and the rock symbol are service marks of PGIM and its related entities registered in many jurisdictions worldwide.

[Music]

IMPORTANT INFORMATION

The video is intended for Professional Investors only. All investments involve risk, including the possible loss of capital. Past performance is not a guarantee or a reliable indicator of future results. The information contained herein is provided by PGIM Fixed Income, the public fixed income business of PGIM, Inc. PGIM, Inc. is a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended, and a Prudential Financial, Inc. ("PFI") company. PFI of the United States is not affiliated in any manner with Prudential plc, incorporated in the United Kingdom or with Prudential Assurance Company, a subsidiary of M&G plc, incorporated in the United Kingdom. The PGIM logo and the Rock design are service marks of PFI and its related entities, registered in many jurisdictions worldwide. In the European Economic Area ("EEA"), information is issued by PGIM Limited or PGIM Netherlands to persons who are professional clients as defined in Directive 2014/65/EU (MiFID II). PGIM Limited's registered office: Grand Buildings, 1-3 Strand, Trafalgar Square, London, WC2N 5HR. PGIM Limited is authorised and regulated by the Financial Conduct Authority ("FCA") of the United Kingdom (Firm Reference Number 193418). PGIM Netherlands B.V. is authorised by the Dutch Authority for the Financial Markets (Autoriteit Financiële Markten – AFM) as an alternative investment fund manager with MiFID top up service capabilities under registration number 15003620. PGIM Limited and PGIM Netherlands are authorized to provide services or operate with a passport in various jurisdictions in the EEA. In certain countries in Asia, information is presented by PGIM (Singapore) Pte. Ltd., a Singapore investment manager registered with and licensed by the Monetary Authority of Singapore. In Japan, information is presented by PGIM Japan Co. Ltd., registered investment adviser with the Japanese Financial Services Agency. In South Korea, information is presented by PGIM, Inc., which is licensed to provide discretionary investment management services directly to South Korean investors. In Hong Kong, information is presented by representatives of PGIM (Hong Kong) Limited, a regulated entity with the Securities and Futures Commission in Hong Kong to professional investors as defined in Part 1 of Schedule 1 of the Securities and Futures Ordinance. It is anticipated that certain investment management services would be delegated to PGIM, Inc. the above-listed entities' U.S. registered investment advisory affiliate. In Australia, this information is presented by PGIM (Australia) Pty Ltd ("PGIM Australia") for the general information of its "wholesale" customers (as defined in the Corporations Act 2001). PGIM Australia is a representative of PGIM Limited, which is exempt from the requirement to hold an Australian Financial Services License under the Australian Corporations Act 2001 in respect of financial services. PGIM Limited is exempt by virtue of its regulation by the FCA (Reg: 193418) under the laws of the United Kingdom and the application of ASIC Class Order 03/1099. The laws of the United Kingdom differ from Australian laws. In South Africa, PGIM, Inc. is an authorised financial services provider – FSP number 49012. **These materials are for informational or educational purposes only. The information is not intended as investment advice and is not a recommendation about managing or investing assets. In providing these materials, PGIM is not acting as your fiduciary.** These materials represent the views, opinions and recommendations of the author(s) regarding the economic conditions, asset classes, securities, issuers or financial instruments referenced herein. Distribution of this information to any person other than the person to whom it was originally delivered and to such person's advisers is unauthorized, and any reproduction of these materials, in whole or in part, or the divulgence of any of the contents hereof, without prior consent of PGIM is prohibited. Certain information contained herein has been obtained from sources that PGIM believes to be reliable as of the date presented; however, PGIM cannot guarantee the accuracy of such information, assure its completeness, or warrant such information will not be changed. The information contained herein is current as of the date of issuance (or such earlier date as referenced herein) and is subject to change without notice. PGIM has no

obligation to update any or all of such information; nor do we make any express or implied warranties or representations as to the completeness or accuracy or accept responsibility for errors. These materials are not intended as an offer or solicitation with respect to the purchase or sale of any security or other financial instrument or any investment management services and should not be used as the basis for any investment decision. No liability whatsoever is accepted for any loss (whether direct, indirect, or consequential) that may arise from any use of the information contained in or derived from this report. PGIM and its affiliates may make investment decisions that are inconsistent with the recommendations or views expressed herein, including for proprietary accounts of PGIM or its affiliates. Any projections or forecasts presented herein are as of the date of this presentation and are subject to change without notice. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients or prospects. No determination has been made regarding the suitability of any securities, financial instruments or strategies for particular clients or prospects. For any securities or financial instruments mentioned herein, the recipient(s) of this report must make its own independent decisions. © 2022 PFI and its related entities.