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## Elina Ribakova on Russia Sanctions: Diving into the Details

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### Webinar Transcript

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Markus Brunnermeier: So welcome back everybody to another webinar organized by Princeton for everyone worldwide. We are very happy to have Elina Ribakova with us from IIF, hi Elina. Elina will talk about the Russia sanctions diving into the details, and we had some webinars before the sanctions and the war in Ukraine, and just to say a little bit, Sergei Gurive was talking more about the Russian macroeconomy. Then we had Jim Hamilton talking a lot about the oil shocks and what we can learn about the oil shocks we experienced earlier for current events, and last week we had Baqaee and Moll talking about the impact of the cold Turkey embargo on Germany, if you cut off gas and oil. Today, we will focus much more on the details, and also on the financial implications of the sanctions. So let me give a few opening remarks, of course, the different types of sanctions, there are trade sanctions, so you can control exports. So, for example, some technology products you don't export to Russia anymore, or you can have import restrictions, particularly energy restrictions and you can have financial sanctions, financial sanctions can limit the activities you can take, so capital account controls. We can also freeze certain reserves, that's holdings, you freeze them. And you can also have some forced currency conversion and you can, on top of it or the financial sanctions and the trade sanctions, you can also target individuals, you can have travel restrictions and other forms of sanctions. Now, in order to have sanctions, you would like to have some resilience in your sanction scheme, so when you're on the offensive, you want to sustain the sanctions over a long time, it would not be just a short event, but also last for a long time to hold out for them. But if you're on the other side, like Russia, you have some resilience, in order to be defensive, so you want to withstand other sanctions, and how do you do this, you can prepare for that before the sanctions are implemented, so build up reserves, you go for more autarky. And once the sanctions are implemented, you can react to them you're more agile, more flexible, and this way you can build up some more resilience. So there's essentially an offensive component to it and a defensive component to these sanctions. And on top of it, there are also secondary sanctions, what are secondary sanctions? Typically what happens is at the moment there's a lot of energy exported from Russia to Europe, and of course there's a lot of energy coming from the Middle East or somewhere else exported to China. Now, if you just impose sanctions from Russian energy to Europe, you can just relocate the whole oil, for example, so essentially you cut off the sales, oil exports from Russia to Europe, you just import from the Middle East. But instead of Russia exporting to Europe, Russia is just exporting to China and China doesn't need to import any more from the Middle East, so this way, everything is the same as before, there is not a big change, so the sanctions don't have a big impact, they're not very costly for Europe because they get an alternative source, but they are not very costly to the Russia because they have

another export market in China. And then the question is, do you want to impose some secondary sanctions on China, if China is doing that, or do you want to make it difficult to ship certain energy from Russia, across the globe essentially to China, if there's no pipeline from Russia to China right now. So this way you can actually avoid this way out typically you can have. Or you can also work with payments, so it makes it very difficult for China to pay for the oil from Russia. But, in general, oil is particularly the case where you can get around the sanctions and the secondary sanctions necessary for gas. You have less of the case because gas, you do pipelines in the first place, ideally, in order to transport it.

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Now, in general I think there's a hide and seek game going on, there are some questions which I think Elina will address, why does the Russian, why do they want to be paid in Ruble, instead of dollars or euros, and you know, essentially, let the energy import swap the currency from the euro into the ruble and then pay in rubles rather than paying in ruble and then the Russian bank has to swap it and there's probably hide and seek game going on, that you don't want that, if the Russians have to do it, you see how they do it and how the paper trail is looking, and then you would like to figure this out. Another question you would like to address is why doesn't Russia want to default on its dollar debt. Okay, and it's actually more the U.S. who wants Russia to default on it on the actual dollar debt, even though some of this debt is paid to the U.S. banks and there might be a reason that if Russia is forced to default, because they can't pay in dollars. Then they might be downgraded already beforehand. That might not only hurt the current debt level but it might also make it impossible to raise debt in the future, after the war is over, because the existing debt becomes a liquid, but also the future debt is impaired because you have to first sort out the old debt issues. And then there's some issues, to what extent crypto assets are used to get around sanctions and we will go into that hopefully too. Now let me just say a few words about sanctions and their international monetary system. So what the U.S. did and the Allies did essentially is to freeze the dollar reserves and I've written a piece for VoxEU, with Harold James and Jean-Pierre Landau, and the question is, what are the implications for the stolen and will the U.S. dollar be hurt by you know, having done that, as a reserve currency. And there's some arguments out there which say, oh no it will all move to crypto assets, to bitcoin, and ethereum, and others. Some others even argue, you know that the Australian dollar might step in, or commodities are stepping in and becoming a new reserve asset. We argue that's probably less the case because crypto is just not big enough and also not reliable enough. The same thing is true as far as Australian dollars and commodities are concerned, it's very hard to transport in the first place. And then, on top of it, the U.S. is improving the store value component of the U.S. dollar and making it more digital and better this way. It's really the store value component, not the invoicing and immediate exchange aspect of the dollar. So the question is what will then emerging economies do if you know, there is no alternative out there for the U.S. dollar that might actually reduce the need to have reserves by just more actively intervening with imposing capital controls, so this way you can either, you know, if there's a run on your currency, you can work with your reserves and having high reserves might be a signal that they will not be around in the first place, or you can alternatively impose capital controls, so that might be more activity on the camera control side going forward and that might hurt globalization in the big scheme of things so that might actually hurt the whole global economy because of globalization is going down. Now, with these little opening remarks, I would like to move to the poll questions Elina put forward and there are three questions. The first one is does the ruble strengthening mean the sanctions are not working, yes or no, and actually 20% that yes, and 80% said no, so it's actually still working according to the majority. We will see what the position is afterwards. The second question is do you think that the full embargo is preferable to a gradual approach, yes or no, and 60 percent saying yes, we should go full

embargo right away, we shouldn't put it gradually and escalate down the road, but just go full force right away so 60/40

8:08

Now the next question is, I think a very interesting one, would you pay for sanctions on Russia or for a stronger EU armament, and how much of your annual income would you give up? And just to get a sense for that, so what we have here for numbers— I should say that nobody was willing to give up 50% of their annual income— but to give up nothing it's about 12%, 2% of the annual income is about 57%, and 5% income reduction as well 20% are willing to do that, and 10% is about 9% of the people are willing to do that, so the majority is willing to give up 2%, and then some are willing to, about 20% are willing to give up 5% of the income, but the extreme you know, giving up 25% or 50% turns out it's very hard, very few people there is one voter actually each is willing to do that. So let me leave it at that and pass on the floor or the digital mic to Elina and she will tell us all about Russia and the sanctions and the details and the financial plumbing, what we need to know in order to really understand how things work and sanctions.

Elina Ribakova: Thank you so much. Thank you so much Markus, and thank you for the participants, and I see a lot of friends here, also in the audience, so it will be a lovely discussion. It's an honor, one friend said to me so you've been invited to the Oscars and I'm like yes I'm all ready, so I'm here at the Oscars and some, of course, first and foremost I do want to say thank you to our colleagues and friends in Ukraine for upholding our democracy and sovereignty in European Union, I myself am from Latvia, so I do feel strongly about that, and then, of course I don't want to give too much agency to to our Russian colleagues, but I also understand their predicament, more than anybody else. So it's a multiple stab wound for many of the colleagues that have worked in this region for many years. So without further ado I'm very happy with answers to the question and I will start from the third question and then we'll go into the details, and the reason I want to bring up this third question here is because we have so gotten used to stay in our lane, so we have our macroeconomists then we're like a tram, we stay in our tracks, yes, there is some deviation, but we just sort of drive only this way. Then we'll have foreign policy experts do their thing, national security experts will have the Defense experts, and we sort of all have existed relatively happily and separately up until recently. And I think that all started sort of changing just before the U.S.- China standoff when it became a bit more political. When we realized that you know well, WTO, not everybody wants to sign up for that, and everybody has a little bit of grievances even multilateral organizations, we have some grievances around that and, of course, now was the conflict with Russia's war in Ukraine, I think that highlights the concept of economical national security, even more so. However, and now, let me start the presentation here. So as you can see here, it is all geopolitical now and the issue is that we have the cost of sanctions versus sort of cost to ourselves versus the sanctioning of the economy we're trying to sanction. That is important, of course, and we have economic models to deal with that and try to think through that. But how to compare the cost of sanctions, relative to military intervention. In terms of economics, economic terms of a loss of life, because in a way that's what we're discussing right now, and it's not only us there's wonderful economic research on statecraft, not economic, but sort of mix of foreign policy and economics, on the geoeconomics and statecraft. There is Putin who says well, this is an act of war, you're not sort of shooting bullets at us, but this is an act of war. There are also press talking about it and even Jake Sullivan, who was the National Security Advisor before joining the administration, wrote that wait a second, America needs a new economic philosophy, foreign policy experts can help.

12:17

Elina Ribakova: So I think it's critical for us to have the models now, which will help us to think through the cost of sanctions and the details, not only within our field but cross fields. And that is probably sort of the highlight of the presentation and the question, the third question that we have here, so let's go further down and look at the next questions, as sanctions are working, you know, we do think that they are working and I'll try to explain as much as I can what I have in this presentation, they are definitely having an effect. As Markus pointed out, we have been sticking to financial sanctions, mostly, in terms of Russia, since 2014. We had plenty of time to practice, we had plenty of time to think through the number of times we wrote about sort of sovereign debt sanctions on Russia, you know it's hard to count but we're almost not even thinking about that, because we have put all the most severe financial sanctions, almost all of them, on the table now, very quickly, in the extraordinary coordinated fashion, almost over the weekend. So I think there's definitely a big achievement for the U.S. for the EU, for countries to sort of step out of their usual rhythm and be able to coordinate internationally very severe financial sections, but we've been mostly focusing on financial sanctions. Yes, some of them have de facto become a little bit trade sanctions and we can talk a little bit more about that about SWIFT and other payments issues. Yes, there have been some export controls and the European Union has also stepped into that, but we have not yet touched the Crown jewel of Russia, the most important part, which is commodity exports, and so the question is here, is it time to move to smart sanctions on energy. I wouldn't want to advocate for any way or the other, but I do feel that, given the nuance and the complexity of moving away from Russia's energy and what also Markus sets the stage in terms of the diversion of Russian energy, it's important to get it right and have an enduring impact rather than to go cold Turkey, realized by the winter that we don't have important energy sources, that the refineries cannot work, that we cannot supply Ukraine with diesel, and then have to back away and somehow that renegotiating the position, I think that would be for all the most possibly awful scenario. So talking about my smart sanctions, what could be done. Already now, who could look into escrow accounts for payments for Russia's exports and again, you can be oil, it can be gas, it can be other exports. Russia would still receive those payments, but Russia would be limited in terms of what they can spend on. And here we can talk a little bit, what does it mean, what are the objectives of sanctions and objectives of sanctions can be numerous and, as I started, you know it can be sort of within the macroeconomic field but oftentimes it's actually within a foreign policy and military field, right, but the most narrow definition of sort of objective, we want to impose harm on the other party's economy, all we wanted to make more costly for them to finance the war, or nearly impossible to finance the war, so those kind of objectives within our macro economic field, we can try to achieve if we start talking more about regime changes would, I mean, frankly we almost don't even have models to assess that and then empirical evidence— I haven't seen almost any papers that will conclusively say that this this kind of sanctions can work and they have worked in the past. And definitely in terms of macroeconomic research this is a fascinating field. But in terms of limiting Russia's ability to finance the war, imposing costs on Russia's economy, we have been successful, and we can do more. So escrow accounts for payments on Russia's exports and we can talk a little bit more about that; limitation for oil and gas purchases, U.S. has already made an announcement on oil embargo. There are refineries and the way in the U.S. will not be able to work anymore, I mean they still have some supplies, they will be able to work through that, but they will have issues, because Russia's soil is similar to Venezuela, it's similar to Canada.

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But you know Venezuela's is a tricky relationship and Canada again their infrastructure issues, but so it will be close, but of course it's not the same course that European Union will have to go through if they were to start doing this embargo. Therefore it's natural that in the U.S. it's easier

for them to do this; for Europe requires more time and preparation. And again, let us not forget, we have worked with financial sanctions on Russia very closely since 2014. We have not tried to develop the tools or the analysis to work on the energy sanctions on Russia, actually, frankly, very few people worked on this issue and seriously started considering it all recently, so it's natural that unintended consequences could be there and it's important to work through them. And then, finally, the question of diversion— so I'm giving you all the upfront and then we'll go into details, the question of the diversion. As you saw, Yemen's presentation at the Atlantic Council should send a very straight clear arrow message towards India and China that secondary sanctions are on the table and generally what Markus explained about secondary sanctions, the U.S. has been using secondary sanctions effectively and frequently. The European Union will have to keep quiet on this because, generally, the European Commission considers secondary sanctions to be not illegal, and one of the recent tools that they have developed to defend themselves against the economic portion is specifically aimed actually at the secular sections, so it will be very interesting, but if it will be working in coordination with the EU, the EU is saying that look we're also going to get take measures to reduce our reliance on Russian energy, then the U.S. can move freely, without endangering transatlantic relationship, can focus on the secular sanctions threat to China and India. How can that work? Well, it has worked in the past, it's been done with Iran. What happens in order not to shock the commodity markets immediately, cold Turkey, and have potential a very high price from which actually Russia benefits and almost neutralizes the fact that we're trying to achieve. You would give waivers six months from now, or a year from now, in the Iran case, I think it was six months, where you say the country's commit to certain reduction, you're going to grant a waiver down the road for them to continue importing what they need. And this way you're withdrawing sort of this, the supply of commodities from the market gradually. But at the same time you're working with the partners on the other side and then at the same time you're achieving the objective that you need, meaning in the case of Iran, China and India were forced to reduce their purchases and actually they did that. So let's move to the next slide. We talked a lot with Markus before the seminar and another colleague, so sort of what is Russia really, like explain it to me Russia in one chart, and then this is a chart that I drew many times over my career, and this is just all of us will know very well, this is the flow of funds, this is the balance of payments. Very simplified version of the balance of payments. The red one is the current account balance surplus, and generally, as you can see, Russia's in surplus Y because we rush exports commodities, mostly. And then, of course, when there is a shock to commodities, Russian domestic demand stands to contract, the imports contract as well, and then the sort of the current account rarely goes into deficit so what has happened from say 2011, and even sort of similar picture before, until 2014. We see a lot of stuff happening on the capital account as well, so those there's green bars, there are these gray bars, you know, there's FDI, there is a blue bar they have FDI so Russia seems to be very engaged in the global economy, not just from the current account perspective, but also from the capital Financial Perspective, it's very sort of engaged, it's incorporated to the global capital flows, in terms of the— sorry there's one, so the green bar is Russia's borrowing on the external capital markets— sorry about this, yes, this is the Russians borrowing on the external market. I'm sorry that the one sort of— it's a little bit dropped off, but never mind so I'll walk you through that, so the green one is Russia's borrowing, and external market, the blue one is FDI, red is the capital current account, and gray is mostly junk, it's mostly Russia's sort of capital flight or Russian residents, leaving money from Russia.

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Elina Ribakova: So, we talked about the current account, we have this integration on the global capital markets, but what Russians do with that is they put money outside. It can be some of the export proceeds that Russia decides not to sell domestically into the local market. It can be some of the borrowing, then that gets into this sort of round tripping and I know colleagues have

done very good work on the China similar situation on the issues with the balance of payments but long story short, there is a lot of integration, what happens after 2014? After 2014 you see the rupture, so you see these green bars shifting to negative, so Russia aggressively repaying external debt, Russia disentangling from the global capital markets, FDI also has second thoughts, and it also starts going away. And also as Russian resources likely shrink that's why there is less money for capital flight. So we have that situation, Russian authorities think about it, and say wait a second we're not liking the situation so much. We would like to rebuild our buffers, and they start rebuilding reserves, they do fiscal adjustment, and they focus on positive real rates and inflation targets. And we're going to look at that in a second. So we will look for them more closely. What is happening, most recently now? We're joined very high current account surpluses and at the same time we're also seeing some articles. So I'm very curious now about the latest data for the first quarter of this year. It's only for current account and reserves, but of course I'm also very curious how effective the authorities will be with the capital controls containing this capital account. So let's go to the next slide, there we go. So yes, we talked through them, you know, so the sanctions that have been taken and so let's move a little bit more into the nuance of the financial sector sanctions. Just a reminder to all who don't look at Russia very closely all the time. Russia's financial system is dominated by state control banks so if we go down the list, Sberbank is state controlled, VTB, Gazprom, there is Rosselkhozbank, there is Otkritie as well now, so there is almost all the top banks as they control, and just Sberbank, the top largest bank is a very significant share of total banking system assets. It's also a very significant share of deposits, and it has branches across the country and it's also banks, a lot of even pensioners. So it's a very important, sort of socially important bank. The largest private bank which was recently sanctioned is Alfa bank and it's 5%, it's a very small share of the total banking system assets. And then all the foreign banks, as you can see, and that's when we're not even talking about that kind of exposure. All the foreign banks are less than 10 percentage points total, the mobile banking system, so it's heavily dominated by state control. The financial system, it sort of operates as if it were independent banks, but, of course, in a situation like this government has a lot of control over the financial system. So in addition to freezing the assets of the Russian Central Bank, as Markus pointed out and please note, what else has happened in terms of the financial system? We have put a number of banks on the blocking sanctions or other types of limitations.

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The most important one is Sberbank. Sberbank was first disconnected from the corresponding banking with the U.S., and what that really effectively means is that Sberbank could not touch dollars. So what it was recently added to the full blocking sanction, it didn't make a significant change, because it already couldn't touch dollars, and it was already disconnected from this global financial behemoth dominating the market, U.S. markets and U.S. dollar. Sberbank has to work with euros. Why was Sberbank spared, just like some other banks like Gazprom bank, because European colleagues continue to buy energy from Russia, and they need to find a way to pay for that energy. If we're going to sanction all Russian banks, to full blocking sanctions, whether it's, even if it were the U.S., only European counterparties would not be able to work with those banks. And this is where you know sort of the threat of secondary sanctions comes in, Europeans would like to continue to transact in euros with these banks. It will still be difficult and potentially a sanctionable activity if that sort of feeds back to the U.S. So that's why a lot of those banks who have been still spared until recently, so that the U.S. can continue and still continues to pay for Russian gas and other commodities.

Markus Brunnermeier: About the difference across it private, are the banks— so they all stayed on the enterprise, except for the Alfabank. Some are red, some are blue?

Elina Ribakova: Yes, so the red one brings me to a.

Markus Brunnermeier: So Gazprom Bank is different from the Sberbank, for example, because it has Gazprom, and has an energy arm already part of it.

Elina Ribakova: Absolutely. So Sberbank is mostly your— one of those sorts of, I wanted to give up the American example, but I will resist— so Sberbank is your sort of savings bank. It's the largest domestic savings bank, mostly to the local population, I think. Also that's why the U.S. was trying to stay away from Sberbank in the beginning, trying to signal to common Russian people that we're not after you, of course we're now past that point. VTB was Russia's investment banking idea. That died a very quick death, because once it was added to full blocking sanctions, it had to send a letter to all these clients saying that we're moving all our brokerage accounts for somebody else, we can no longer do that. VTB is also a little bit of a piggy bank, where the government of Russia, they need support during the crisis, they can pull the head of the VTB, and say you know what you have to bail out these firms. Traditionally, it was not done to Sberbank precisely because they're worried about the bank runs, and individual babushkas and dedushkas in the villages losing that deposit so they try not to mess with that bank. And that bank actually, there's a lot of progress with Sberbank in terms of being more progressive and digital and all that.

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Markus Brunnermeier: And the bank runs we observed were mostly with Sberbank?

Elina Ribakova: The bank runs what we observed, were with everybody, but particularly including Sberbank which is usually the bank that doesn't get run on. So it gets a little bit of a spillover, but the fact that you had runs at Sberbank, at their cash machines, at their branches, I think that is very significant and shows you that you really had a widespread crisis in Russia. And then other banks, as you pointed out, Gazprom is another key bank here, is the one that works, mostly was Gazprom, and most of the work was energy. It's also an active bank but it's very focused on commodities and energy. And there are other banks that, maybe, work more with the military. Well that got disconnected, and then the red ones, are the ones that were disconnected from SWIFT. So SWIFT is where we've got a little bit into the territory from the financial sanctions into trade sanctions, even before the actual trade export embargoes and others were taken. Why, because, as we know very well, SWIFT as a multilateral international cooperative off I think more than 11,000 institutions that process millions of transactions a day, but what they do, they don't settle. Russia has a domestic payment system, the U.S. has a domestic payment system, many countries will use SWIFT for their exchange of transactions. So what you do is that you send information, all of us, whenever you have to send them to grandma, the payments, you know we say "correspondent bank" this "I've bank this," so we'll fill it out. And this way this payment is not lost, so settlement happens separately, but there is information going alongside it where we all know what's happening in those payments. There is no alternative at the moment to SWIFT, and I think when we talk about the dollar alternatives, it's also important to start talking about the payments alternatives. So, for example, if there were— and I am diverting just for a second — if there were a fantastic payment system, the new blockchain space system or CBDC system based on European currency, ECB, it could potentially be a competitor to the dollar as well. Because as we know, we use money for many purposes, one of them is for payments right for speed and effective payments and SWIFT has been dominating, has been a monopoly on this payments information services and now has the new blockchain development sensibilities, the potential of will have local competition.

Markus Brunnermeier: The argument that you can replace it with the sending faxes or, of course, you can't handle the volume, but for your energy payments, you could make the payments by sending a fax and...

Elina Ribakova: We can, yes, yes Markus I'm sending you a fax now it's gonna arrive, but I'm gonna I'm gonna buy it, yes of course you can write, I mean, practically it is very difficult, and I think one of the sort of issues besides self-sanctions by firms in the immediate issue is that hit is this SWIFT. Once they disconnected from SWIFT, and you had accounts with those banks and you tend to use them for your trade payments with Russia, you had to you had to stop, because wait a second I'm going to set up a different accounts with different bank, which bank might be the next one sanctioned, then it's it's impractical, for most people to work with us.

Markus Brunnermeier: How easy can you get around that by just saying okay I can't do it with VTB bank anymore, I got to go to Gazprom bank from the bank.

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Elina Ribakova: Yes, you have to set up just the different account and in that sense, it is easy, you'll have to migrate all your accounts and all your documentation to a new place. They do know your clients, that you will do treasury risk assessments and then you move to that bank. And, if you want to exclude, for example, an energy payment from sort of you explore the bank from SWIFT, but you still want to do energy payments in theory could still do it because energy payments, as opposed to a little things, are pretty bulky. So it's relatively easy to trace them in the file of payments information, but even then, there is a whole conversation about the need for new technology for better accuracy of SWIFT transfers, so this is what we've had since 2014. So we don't have to spend too much time here. The chart on the left is to say what I said before, this engagement from the global financial system, and this is, you know, from 700 billion outstanding gross debt of the Russian Federation to about 200. This is more than 700, 750 actually, so this is a large reduction of external debt, all of it repaid, and this is the result of the 2014 sanctions. So this is also what happened to reserves, and so let's go to the next one, this was Russia's natural response to 2014, saying okay fine, you're killing me with sanctions as we started at the beginning of the seminar, I'm going to insulate myself and isolate myself from you, I'm going to accumulate enough reserve so I can withstand an external shock. My current accounts surpluses will continue, because you need to continue buying my energy, but on the capital account, I'm kind of disengaged, and this is where this the start of the presentation, the first chart, and this is what they did, they accumulated reserves, they also thought a little bit about about the game.

Markus Brunnermeier: Is this physical gold? Can you ship it?

Elina Ribakova: Physical gold, yes. I mean it's easy because they are one of the largest producers, so they have domestic companies that produce gold and they can get it from them. And that's why it sort of works nicely for them, and this is what happened exactly from March 2014 to 2021, we have shifted away from the dollar. Massive right, we have shifted away towards gold on shore, physically also present on shore, we're moving a little bit more to yen. What is significantly more relative to the dollar, it surpasses, right, and this is data from n-2021 and look at it carefully, because this is the last time you see. They're going to stop publishing breakdown, understandably, as well as probably many other things they'll stop publishing now so our job will get more interesting. They also divest from U.S. treasuries because they felt that in the spirit of financial sanctions, again that will be the easiest for the U.S. to sanction right, so



there have been some stories about maybe they're hiding it in Bermuda, Bahamas or whatever it is, but you know official statistics, this is the official statistics.

Markus Brunnermeier: So, are you saying that they were preparing already for almost 10 years for this war?

Elina Ribakova: You're asking me to be exposed, well we're smart, I do not know if they have been preparing for the war but they have been isolating themselves and they've been thinking geopolitically about macroeconomics since 2014, 100 percent. And that's why you could have an independent super professional macroeconomic block and let them work and do their job because their objectives align with the objectives of geopolitics.

33:37

And what did they do, since 2014, isolation, super strong macro, cut fiscal deficits, attract foreign investors to support your global and your fiscal with high real rates, which aligns with domestic inflation targeting and higher demand, higher supply, domestic global funding. And, in the meantime, if you try to cut fiscal deficit so eventually you could say to foreigners goodbye, so by the time the war started, there were the stage they could have said to foreigners goodbye, with no difference at all to find ourselves much. So, yes they've been preparing for something whether it was for war it's hard to say. But all that said and done, did sanctions have an impact? Well sanctions, all put together by a lot of countries, all the nuclear financial sector essentials, at the same time, I think they're going to have an impact. We're seeing some evidence of Russia's imports already contracting, we're seeing some evidence of economic activity decelerating. We need to watch the second quarter, so I think any indications from— and soon enough actually give us a couple of quarters will be watching the lights in Russia from satellite imagery. I think that will be very interesting, if we're not getting any statistics, hopefully not so fast. But your sanctions had an effect. Sanctions are likely to have an effect on growth, and one of the reasons they're going to have such a dramatic effect is because there was a shock to the financial industry, but also there is a shock to production, because Russia relies a lot on imported components and we can talk a little bit about that later, but let's start can start sort of stay with the financial sector. As you can see, on the right hand side, we can do financial conditions index, but in Russia I think policy rate matters, so there was a very professional and swift response from the Central Bank, the Central Bank hike rates, more than doubled the rate. And also took extensive capital controls measures and the capital controls measures of what they did is their expert proceeds requirements. 80% of all exports' money that they get from the imported exchange needs to be converted into the market and into ruble. And it has to happen quickly, and I think they're probably looking after it closely. Individuals cannot withdraw more than \$10,000 from their accounts until September. I think they recently started changing it, but they're basically freezing your foreign exchange deposits, right. There is also limited convertibility. You cannot buy more than \$10,000 into foreign exchange, some of that is being relaxed, but these were the immediate measures announced and they definitely had an effect. So let's look here at what's happening to the ruble. Ruble is back to pre crisis levels. Why is the ruble back to pre-crisis levels? Huge current account surpluses and tight capital controls and highly skilled response by the Central Bank. So that's why the ruble is back to pre pre-crisis level. Also let's not forget, there is not much liquidity, so if me and you will try to transfer a sort of proper trade size transactions through the ruble, it would be difficult, and I do not know if it's absolutely true, but in anecdotal evidence, I heard even that Russian exports are struggling to sell dollars on the market, because there were not enough buyers. So that's how, given that all foreign investors were taken out from the ruble market by a lot of the measures, by lot of the capital control measures.

37:09

Markus Brunnermeier: So just to get a sense so using the ruble is back, but it's a different ruble because I can't use it essentially I have to keep it in Russia.

Elina Ribakova: Exactly, the ruble is back because it's a heavily capital controlled ruble. But, the current account inflows are real.

Markus Brunnermeier: And this 80/20 rule, so does it hurt the oligarchs as well, or is it mostly that anyways everything is state controlled that the oligarchs and optimally engaged in that.

Elina Ribakova: Exactly, I think this is another step of the preparation from the 90s, or 2000s when Putin came to power is removal of oligarchs from almost all spheres, leaving them various small control areas, whether it's metals and mining a little bit, a little bit of gas there that will then in TELCO, you know media, maybe, not so much anymore, but now media no, sort of consumer services. So we pushed them out into more neutral territory, but the core crown jewel, oil and gas, with the State; banking system, was with the state, so it's a very state controlled enterprise, Russia. So therefore the money is mostly flowing to the state.

Markus Brunnermeier: About rare earth, have you looked into rare earth as well, is this control, the oligarchs or by the State as well, and does this have any relevance, or is it too small to matter.

Elina Ribakova: Well, I have looked at less about it, I think guess I have I'm going to skip this question for now yeah. So let's talk a little bit about the banking system, and then we can go over this quickly, so the bank runs. You asked me the question about the bank runs, so this structural liquidity surplus of the banking system was vis-a-vis Russia. And I generally do think that it has something to do with the fact that the system would get more deposits than it finds lending opportunities, I do not think it's a problem with the Russian payment system that requires you to hold such a buffer on your overnight account with the Central Bank. So this is basically money that the Treasury so various banks have to part with the Central Bank, because they don't have any use for it, just sort of balances hanging over there. So we've had a long history when the Russian system has been in surplus and to meet means again that there are not enough lending opportunities. What happens in this you see from February 28 there is a sharp drop and it's a very significant drop, so to me that signals that a lot of banks are experiencing such bank runs that they have to turn to the Central Bank and borrow. And this is also what we're seeing in the close up of the same, we're not going to get into Russia has made fantastic—no longer relevant— but fantastic progress progress and monitor operations different instruments they can lend to you in foreign exchange, they can lend you with non market based collateral that a lot of things so long story short, they again lend a lot. I do find it interesting that there are some banks that are still in surplus. Of course it's normal during the crisis, your system becomes fragmented. I wonder if, maybe foreign banks, because if you know— or Sberbank didn't have such big runs as I'm thinking, but I do think they did so, this is something that's going to study further. So we talked through most of this, I think, and so, so I do get a lot of questions about how the money is coming now and what the Russian request is for rubles, for payments and rubles.

40:43

So if we talk about financial sanctions, we've done a lot of financial sanctions on Russia, yes, they had some impact. The system is stabilizing, what's next? We're asking ourselves this

question, Russian authorities are not silly, they're also asking themselves the same question. So they do understand that next is potentially further oil and gas embargoes. And you if you might remember the announcement on the ruble payment scheme around the time when I think Biden was going was already going in Europe. When there was some noise that Europe might take more aggressive steps on energy and that's when suddenly this measure came from the Kremlin and then the authorities were told to explain exactly how this measure would work and the Central Bank had to struggle a little bit to figure it out. So I do think it was out of fear and it was a preemptive measure against potentially sanctions on Russia, including maybe this escrow account that we discussed or other other sort of embargo measures, so what happens with the ruble? It's actually very straightforward, we have Gazprom bank and we have regulation from the Central Bank that doesn't explain that. So you, as a buyer, any buyer in Europe, and there are many companies buying from Europe it's not that you buy centrally, they have a lot of companies that buy from Gazprom gas. So they have to open a special account with Gazprom bank, then they will have to pay into that account in Euros.

Elina Ribakova: Gazprom bank will then convert their money into rubles. It doesn't have to go to the Central Bank for that, and I think there is, we can talk a little bit more about this, and what that means for sanctions and today's news, but the way I understand, it doesn't have to go to Central Bank, have to go to the market, converted into rubles and then again put it on the buyer's account, the buyer open effects account brought the money, Gazprom converts it into rubles and then the rubles are being paid into Gazprom by Gazprom bank, so it's a very simple "transaction." Gazprom bank is not sanctioned in a way that prevents them from doing this activity. If Russia can coerce enough foreign buyers to do this transaction, it will become very difficult to sanction Gazprom bank. If we do transactions in ruble, and Gazprom bank has hold of your account it's much harder to do an escrow account for the oil for food style, so I do think that maybe it's not a wonderfully thought through idea but it's sort of some ways of trying to prevent from getting more into the energy of sanctions.

Markus Brunnermeier: I want to come back to my earlier question, is then the SWIFT sanction— is this having any bite, if I can go through Gazprom bank.

Elina Ribakova: In that sense, no, exactly. It had an original bite, but I think the sanction side moving target, you bite it here, it moves, you have to bite it again. So I don't think that sanctions can be seen as that you should at once, you should have one weapon and then you, you can relax, right, I think systems adapt, and I think what we'll learn from 2014, Russia did an amazing job of adapting to 14 sanctions. Especially when, in terms of macro improvements, they did inflation targeting and fiscal rule out of spite to sanction. So, of course, they're are much more vulnerable position now but, again, the system will adapt, the accounts will migrate to banks that are not sanctioned, the banks that are not done this week, it will become even more centralized, SOE owned financial system, but we are past that in Russia.

44:15

Markus Brunnermeier: So let me just ask if China buys some oil from Russia, how's the payment happening, then?

Elina Ribakova: There has been some talk about payments in yuan, and some talk about payments in rubles. For most oil and gas, actually still a big chunk of it is still traded in dollars, particularly because there are no benchmarks for oil in euro so then it makes the whole process much more cumbersome. Then for gas there have been some sort of discussions, and I think they are small, so I know it more from the news than the actual data, that some payments

happen in rubles and yuan and we also know from the news that India is agreeing to pay something in rubles.

Markus Brunnermeier: But if it happens in dollars, the U.S. can observe them?

Elina Ribakova: Yes. What happens in dollars, if it happens via SWIFT, U.S. from the 2011 onwards has an agreement where they see all the transactions of SWIFT, can request that, so then the U.S. has full visibility.

Markus Brunnermeier: And does the Russian state have some offshore accounts somewhere, outside of Russia, and you can pay to them, or we don't know?

Elina Ribakova: We do not know, I think we're definitely—but, again, Russian state versus SOEs, SOEs definitely do, and at this stage, SOEs and Russian states are becoming much more one. And, as we saw this big gray area, the dodgy area has been huge for years. Russian capital account outflows have been 100 billion, 70 billion every year, and we tried to do research a few times on trying to break it out. What is the thing though isn't there's always a big chunk of that is just pure capital flight.

Markus Brunnermeier: And this pure capital flight comes from who, the oligarchs or other parts of their...

Elina Ribakova: Most likely from the oligarchs, yeah most likely from the oligarchs, or SOE companies. So, for example, there is a nice research on the 2014 sharp sell off the ruble I do recommend for many to read. Well it's alleged looking at the one by one sort of tick by tick data, that one of the large SOE companies wanted to convert a very big amount in the middle of the illiquid market and that's what moved the ruble so things like this don't happen. Okay, so very important today, the EU said that this kind of scheme of transferring payments, potentially is against the sanctions so we'll see an interesting debate and Hungary at the same time, said that they comply with the scheme and buy. So I think European sort of fragmentation here is very, very important. If Russia manages to fragment Europe on this topic, it will make this progress on sanctions even more cumbersome.

47:03

Markus Brunnermeier: So if Europe just agreed or they are about to agree to buy all the gas centrally through one central agency, that will make a big difference.

Elina Ribakova: Yes, that will definitely strengthen their negotiation power and also would remove this fragmented power problem of Europe. So we talked about the current accounts, we don't have to spend much time, just a quick reminder on the right. So for Russia, crude oil, petroleum products are also important and, of course, natural gas. We do talk a lot about natural gas, but oil is still the biggest share and petroleum products as well, and petroleum products is somewhere where we might be able to start with limitations and embargoes, because then it would also benefit some of the refineries in Europe that will say thank you very much, we don't want your products we're very happy to get rid of them, we're happy to comply, we will be able to have better production ourselves. And chances are they will have enough capacity to do that so that's another, yep.

Markus Brunnermeier: Petroleum products are refined gas or refined diesel?

Elina Ribakova: Oil, well mostly, this is all the products that come from oil. Yeah so let's go quickly to the next, we know the largest partners that we know that, that's it is Europe. And so, for those who are the largest buyers of oil and gas, this is the U.K., E.U., and the U.S., and this is the right hand side chat, so they buy the bulk of what Russia exports. So, especially for oil and petroleum products, the dark sort of the dark line, the black line is you know they account for the bulk of what Russia exports, and the similar story is for gas as well. Let's maybe move on quickly, there is also data here on which countries, and how they're more exposed, and so what we see is that sort of the gas supply courses we know very well, as much less diversify, right, so the share of energy inputs accounted for Russia in gas, here is much more significant than it is in oil. So we do have more room for maneuvering oil rather than in gas and gas, very quickly, we do have also the physical limitation capacity. We have LNG terminals in a number of countries, but they're not in the right places, so bringing enough from the various LNG terminals, to the North of Europe is tricky so, for example, Spain has a lot of capacity, but there is only one pipe that's going to France and there is nowhere near enough to be able to substitute Russia. Spain could buy less gas maybe from Algeria and then Italy could pick it up. There are also the sort of opportunities but generally fully, it's not possible at the moment and in the near term because you need to think about how you build infrastructure here. It's not the question that we can sort of say, we have the capacity, let's bring it in, we need to have infrastructure in the middle of the country. That infrastructure will take time to build, of course, there is also a chance of maybe scaling down demand for gas that should contribute but that will be needed anyway.

Elina Ribakova: Even sort of with improvement construction.

Markus Brunnermeier: So can I ask you directly, so, would you go cold Turkey and sacred cut off Germany from the gas right away or and would be most effective or would you say we need to wait?

Elina Ribakova: I worry that if we're sort of an extreme scenario you're part of Germany, you can probably do more or less now because it's warmer but I do worry that it will come one year or maybe two years, and we do not know how this conflict is going to develop. And if there is maybe a change in government and maybe there is huge social pressure to reconnect to some sort of gas supply come winter and you have especially Austria, but Germany too, you have people not having enough heating you have to ration heating.

Markus Brunnermeier: And can you say a little bit about Central Europe, like Poland, and all those, they are even more dependent on gas I guess.

51:12

Elina Ribakova: So, yes, we have here we have countries that are even more dependent and that's Hungary, as you can see, share of energy imports accounted for by Russia for gas, kind of Hungary is up here, that's what's happened to comply, you know we have other countries here in the very tricky situation. So, yes they're very dependent, of course, for them, the question that we asked them the poll, how much you would pay for the war vs gas, that's it, it's there more in this outlier part of your of your question, because there is a genuine concern in the Baltics about risk of invasion. And, of course, Germany is here, close to the EU average. So therefore as we discussed earlier, I would rather start with oil, I would go after all products, petroleum products. I would look at the taxes or other sort of embargo versions on oil itself but gradually, and then, in the meantime build infrastructure and smart contracts within the gas infrastructure LNG and other and other sort of production and demand and then implement the gas part of the story somewhat later. Which also brings us to the next natural point, which is that

we want to have less cost to us and more close to Russia so where is more costs. Well, more costs in all the petroleum products, of course, with extremely high gas prices that might start changing, but even then here, you have the oil for the balance of payments, this is red—sorry vice versa, this is red is gas, blue is oil and petroleum products, this is the bulk of an influence that we're seeing. And just very quickly on gas, or we can talk about it later on the spot versus the long term contracts for gas, I think that's another important issue, but maybe we'll come back to that..

Markus Brunnermeier: So you would cut off the oil, but at the same time you're not worried that the oil is just shipped to some other countries, China, and you would sanction shipping?

Elina Ribakova: That's a very good question, hold on a second, let me just do that since we might not be able to get through all the presentation here, but everybody will have it as a chart pack. So, Druzhba Pipeline, 1964 the energy experts here might correct me, Druzhba is friendship, 1964, lovely, I mean I like Soviet art, so I don't collect some of that stuff anyway, so this is Russia, a lot of Russian oil. And there is a pipeline that goes here, there are some transportation hubs that go here as well, there is one pipeline that started going towards China. And it was completed not long ago, and it's also going to another transportation hub here to China, but it's the same pipeline. So for Russia, the biggest reserves are still closer to Europe and the infrastructure is still closer to Europe. To divert via the pipeline, so, if you look very quickly at Russian crude oil exports in 2020, in million tons, we have Russia, you have Europe, you have China, and you have other, and I'm not even looking at India because it's just too small.

54:23

Elina Ribakova: So we have the pipeline, and this is an economist's calculations about pipelines so I'm not going to talk about the maintenance and you know, like I'm sure some energy expert will say that this is very wrong, but let's bear with me, this is the official pipeline. So we have the pipeline, and this is currently used by the pipeline, so we want to take and replace some of Europe. What we can replace, we can replace this much, so 42% of exports to Europe via pipeline to China, this is just simple calculations, how you're going to replace the rest. How you're going to replace the rest, you can try, via cargo sort of trains domestically, you can try via shipments around the world, you can wait until it melts here more and you go more, right so, but it will be cumbersome and difficult and it gives all.

Markus Brunnermeier: Can you sanction the ships?

Elina Ribakova: So yes, the ships are a possibility but you could end up using a big share of global available ships for that, and here you would also need insurance companies willing to work with you, despite the threat of sanctions.

Markus Brunnermeier: So let me ask you one puzzling thing is Ukraine, some of these pipelines go through Ukraine, they could stop these particular pipelines, I guess.

Elina Ribakova: Yes, but they haven't, they haven't stopped neither gas, no, neither have they bombed them, it's a very peculiar situation, the trade is still ongoing, the gas is still ongoing Ukraine gets Russian oil, indirectly, for the military effort so yes, they could do that, but they haven't gotten to that point yet.

Markus Brunnermeier: Do you think it's in Ukraine's interest to keep it going in order to have enough diesel in order to fight the war?

Elina Ribakova: Yes, at the moment, yes they're there for sure, so they do get the diesel from Poland, Poland gets it from Druzhba pipeline so this is a critical during the war so yes, for Ukraine itself, Ukraine is the first one to ask quietly for new ones, not a cold Turkey approach.

Markus Brunnermeier: Can you say this again.

Elina Ribakova: Well, I mean I think it's, the question is that Zelensky made a very big statement, the other day about the call track approach actually and it's very important for for for media, but I think it's also sort of many people in your friend also understand that it has to be a smart sanction. So cold turkey, what can be done? Escrow accounts can be done, that is something that nobody has to wait for. Targeting realistic cut offs of oil and gas it's also something that can be done, but not saying from today, tomorrow we're going to start buying everything else. That question on the stop buying everything else, and here I'm answering now to you out of my field if we're now thinking about economic statecraft versus military versus nuclear war versus the cost of lives in Ukraine. Then yes, of course, keep the Druzhba pipeline, but cut off everything else so it's, this is the course that we need to be thinking about when we're thinking about sanctions, not just about economics.

57:33

So let's go quickly, I want to show you something on revenues as well, a lot of people talk about...

Markus Brunnermeier: Because I saw you mention that if the U.S. makes a deal with Iran, it would help a lot just to bring the price down, and it will bring the Russians difficulties as well or not?

Elina Ribakova: It would definitely help. I think Iran, a whole different way around Venezuela, we're back to that, so the U.S., for example, picks up a lot of inputs from Russia at exactly the time when as well, and the run was taken out the market. and that's why, at some point, Russia was supplying 8% of oil to the U.S. and actually a lot of refineries are still focused on that, but not anymore. But so yeah, you could try to do the reverse, but then you have a very complicated negotiation as you remember Iran was first put in I think 2012, 15. Then you had the deal in '15 and then the U.S. walked out on it so every time there is this uncertainty about the sanctions big businesses are less likely to come back. And 18 was a huge slap back to especially a lot of European businesses that said wait a second. We trusted you, we went back even timidly, and we've got this surprise, we're not going to touch it again. So therefore the ability of people to come back and help around develop their oil and export it's going to be very also. First part negotiation between the governments, second part convinced the business that this time it's safe to come back, we have elections in a couple of years in the U.S.

Markus Brunnermeier: And what's the capacity of Saudi Arabia or even other countries in the Middle East to expand the production capacity quickly?

Elina Ribakova: So Saudi is one of those that I understand is one of those swing producers, so they have extraordinary though I think out of both I can generally, I think that they are one of those that actually have a lot of swing production capacity. But the issue here says it's all geopolitical and Russians have been on it, Russia has worked on the OPEC project as a

geopolitical project. So when Russia started doing the OPEC plus it did not need all four breakeven prices, it was very good on their own so actually, by the way, sort of here we have a tear on the budget revenue. After 14 we managed to reduce dependence on oil and gas for our federal budget. Our breakeven budget was \$40 per barrel, right. Balance of payments is even more potentially comfortable, so at that stage actually, Saudi and others were more uncomfortable because their fiscal oil breakevens were much higher. So this is where Russia came and said Okay, we can work together, I want geopolitics from you, I have money, I have contributions from oil and that's why now Saudi and OPEC plus is sitting relatively quietly, we haven't seen any big announcements we're going to push ahead and answer and supply as much, they've been very quiet. So it's very possible that they will say no, thank you very much. Just like China on a different scale. So yeah so very quickly, we have let me show you the oil and gas revenues for the budgets. All of us remember let's look at the left hand side, all of us remember about gas, but again share gas revenues here. Share of oil revenues is here (this isn't the federal budget).

1:01:00

So the way that taxation works in Russia, a big bulk of extraction of stocks and also a big share of exports is also taxed. But the way that taxation is centralized, the money flows to the balance of payments for oil and to the budget. The money flows for gas, the balance of payments, a bit smaller and much smaller to the budget. Because my understanding is that Gazprom is always used for domestic investment for domestic subsidies for some geopolitical projects, it pays its dues, so Russia cooperated in different ways that oil did. Oil paid was natural money, so there is an exponential taxation, just a little bit over \$25, it goes up, and basically all of the profit on the 60 to 70% of profits, is taken by the budget, that's why also Russian world production breaking is so low because they've been working for this, for I think since 2000s, or the late 90s.

Markus Brunnermeier: Are you saying that if we make a partial embargo on oil and what happens is that Russia will deliver fewer barrels of oil, but at a higher price, oil price might go up and then it doesn't help us at all.

Elina Ribakova: Precisely, so if you look at the budget very quickly here, this is a little bit of my colleague's calculations, very simplistic calculations on the implies. And what we did with ruble prices 75 and ruble at 150 because remember revenues in rubles, right they get converted into rubles, expenditures fixed the nominal terms, well until the budgets change but then we have sort of the brand price, and here was the current discount of 25 will continue just for simplicity, you see what happens with even the decline of volume, they still potentially get money on the budget, this is percent of 2021 GDP.

Markus Brunnermeier: And it's also very important for the military, the budget is very important for the military?

Elina Ribakova: Yes, the budget is very important for the military, and we do have yes exactly. It's here, we have a national economy, we have national defense, are the services they also have a chunk of the expenditure that is a hidden expense. Ever since the sanctions Russia started using expenditure as we used to be one or two percentage points, very small then it went to 5, 9, 13, 10, but we do not know what that is so officially Russia reports a number on how much is spent in the military. Unofficially, I really don't know. The only sort of saving grace here, is there is a domestic is a semi-oligopolic market. So if Russia is corrupted everywhere else, chances are it's also very corrupt there, so the fact that they spent more doesn't mean that just because they get better products, so they get better contracts. Right, just like when it was



the Olympics, which cost \$40 billion, I think. So its potential that you know the spending that was in the budget hidden or official, it's maybe actually not going through a very not be spent very effectively so.

Markus Brunnermeier: So Marius has a question, actually how important is it that Vitol, the largest global oil trader will stop giving us oil by the end of the year, is this important?

1:04:09

Elina Ribakova: This is extremely important, because I think three or four top companies, the foreign companies that operate in Russia, they do maintenance of all the fields. So they do a lot of work in Russia for decades since the 90s and they've always had a very close relationship because otherwise you couldn't work in Russia because of the government relationship with these businesses.

Elina Ribakova: And a lot of these companies fully rely on them so even for the existing fields, you will have a problem, and for the new fields, there is no question, so I don't know if the LNG or the new Russian oil fields, they will not be able to develop without the technology. Even in 2014 there were minor sanctions on the energy technology, even those were beginning to bite, and now, this one's for big bite, even more so, we do think that the announcement by Novak, by Russian Energy Minister that they're going to drop by 4-5% this year I think it's nonsense, as is, they will drop by 10, 20% this year in terms of output. Just because they will not be able to do without foreign companies and the problem for some of the Russian fields is that once you close them, you won't be able to reopen them. So we are potentially losing this production permanently and that's also where Russia sort of feels the pinch, because it's not only just about financing, it's a risk of losing your production altogether.

Markus Brunnermeier: But that would argue for a cold Turkey approach, in a sense that you have to shut down the field and they can't open it up again or do I see it incorrectly.

Elina Ribakova: With the corresponding costs for the European economy and still you need to have smart carve out so we find substitutes for places like Ukraine. If you call the cold Turkey a prepared approach, yes.

Markus Brunnermeier: So, but this is about oil or about gas so once you close down the well, you can open up and again that's for both oil and gas.

Elina Ribakova: So what I understand is more for oil and gas. For gas it's the new developments, the LNG from Russia and there's some there's some one chart here on LNG you'll see how much Russia has also been supplying on the LNG market you see, it's very important, Nova tech little semi private company, you know not not the government managed to make it space here, it has some good projects it's actually international projects as well, I think half owned by foreigners. And did great work, but now, without foreigners, they will not be able to do that, again, there is a long conversation on guess. What you want to keep on the law contracts which are cheaper versus the short term contracts, spot contracts which are killing Europe at the moment, and especially if you go cold Turkey, and we can have a variable we can have a separate seminar.

Markus Brunnermeier: But in general, these technology sanctions, you would say they're very important, not only in particular, for you know, being able to extract more gas and oil but also let's say that for the airbus says you don't give them spare parts anymore, is this really

important to I would say technology with respect to the oil and gas and energy industry is way more important, rather than that.

1:07:09

Elina Ribakova: It is important, across the board, and then there is one of the researchers, Zubarevich, she has been working on the economic geography of Russia, and I've been really focused on for work, recently, especially with something is that if you go through the map of Russia, almost everywhere steel, you know car manufacturing, Kaluga, St. Petersburg, this and that, you need to have foreign parts. And we were trying to talk with my colleague and economist the other day, well Russians are like, well Kamaz, can we do Kamaz? No we cannot, foreign parts. Well Lada, can we do Lada? No, foreign parts. So almost everywhere in manufacturing, in processing, in steel, in oil and gas, you will be shooting these constraints and that's why I think sanctions also have an effect because oh majority of them— I wouldn't take a flight in Russia, what I'm trying to say anymore so give it another month I will not fly anywhere, because you will don't have the parts right, you will not be able to repair those planes. The same thing for fast trains, you know you cannot. So things will last us as long as they might last but then that's it, you're not going to have new parts and to circumvent sanctions and bring them in bulk via Kazakhstan, it will be very tricky, it's unlikely people will do that. Question is where China was the Foreign Direct— what is it called? I think there is one of those expert rules by the U.S., where the product is not produced in the U.S., is not produced by U.S. companies, but has enough of the U.S. component either technology or software, it's still under export controls. The question is whether China will try to circumvent a lot, I don't think so, but you know that's a big question.

Markus Brunnermeier: You mentioned Kazakhstan, and you know the other Asian countries are very dependent in terms of transport on Russia and can they be of any help or they are more the Russian side anyway so that's...

Elina Ribakova: You might remember, just before the war on Ukraine, there was a little change sort of in Kazakhstan and Russian, sort of Russian dominated sort of a small former Soviet union's abridged NATO version participated in that peacekeeping mission, so there is clearly their own power dynamics, it was interesting to see the China kept out of it, although China has a lot of interest in Kazakhstan and in business, China and Russia, there is a bit of competition. But no, I think they sort of, they're not like Belarus, of course, but they still have enough links with Russia that I think that their alliances are between Russia and China, rather than the West.

Markus Brunnermeier: Very good, do you have some two more slides, and then we have to come to an end?

Elina Ribakova: Exactly yes, let's do two more slides, so this is what we talked a little bit more about China and India, in terms of what the substitution can be, this is how much in volume, so this is how much Europe takes from Russia, and this is where China currently buys their oil, and this is where India buys their oil, and, as you see, Russia is not in there, and that was too small, I know it is there, it is there it is. So, you would have to change all the status bars and drop it somewhere here. India doesn't have enough refining capacity to do that here, China would have to depend fully on Russia for their oil supplies, so there will suffice it's even for China itself, it might be a question, and then of course we already discussed transportation. So let me just see one slide, one last slide, which can be another couple of seminars. Don't forget Russia doesn't only export oil and gas.

1:10:45

So we do have a number of markets where Russia could try to do counter-sanctions. And we're already seen that the prices have moved significantly, particularly to some of the places where Russia has dominance, but, of course, Belarus and Ukraine. And it's also a Ukraine story. So I doubt, I mean Russia has not been effective in counter sanctions, Russia hasn't really thought about the sanctions, probably because they always thought that we're not going to be effective, anyway. But if we're going to this stage of war, they might decide to do so. The only thinking I have here is that if you're losing a bulk of your oil or gas revenues on the balance of payments why kill it completely by also killing your metals right. But you could start having the nuance, as you can see, you know palladium is important, so I think that titanium was hard to break out aluminum— we already know about the food problems, fertilizers and the foods, also from Ukraine and the harvest so that's something that's for the next seminar.

Markus Brunnermeier: So how important, so how much influence does Russia have over some countries in Africa, which also provide some of these supplies or commodities.

Elina Ribakova: So, Russia has been going into MENA and China and Iran and somewhat less to Africa, it has had some relationship with Africa. Russia's projection of power is often like arms deals, so a big chunk of other exports in Russia is arms, like India relies on the tanks on Russia and other hard hardware. Then in MENA a lot of countries buy as well and in Africa as well, and then also there, there are nuclear plants. So, ironically Chernobyl notwithstanding, Russia is one of the sort of very competitive providers of this technology. And it competes I think with the U.S., with France in this and, for example, Egypt. I think it's doing a big project, so there are two— I South Africa was trying to do a project so that's one of the areas where it definitely has a lot of influence.

Markus Brunnermeier: So let me come back to one more question which came up about the gold itself, so it seems like Russia bought a lot of gold from Sudan through some illegal means and smuggling, but if you were to want to use this gold, I asked you can just ship it there's no hindrance in a sense in terms of shipping it to to pay for certain things.

Elina Ribakova: So that they're already sanctions on the Russian central bank's ability to use gold. So you would have to circumvent sanctions, how fungible the brakes are, we can discuss well, I know that Iran via Turkey tried to do that and was semi successful for a while, and I think there was either Iran or North Korea's planes was full of gold, I think it was around will serve as a rest at some point, of course, there was this big sanctions debate was was Turkish banks and then, if you look at the Turkish current account balance of famous you always had errors and omissions and they're always positive and somehow helping to patch up Turkish current accounts, and I think a lot of that was circumvention of sanctions from Iran, but that for for a while, so I think OFAC and others have gotten smarter in terms of monitoring it the tracking so So yes, this is something that you can do try to use physically but it's also not very practical. It's probably easier to swap it somehow and use that if you need to have foreign exchange.

1:14:07

But at the moment, we do have a funny situation where the Central Bank cannot really accumulate reserves because of sanctions, but at the same time they're having a wall of effects, so what might see is them liberalizing a little bit for domestic residents of their capital controls.

Markus Brunnermeier: So let's conclude with if you were all powerful and you could design the whole sanctions for Europe and the U.S. and the rest of the world, coming back what you started out from essentially, how would you design it and do you have a particular advice, if you can pick one you know thing you can really change some policymakers perspective, what would you pick.

Elina Ribakova: Those are different things, what would I pick and also how to change those policymakers' perspectives? So well, I pick up escrow accounts and start with oil products, and then of course work it out to oil, taxation, and the smart way or tariffs and then guess what sort of do what you can do now and it will be already impactful. How can I convince the authorities that European energy security will have a price for the rest of time right? It will learn, and people in Europe didn't have to think about that so it will no longer be the most efficient and we'll have to incorporate the price. So in the ideal world, I would have some sort of burden sharing between the U.S. and Europe moving away from energy altogether, because otherwise Europeans might say wait a second we're going to make this huge hit, Russia quote unquote has been our reliable supplier, since the Soviet times. We're going to have a scenario where there is somebody else coming to the elections or somebody who has been like that before who will say we're out of NATO and we're not interested in supplying energy to Europe and what do we do.

Markus Brunnermeier: Good so I forgot one question I would like to throw in at the end. I apologize for that, but it's about all the crypto aspects.

Elina Ribakova: Oh yes, yes, yes, yes, very good question so Russia is very important than mining, Russia is also important that using them for sort of like kind of dark web and basically criminal activity and corruption, so they use that there's been spikes on some of the crypto assets around the conflict, Ukraine and Russia, and also actually Turkey partially because of their problematic monetary policy, but the volumes are just not big enough to help circumvent sanctions, I want to do more research on that so if anybody has advice, please do send us. I know that U.S. treasuries also focused on it, they do make technically no distinction between the two, but there has always been the concern where do you find it interesting is how SWIFT dynamic will change with the CBDCs and crypto assets, I think that is where Europe also potentially has a chance in terms of the even higher role of Euro, we talked about the role of Euro, we will say wait a second wait a second it's second, it's only 20 years old and its second you know, it's huge right. So, I think that's where I think the action is more than looking into Russia's ability, at least in the short term, to circumvent sanctions this way because then that you need to cash in you need to be known once you go into the mainstream economy.

Markus Brunnermeier: Thanks a lot the Elene, it was really illuminating I learned a lot and I hope everyone learned a lot as well, and we stay in touch and hope you can enlighten me, I guess, we learn more about all the events unfolding, we live in fast moving times and hope to talk to you soon, and thanks.

Elina Ribakova: Thank you so much, thank you.

Markus Brunnermeier: Bye bye.