## General Discussion: Communication and the Beliefs of Economic Agents

Chair: Kristin J. Forbes

Ms. Forbes: I want to ask a quick question. Yuriy (Gorodnichenko), you show this very interesting divergence in terms of how CO-VID has affected inflation expectations for different groups. For example, you show that professional forecasters expect the current pandemic to cause inflation to fall along the lines of standard Philips curve frameworks when you see a collapse in demand and an increase in unemployment. But in contrast, you show that households, and some firms, expect the opposite, that the pandemic will cause inflation to increase, probably due to some sort of supply-side effects related to the shock. As you noted, you have seen this divergence in other periods. When you have seen this divergence between what households expect and professional forecasters expect, who is right? Who should we put more weight on in the future?

*Ms. Hunter:* We can see from the last few days that there is a relationship between inflation expectations, uncertainty and scarring. I wonder to what extent you think it makes sense to study how households perceive or anchor to a high increase in costs for certain goods. It seems that they then assume that will translate across the economy, whereas economists look at the inflation basket and the consumption basket when thinking about inflation. I think there might be something there in the anchoring that households do, when certain

individual goods go up and they assume they will translate into the full basket.

Ms. Swonk: I am dovetailing off Constance Hunter's comments. I wondered what you thought the role rising inequality is playing in people's perceptions of inflation, particularly their ability to pay for basic necessities such as food and shelter? How might those perceptions have been distorted by the COVID crisis? How might that influence their views and complicate Fed communications on overshooting on inflation. The goal is to overshoot for good reason, to allow for a catch up in employment and wages of the most marginalized workers, but there is a tension there. I just wondered what you thought about that inequality aspect on how people value certain things more in terms of what they are paying for.

Mr. Villeroy: Let me at this stage accept your hypothesis and focus on your policy recommendations. You recommend that we speak to households and firms about more than inflation. But we do already present a comprehensive economic outlook about output, unemployment, etc. What do you mean, exactly? Do you mean we should go beyond, from let's say a policy description and forecast today to numerical objectives about output and employment? Which would create two serious questions: First, for those of us who don't have a dual mandate; and second, even for those who have a dual mandate, they are not ready to specify a numerical goal for employment. Look at what Chair Powell said eloquently yesterday.

Mr. Blinder: I want to bring up a phrase that got banned in economics a long time ago. Maybe it's making some comeback and it relates to your paper: "Money illusion." You had in the bibliography, but you didn't of course mention it, a reference to an old (Robert J.) Shiller paper of 25 years ago which I remember reading and concluding people were just hopelessly confused about inflation. It reminded me of something I put in a book that I wrote 33 years ago, "The Coefficient of Robbery," which was the inflation rate divided by the nominal wage increase. The idea is that people thought they should get whatever nominal wage increase they received, regardless of the inflation rate. So, every point of inflation robbed them of their just deserts. That, of course, is not the way we economists think about it

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at all. So, I wonder whether you think that money illusion goes some considerable way to explaining why people just think inflation is bad news, and anything bad gets associated with inflation.

Mr. De Gregorio: I have two questions, and a comment. The first question is regarding which forecast is more accurate, professional or households? I would guess professionals, but could it be that forecasters predict CPI while households forecast the true cost of living, at least the relevant for them. Now, what's really interesting is the different sign of the correlation between inflation expectations and activity for household and professional forecasters. Again, my concern is the difference between them. Who does it better? It seems, according to the discussion, that households would do better. This leads to my second question. In your surveys of household and forecasters, the answer about consumption and investment is based on actual data or their perceptions? And finally, a comment. I like the approach to central bank communication focusing more on goals rather than an instrument. However, I do not think that central bankers have full control on the emphasis of communication. Usually, in advanced economies, in particular in the U.S., the main concern is on the pace of interest rates, but I think this is more market driven than the actual purpose of communication. Particularly in the U.S., because of its role in the overall economy and global asset prices. In contrast, in many small open economies following flexible inflation targets indeed the focus is on the target and, perhaps mostly, on economic activity. Indeed, the inflation forecast is the operational target, because is the way to conduct monetary policy and helps anchoring inflationary expectations. Hence, the main focus of communication is on the outlook of economic activity implicit in the achievement of the inflation forecast. Most of headline news in the press after inflation reports are released is the forecast for activity. Therefore, my concern regarding your policy proposal is to what extent central banks can actually control the emphasis of communications.

**Ms. Lucas:** I wanted to ask people's opinions on how much they think that the levels of debt and fiscal policy is also having a role now in driving the particular correlation between inflation expectations in the real economy. That is, I hear more and more from my

acquaintances in business on Wall Street, my students, my friends, that they're concerned that if the economy stays weak and government spending does continue to increase, there really won't be any choice but to monetize the debt. It is a channel I would like to hear what people are thinking about. I also thought it was very interesting to see the difference between average inflation expectations between households and forecasters and was interested in hearing more from the author and discussant about how they interpret that difference or what they think the implications of it should be for policy.

Ms. Forbes: Let me pull together a theme in a couple of these questions, including the last questions from José (De Gregorio) and Debbie (Lucas). There are some questions about why household expectations are different. Some of this might be explained in work, including by work that Yuriy has done previously, that shows when households form their inflation expectations, they are more effected by the items they buy daily that are salient. For example, food and oil prices. Those are things that might be more affected by supply shocks. And also if you look at the basket of what consumers buy, it may be different than the basket of goods for the economy as the whole or for companies. Consumers spend a higher share of their income on food and gas, which would be more affected by a negative supply shock. Could some of the differences you show relate just to differences in what is salient for the different groups or the construction of their different consumption baskets? So, really not as big a surprise when you go under the headlines?

Mr. Gorodnichenko: First, I'd like to thank (George-)Marios (Angeletos) for an excellent discussion. This is really helpful. Second, you know, excellent comments from the audience and I'll try to variate and move the comments and questions into a few buckets. The first one is, why we have differences within the professional forecasters and households. And as Kristin already has suggested, it is related to the way people handle their purchases, collect and process information, and prices of frequently purchased goods such as food, gasoline, and so on, play a huge role for that formation of expectations for households. We should be aware of that. This is also related to why we have this divergence now. Somebody wrote at this point yesterday and it

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came up again today that the consumption basket during COVID is really different now relative to what it used to be and this can account for some of the dynamics in inflation expectations on the side of households. Who is going to be right about the future inflation dynamics? I will tell, professional forecasters typically have smaller forecasts. But historically, households do pretty well too, so I wouldn't discount them completely.

The other part, an interesting question about how we should communicate policy. It's already in the documents and everything. I agree with that a wealth of information is available to the general public and they can look up valuable information from the reports, from speeches, and so on. I think the main point I try to make here in the paper is that we already have this information out there, but we just need to change the way we communicate with the general public. The speeches today from the governor of the Bank of Canada made it clear that they intended to invest, want to invest in more sources, including improving communication with the general public. It has to be simpler messages, relatable messages. I don't think you should put them a specific number for employment, but you can have a general statement like the Fed does for max employment. In general, what you may propose is we have to have 2% inflation, not just because it's a magic number, but because it really helps with jobs.

In terms of money illusion, Alan Blinder had a great question. This is much related to theoretical research recently by Marios, where people can partially equilibrium and so it's true from partial equilibrium, inflation is a terrible sin. But in general, it may be actually a very valuable sin in the current conditions.

Mr. Angeletos: I want to commend Yuriy and the collaborators for doing the amazing work and putting a light on how the expectations are forming the reality as opposed to our models, and how communication may influence the formation of expectations. Second, on the key question on the difference between consumers and professional forecasters, I would not go down to what regular people do just from their personal experience and they have no clue what is the difference between the new Keynesian model and the Philips curve. And finally, just to repeat something, communication to the public

is very different than communication to financial markets, and also communication during crisis is very different than communication during normal times. In the context of crisis with the public, I think what central banks should do is to have a megaphone that speaks only about one thing as opposed to many things. So, no talking more than inflation, but rather not talk about inflation; talk only about the things that matter most directly to people's behavior.