General Discussion: Balancing Labor Markets and Inflation

Chair: Maurice Obstfeld

Amir Yaron: Thank you, great paper. Two comments on empirics and theory.

One on the cross section of these countries, the late and early, a lot of it depends on energy exposure, particularly coming out of COVID. The other one is their FX position coming out of COVID. Taylor himself had a 2001 paper stating you shouldn't really have FX in your Taylor rule, but when you actually look at surveys of countries, about 50 percent of them did in their DSGE models, at least the small open economies, some of the ones that you had on the graph.

The other big factor is how aggressive some of these countries were in whether they had adjustable mortgages. That is a big factor in terms of how aggressive each country went because it's much more potent when you raise interest rates and their vast adjustable mortgages.

On the theory part, the main story is that a central bank with a lot of reputation that has credibility can afford to do a look through, and expected inflation doesn't go up and therefore

doesn't have to do as much or can be late while the other one without credibility goes slow, immediately inflation expectations go up and in fact it hurts the economy.

And my question is whether after a success, when a credible central bank is able to do a look through, does it need to replenish credibility? I kind of question that. If you have a successful look through, do you deplete your credibility or do you increase that credibility? And so the definition of what is successful is kind of important. And if tomorrow we had another COVID event, will inflation expectations go up? Will inflation expectations go higher than what we have seen through COVID? In fact, your paper was interesting enough to me that I ran your regression of trying to look at inflation expectation on the left-hand side by five-year, five-year break evens on PCE to see the effect of current inflation to see whether the loading on today's inflation has increased in explaining expected inflation, if there is a loss in reputation. When you run it post COVID, at least for the U.S., you see a decline, so it seems like credibility has increased. So, I think that part—whether credibility depletes or not—is really important. And in order to think of depletion or not in general, in a model about credibility, you really need to formalize credibility modeling, and that kind of requires deviation from full rationality, et cetera, et cetera, which you guys understand. So, thank you.

Joachim Nagel: Thank you very much. It has just been pointed out that, ultimately, it all comes down to credibility. And in your paper, you used a 30-year track record to find out if there is central bank credibility. The ECB is now 27 years old. So, what do you think? How much time do you think might be sufficient to conclude that the central bank has enough credibility? The second point I would like to make is that last year, in 2024, there was a BIS paper about targeted Taylor rules. And this paper

pointed out that it's not just the response, but also the timing that is important. So, what balance do you suggest between response and timing? Does it make sense to wait and see? Or is it perhaps better to estimate and then act? What is your understanding here? What is the trade-off? Thank you so much.

Phillip Lane: Thanks for the very intuitive paper and the discussion. Let me just add a couple of wrinkles.

One, in the European context, we actually had imperfect credibility going into this. The market was convinced that we would not hit the 2 percent target, and the market was convinced that the nominal rate would remain around zero for many, many years. So, what was interesting and goes a bit to Jordi's point about the long-run rate, in early 2022, once everyone had reached a consensus that there was a significant move in inflation, which would not just be transitory, there was a big move in the yield curve. This partly was about what was going to happen over the next couple of years, but the biggest issue was the five-year ahead, 10-year ahead rate went from being around zero nominally to around two nominally, which is where we are now. So, in other words, the view was that you're going to have to make a kind of cyclical hike, which ended up being, like Jordi said, 450 basis points in our case. But on top of that there was this long-run reset of the average policy rate, which I think connects back to the fact that this was a re-anchoring.

The other element is, John Taylor wrote this over 30 years ago. And now with computing power, it's a lot easier to solve the fully-optimal policy path in a macro model. And this may be a terminology issue. What we do is we solve for the optimal path of policy in a range of models. And indeed, it's not about just the first decision you make. It's about the final decision you make. And this is where we start to see what we said in our recent

monetary policy strategy: when appropriate, we will be appropriately forceful or persistent. Because within that family of optimal paths you could either hike rapidly and then reverse rapidly, or you can hike more slowly, but then you're going to be more persistent.

And this relates to what you said in your presentation about historically the correlation between current inflation and one-year ahead inflation being really high. In this episode, in late 2022, our inflation rate was 10 percent. The one-year ahead was about 3 percent. So if you're trying to say, okay, should you be responding to 10 percent inflation or the one-year ahead inflation around 3 percent , you get a very different monetary policy answer.

In any event, I think this is a very relevant paper for what we do. But in the end, should our default at this point be the Taylor rule? Or should the default be some kind of a more general estimate or sense of what is the optimal policy rate path—not just the first decision, but the whole rate path? Thank you.

Emi Nakamura: So, to Jordi, let me just say thank you. I think a lot of the questions have centered around the issue of reputation. How do you measure it? How do you get it? How do you lose it? I think this is an issue where we have some inkling. Is it 27 or 30 years? I think we're not quite there with our understanding. But one thing I do want to emphasize, and something Jon and I have worked on before, is that these are rare events. So in our econometrics, we're used to running regressions on high-frequency things. But you think about the big events in the history of central banking, the high inflation in the late 1970s, early 1980s, in many countries around the world. It's not like we've seen these things many times before. So, I think it's something we have to come to terms with, that we as academics

and central bankers are dealing with a small sample. This also means that the people in the world, are learning about what our actions are from a small sample. And that, I think, really changes the game.

Kristin Forbes: Thank you. This is a very nice paper, and it's much appreciated in this international audience, not just to compare the U.S. to other advanced economies, but to bring emerging markets into the mix. So, thank you. Two quick comments or questions.

First, you start your paper with these nice comparisons of how monetary policy has deviated from the Taylor rule, particularly since 2008. You do this by measuring monetary policy using the policy rate. But as we all know, since 2008, central banks have been very creative. There's a whole set of new tools to adjust the monetary policy stance. Have you also looked at these deviations using broader measures of the monetary stance, such as the shadow rate? My guess is that would close a lot of the deviations, particularly in the lower bound era.

My second question: you have this nice set of patterns of early risers versus late risers. You argue that much of the difference is early risers had to hike more because they had less well-established credibility. I think that makes a lot of sense and is consistent with the differences you document between emerging markets versus advanced economies. The emerging markets raised earlier, partly because they had less credibility, so they had to act sooner and act by more. Have you also done this just for advanced economies? I think if you did that, you might actually see a different pattern. Amongst just the advanced economies with pretty well-anchored inflation expectations, the advanced economies that hiked later had to then hike more aggressively because they were more behind the curve and had to do more to

establish credibility again. I think that would be an interesting comparison to look at.

Carolin Pflueger: Congratulations on a great paper. I think part of the message that you're sending is that following a mechanical rule is not enough. I think we wouldn't be here if monetary policy was as easy as following a rule.

I wanted to follow up on Kristin's question that the link between the rule and reputation goes both ways. I think you examine one direction very nicely, but reputation obviously also depends on the observed central bank response to inflation and other economic indicators. This is particularly relevant when the sample is not that large, and there is learning.

Also, if agents in the economy are restricted to understanding a simple reaction to inflation, how would that modify your conclusions? Do you think that would push you back towards a slightly stronger optimal reaction to inflation, or would it have implications in terms of the lead-lag relationship with inflation? I think that would be very interesting, and I would love to hear some speculation.

Kazuo Ueda: I have a simple question for Professor Galí. This idea about long-term interest rate, real interest rate control is very interesting, but I wonder how you would like the central bank to control the long-term interest rate. We have something like yield curve control, but it comes with a lot of pains. Do you have in mind an equation which transforms your long-term rate rule to a short rate rule?

Pierre-Olivier Gourinchas: Two quick comments. First, following on Kristin, on the early risers versus the late risers, especially if we look at the EMs as the early risers. It is true that many EMs increased rates earlier and more aggressively than AEs, but at the same time, it's important to realize that we've seen a

lot of improvement in monetary policy frameworks in emerging markets since the global financial crisis. This is something that we're exploring for our next World Economic Outlook. In particular, Taylor rules coefficient estimates for emerging markets are becoming much more like those of advanced economies, with less weight on the exchange rate, while the weight on inflation decreasing and becoming closer to that of advanced economies. These findings suggest that emerging market central banks have built enough credibility that they can focus on output gaps more than just responding to inflation, and with long-term inflation expectations being less responsive to short-term deviation in inflation. So, that is also something that is in the background.

The second comment, very briefly, is I think one point in the paper, which I think is very interesting, is how you could have deviations from a simple Taylor rule when you have a particular combination of shocks. This is particularly relevant in the COVID episode where we had a combination of strong demand coupled with supply constraints. And the result of this was a sharp steepening of the supply curve. So, when you have a sharp steepening of the supply curve, you can tighten aggressively and you have a very low sacrifice ratio. So, there is a case for deviating on the upside from a simple Taylor rule when you have this very steep supply curve. And that's something that I think calls for understanding better the sectoral composition of the shocks and the linkages between the different sectors. And I think there are a lot of central banks doing work in that space now.

Valerie Ramey: I just wanted to make the point that central bank credibility can affect not only expectations but also the structural parameters of the model. A key example I have in mind is the fraction of labor contracts that have automatic cost of living adjustments. Because of the high credibility built up during the

1980s and 1990s, the fraction of labor contracts with automatic cost of living adjustments fell dramatically over the subsequent decades. The fall in the fraction of contracts that are indexed could be a reason that we didn't have a wage price spiral like we had in the 1970s. Therefore, if central bank credibility goes down, you will see more indexing of contracts, and then you might not have such a good outcome when you try to bring down inflation.

Jordi Galí: Just very quickly on Governor Ueda's question. So, it is clear that the central bank is not going to control long-term real interest rates directly, and it's not in the spirit of my proposal to do that. The central bank will control the short-term nominal rate, the policy rate. But the idea is that the decisions about the short-term nominal rate, the policy rate, and the communications about the future path of the policy rate, or expected future path, must be such that the long-term real rate attains the value that the central bank believes is appropriate, given the current economic conditions. So, it's not a question of direct control, but of a policy framework that makes it possible to support the central bank's policy rate. And that's the idea of the central bank, to steer the long-term real rate, which is the relevant rate for households and firms' decisions regarding consumption and investment, hence aggregate demand, and hence output and inflation, at the level that the central bank believes is appropriate, given the circumstances.

Emi Nakamura: One of the themes that I heard in a number of the questions was that there are many things central banks today are conditioning their monetary policy on, and even more that they perhaps should condition their monetary policy on. Given the many nuances of the world, when should we raise interest rates, when should we not? That's a lot of what monetary policymakers spend their time doing. And the tension really is

that it is very difficult to identify shocks. So, for example, in the targeted Taylor rule paper, one of the emphasis points, and in our paper as well, is on demand versus supply shocks. But we know that distinguishing between demand versus supply shocks is very difficult, particularly in real time.

One of the challenges we emphasize is that credibility is very important, expectations are very important, controlling the long run is very important. All that depends on the beliefs of markets and of people in the world more generally about what you're going to do in the future. There's a tension that, on the one hand, simple rules and simple messages—like, we're going to raise interest rates if there's high inflation—are valuable in controlling expectations about the future. But at the same time, these simple rules lose all that nuance about different responses to different shocks. To me, that's a central tension in the world we live in.

Distinguishing between all these different shocks is not so easy, but at the same time, throwing out the baby with the bathwater, in the sense of saying we just have to respond one way all the time, is probably too much in the current world.