## General Discussion: Panel on Monetary Policy in an Uneven Economy

Chair: Lisa D. Cook

Ms. Kalemli-Özcan: I would like to direct my question to Kristin (Forbes). I'm wondering the implications of her reworking the playbook idea in a global uneven setting. And this of course relates to the point Maury (Obstfeld) made and Gita (Gopinath) made and Pierre-Olivier (Gourinchas) made before in terms of the two-speed recovery and how emerging markets can be very vulnerable moving forward. The example Kristin gave, the 2015-17 period in the U.S., how we started with the old playbook, raising the rates first and then unwinding the asset purchases, created a lot of destabilizing effects for emerging markets. You might remember from my 2019 Jackson Hole paper, there's an asymmetric affect in the risk premium with the normalization of the U.S. policy, where such premium went up during this episode of 2015-17 in emerging markets and went down in advanced countries. So, I'm wondering, going back to advantages Kristin put forward, maybe the new playbook is even better than the advantages she listed as it will be less destabilizing for emerging markets as interest rate increases will come second?

*Mr. Krishnamurthy:* I also am going to direct a comment to Kristin. I very much like the way you have synthesized the playbooks of central banks and what we have learned about QE over the last 15 years. I want to add one more point, which I hope you will agree

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with, which is that the impact of QE depends very much on the state of the world and financial market conditions. We saw this from the experience of successive rounds in QE after 2008, with the largest effects in the crisis and smaller effects later. We saw this again last year with the Treasury purchases and corporate bond purchase programs, and the impact in March 2020 relative to later. Now it strikes that this observation will change conclusions over the sequencing of policy as well as communication strategy. In particular, if QE is a financial stability policy tool that you step in during a market meltdown or a kind of illiquidity event as we had last March, that suggests stepping in during the meltdown and reversing QE as markets normalize. Communicating that type of strategy then may make the exit from QE smoother.

Ms. Gopinath: Firstly, I just want to reiterate what Maury (Obstfeld) said about vaccines and solving the health crisis as being probably the most important thing to do right now. So, while we are not talking about this at this conference, it is really the number one thing to address. Second, I wanted to ask the panelists, what have we learned from the experience of Japan in terms of the scale of QE that's been done? Because in comparison to the U.S., it's multiples of what the U.S. has in terms of the size of its balance sheet. And, so, what do we take away from it in terms of, should you be unwinding? How long can you keep this growing? How much more can you buy?

Mr. Bullard: I just had a comment for Markus (Brunnermeier) on flexible average inflation targeting. The U.S. is a leader in this policy. I do think it's going to be successful even in its first year of existence because we do have a big inflationary shock in the U.S. I think it is a great area for research, but practically speaking, it's going to be a five-year horizon of some sort. You could either look at a trailing five-year horizon, or you could look at a centered moving average with this year being the center and the SEP projections being the inflation rates in the future. And if you can make a case that you're averaging over that kind of timeframe, I think you can probably declare, at least at a practical level, quite a bit of success for a flexible average inflation target. That also gives you a metric for the situation where you might overshoot. What would it mean to overdo it here? And the last comment I would have on this is just that this is very closely, from

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a theory perspective, is a step toward price-level targeting. We didn't call it price-level targeting, but it's certainly a step toward price-level targeting. And I'd be interested to know what the differences are in the research world between actually doing price-level targeting versus doing flexible average inflation targeting.

Mr. Obstfeld: Well, I've never known what to make of Japan, and so I'm just going to whiff on that one, Gita. I wanted to pick up on something Kristin said and relate it back to the panel on fiscal and monetary. I'm not necessarily opposed to the idea of targeting, looking at the housing market appreciation and unloading mortgage-backed securities first when tapering starts. But since this is a central banking conference, I should point out that this is the kind of thing central bankers tried to avoid for decades, the idea that you would target specific sectors. And there's a debate over climate now, particularly in Europe, and it also gets central bankers into the political realm. It gets them into the fiscal realm. And so maybe from where we are, you do want to target housing, but there's a broader point that maybe it's not so great to be where we are in terms of the amount of private sector liabilities central banks have felt it necessary to buy.

Ms. Forbes: Şebnem (Kalemli-Özcan), great question. Any different effects of raising interest rates versus unwinding QE on global spillovers would be an important consideration—and I had initially thought would be a key part of my arguments today. But when you dig into the literature, it's hard to find evidence that one form of tightening has a bigger effect in terms of exchange rate spillovers (and other spillovers) than the other. There's a couple of papers that suggest QE might actually have a slightly bigger effect on spillovers, but that analysis is only done in a more recent period when there's more globalization, so you really can't compare apples to apples. Arvind (Krishnamurthy), your work has been hugely helpful in understanding all these issues. And I fully agree that QE in particular is state contingent in terms of how effective it is. That is actually quite important for this debate on unwinding, because if QE has a bigger effect when dealing with market disruption and volatility, then any unwind when markets are stable might have much less of an effect. In theory, that makes sense, but we just aren't going to know until it's been tested and tried, which is risky for any central

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bank. Gita, as for Japan, the lesson I think we learned is that it is hard to unwind QE. The Bank of Japan in 2007 did unwind a small portion of its balance sheet, but inflation was about zero at the time. So, it's hard to argue that's a model for other countries to follow, or an example we can learn very much from.

Mr. Brunnermeier: Let me just address a few points about Japan. Gita raises an important question about the size of QE. Like Arvind said, QE should depend on the state of the economy. Equally important, though, is to identify which sectors are balance sheet impaired or face a debt overhang problem. It might be the household sector or maybe the corporate sector. Depending on which sector's balance sheet is impaired one might want to buy mortgages or corporate bonds. And that leads of course immediately to Maury's point, political issues. Should central banks go into redistributions? I don't have time for that. Jim (Bullard), you're totally right. Essentially you raised a very interesting question. I haven't thought about the trade-offs between a trailing or moving average. That's an issue I have to think about more carefully. In any case, if you take the average of inflation over an infinity horizon average inflation targeting essentially converges to price-level targeting.