General Discussion: Monetary Policy in Times of Structural Reallocation

Chair: Janice C. Eberly

Ms. Eberly: Let me start with one question that follows in some ways from remarks by (Jing) Cynthia (Wu), just to ask the authors how they think about this trade-off that they've identified between, let me call it stimulus and reallocation. It struck me reading the paper that you're writing it in the context of monetary policy, but in principle, this could apply to a broad set of stimulus programs. So, are there aspects of the trade-off that you've identified that you think are unique to monetary policy, maybe Cynthia's discussion of alternative monetary instruments is part of the answer, or how are you thinking about the trade-off you've identified? Is it general, or what's specific to monetary policy? And I know Veronica (Guerrieri) is there, but a number of her co-authors are as well, so any of you should feel free to jump in.

Ms. Guerrieri: Clearly there is a huge role or room for fiscal policy in response to the pandemic that we advocated in our previous paper. Here, we just focus on monetary policy. And our objective was just to say, let's think about commercial monetary policy and think about the fact these are reallocation of labor, because we want to just warn people not to worry too much, if there is an expansionary monetary policy, about the danger of creating inertia in the economy, where there may be some long-lasting effect in the restructuring of the

economy. So, it's more like don't worry too much because there is another channel, and maybe we should worry, or not, is an empirical question, but it's not obvious that overheating is a problem in that dimension. Now, on the other hand, of course, there are a bunch of issues about that come from heterogeneity of agents that this model is silent on, and for which a different type of stimulus, especially peaceful policies is that important about this was beyond the scope of this paper. I don't know if Iván (Werning), or Guido (Lorenzoni) or Ludwig (Straub) want to add something.

Mr. Werning: I would just point out that the way we think about monetary policy is quite broad, but it would be distinct from certain policies that aimed to stimulate particular sectors and pick winners. That's not the focus of our paper. Such policies could obviously create a situation where you're hampering reallocation; we're focusing on a broad policy that would help facilitate price adjustments, wage adjustments. And, in extensions of our model, we also would consider a fiscal policy. We would think about broad policy that removes and helps with liquidity constraints. And I think also summarize a lot of the policies undertaken by the Treasury, as well as some of the policies by the Fed. So, I think those kinds of policies are not picking winners or holding back reallocation, but quite to the contrary as in our model, potentially helping with the reallocation process. But it's an important concern if we think more broadly of a wider scope of policy.

Mr. Prasad: My question is whether monetary policy can lead to inefficient labor reallocation, if the asymmetric demand shocks are not consistent with longer-term desirable labor reallocation patterns. Let's say the COVID shock leads to a temporary increase in the demand for some goods, let's say masks and hand sanitizer. And a decline in the demand for, say, restaurant services. You have easy monetary policy that leads to labor allocation, but then as the economy recovers, the shock sort of reverses itself. But now with tighter labor market conditions, you actually have a position where labor doesn't move back to the sector where there is rising long-term demand. So, you could have rising inflation and ultimately monetary

policy ends up with a problem on its hands, with rising inflation and inefficient labor reallocation. That is not necessarily what would be desirable from a longer-term perspective.

Ms. Gopinath: I was struck by the last comments that Veronica made about how monetary policy also needs to get relative prices right. I mean, that's pretty much all of international economics and, if you go to multiple countries and you have different shocks hitting different countries, the whole discussion about exchange with flexibility is all about getting that relative price adjustment when you have sticky prices in each country, but you didn't mention that. So, I was wondering why there were any particular reasons you see a big difference, and it will be great to know what that is. Secondly, just in terms of looking at the data now. If I look at restaurants and that's the sector where you have both unemployment gaps and at the same time, that's where in fact real wages are growing the most. Right? There's both a demand shock and a supply shock. So, I'm thinking of in your environment, how would you think of the current situation? Is that consistent with your model or is it a bit different?

Mr. Lorenzoni: I can take these questions. The first question is on temporary shocks. Yes, I think the motivation for thinking about reallocation was this paper by Nick Bloom, Steve Davis and others that argued that there may be permanent effects. So, you're absolutely right. If it's temporary, probably mobility is not going to play a big role. And I don't think the concern is very much with the temporary nature of the shocks, but we believe that there may be lasting effects that we don't even know how they're going to play out, but there's going to be a different economy when we come out of the pandemic. And the questions like, is policy that we're doing now preventing some of the structural reallocation that eventually would be beneficial? And that's the spirit of the exercise. On Gita's (Gopinath) comment, absolutely. International is, of course, a huge area where relative price adjustment is important. In fact, that Veronica cited a paper by (Pierpaolo) Benigno that was exactly motivated by kind of making the connection between a change with flexibility, and a change with adjustment in open economies. And

how do we think about it in abstract, in general, as an issue of getting relative places right in an optimal monetary policy context? So, yes, of course, we are aware of a big connection. And also the paper by Iván and Emmanuel Farhi on labor mobility in a currency union. And also there are interesting connections there. That's a paper about people moving across countries and here it is about people moving across sectors, but there are also some similarities there. And for sure there are more that we need to explore. The harder questions, like the question about the restaurants and about adding sectors, but there is at the same time supply and demand shocks going on. And again, I think Veronica mentioned that. We talk about sector *A* and sector *B*, but we don't want to interpret it narrowly as like larger industries. Within each sector, there's probably pockets where there is abundant demand, and pockets where there is instead a lack of demand and unemployment and the problem of how do you reallocate people and resources in general from one point to another. In general, yes, we can say we can relabel things then, of course, from a quantitative point of view, the degree of substitutability between sectors and the ease with which you can reallocate the resources from one to another will depend on the label that we decide to use. From a quantitative point of view, it will matter whether we think of mostly a problem of sector reallocation or mostly problems of reallocation between businesses or between different areas of the country.

Mr. Frenkel: My remark is not really a question, but rather a reflection; it refers to the relationship between *relative prices* and the *price level*. The author highlights the important point that large changes in relative prices may cause significant damage to the real economy if there are rigidities in the economic system. The data presented demonstrate that indeed, the changes in relative prices have been very significant. Therefore, given the presence of rigidities, the focus on the impact of these changes in relative prices on the real economy is indeed well-placed, and poses the question about the appropriate policy response. This brings up issues that are similar to those that were discussed in the 1970s in the context of the oil shock. There, the oil shock brought about a large rise in the relative price of energy and, due to rigidities, created significant recessionary pressures. Faced with this challenge, policymakers decided that monetary policy should be

eased significantly in order to facilitate and bring about the required rise in the relative price of energy and thereby bypass (or reduce) the difficulties induced by the rigidities. The unintended consequence was a dramatic rise in the rate of inflation. Thus, what started as a supply shock and a rise in the *relative price* of energy, got transformed through monetary policy into a rise in the *price level* and over time into an accelerated rate of inflation. This costly lesson should be kept in mind: monetary policy *should not* be the primary policy tool for dealing with the consequences of a supply shock. Instead, rather than accepting the presence of rigidities as given, and risking inflation through an excessively loose monetary policy, it would be more prudent and more appropriate to adopt *structural measures* designed to reduce the degree of economic rigidities and thereby increase the flexibility of the economic system. In the absence of rigidities the requisite change in relative prices can be brought about through the flexibility of wages and prices without causing a significant damage to the real economy, and without necessitating an excessive easing of monetary policy. Thus, policies which reduce rigidities and enhance the flexibility of the economic system, also reduce the need to rely on inflation as the mechanism which facilitates the requisite change in relative prices. In conclusion, we should not rely on inflation to adjust relative prices, nor should we justify inflation on the grounds that it helps to adjust relative prices. History has taught us that, unless checked early on, inflation must be avoided since it inflicts high cost on the economic system. With this in mind, it seems to me that the relevant question is not "what should monetary policy do *given* the rigidities," but rather "what are the structural policies that should be adopted in order to *remove* the rigidities and alleviate the excess burden carried my monetary policy." In other words, the rigidities should not be viewed as *parameters* but rather as policy-determined *endogenous variables.*

Mr. Furman: I was also going to ask the same restaurant question Gita did. So, I'll go to my second question, which is just understanding the role that downward wage rigidity plays and how important or not important a factor it's been at least in the United States over the last year and a half. First of all, there's been some evidence, and I'd love to see what the micro data shakes out, that people were able to at least

initially give some nominal pay cuts to workers in a way that they've been unable to in the past and so there may have been a little bit less nominal rigidity. At the same time, nominal wage growth overall actually continued at the same pace that it did prior to the pandemic. That's something very different from previous recessions where you saw nominal wage growth slow a lot in a way that probably was very constrained by the zero lower bound for many years after it. Here, it doesn't seem to have been constrained, in part, because you could lower, but more importantly, because those sectors that continued to employ people seem to continue to want to pay people. And so nominal wage growth has actually been sort of extraordinary. Given that fact I wanted to understand, does that diminish the importance of using price increases to generate the real wage cuts to get the reallocation if it seems like employers, especially in sectors like leisure and hospitality, didn't actually want to cut real wages, and weren't constrained by nominal wage rigidity.

Ms. Guerrieri: Let me first answer Jacob (Frenkel). I totally agree. We just bring to the table another element, an element of keeping an eye on relative prices. In thinking about the impact of uneven shocks, that we think is important, but this doesn't mean that we should forget about inflationary pressure. And, for that, it's absolutely important, I think, to keep an eye on the evolution of data and expectations, and make sure that expectations are well anchored. And, so, I totally agree with that. And, in response to Jason (Furman), first, it would be very interesting to have some more real-time micro data on wages, in the last month and year. And hopefully we will have this data soon to judge how much rigidity we have on our side. Two things I want to mention about the data. It's true that, for example, at restaurants now no one probably gets wages. It's difficult to find people working in restaurants. Right? So, this could be interpreted as contradicting, or against the argument that sectors that have been hit more heavily actually could have deflationary pressures. But, in truth, the way we look at that is that this is a sector that, in this moment, it's not anymore one of the sectors that is our *A* sector, the sector that is declining. But it actually is now a sector that is booming. And so, in a sense, the difficult thing about thinking about sectors in this

recession is that what you define a sector that is declining, and what is there for you to define a sector as booming is changing all the time, in response to the shock and response to the recovery. And so, in that sense, we probably would call right now, maybe, one year ago restaurants were clearly a sector with low demand, (but) right now, we would probably think at sector *A*, the sector restaurants, is a sector that instead is picking up and booming. And, so, it's a question of thinking of across sectors.

Mr. Lorenzoni: I wanted to just add a comment on Jason's observations. So, downward rigidity, of course, in our model, plays a big role. And it's a very stark assumption. I think our point goes through more generally, if the argument that we make is that, in general, it is harder to adjust relative prices by having deflation in some sectors, than by having inflation in some sectors. And that actually connects to Gita's comment about international. Right? It's a similar situation as in Europe a few years ago. It's hard, if you want to readjust relative prices, it's much more costly if you need a big deflation in this region, and stable prices in this other region, then if you can allow for some inflation in, say, Germany, and then don't get it in Italy and Spain. So, I think that's a similar spirit. It's more costly. If you want to readjust relative prices, it's more costly to do it by having enough slack in the sector that pushes prices down, than by having a bit of inflation in this other sector. And then, in that sense, downward rigidity is doing this symmetry in our model in a very stark way, but I would interpret our message in a broader way.

Mr. Werning: I think, like Jason suggested, we really want to wait for the micro evidence, because it's very well known that previous wage movements that appeared to show flexibility, had huge compositional effects. And I don't know about the anecdotal evidence, but that's a major concern with any quick look at the raw data right now, I think. Because this shock surely has huge compositional effects. The other point I want to make is we use the language of sectors, because we have a two-sector simple model to try and provide a simple set up to be clear, but a lot of the relocation is within sectors, as Davis and co-authors have argued. So, we're interpreting our model. I think we

can interpret it more broadly. The restaurant business is reallocating, some things are shutting down, others opening up. The way they're doing business is changing, etc. Definitely you see new people. If you go to any restaurant, there's new people there. This is not just a painless coming back. In that more broader sense, just re-emphasizing what Veronica says, during the shutdown, maybe you want to think of restaurants as sector *A*, but maybe now you want to think of it as sector *B* in our model, somewhat. In a richer, more dynamic model, with more sectors, etc., you wouldn't have to make these artistic reinterpretations of the model. But I think, at this point, it makes sense to think of it that way.

Ms. Boushey: I think my question follows up on your point, Iván. I was trying to think about what if labor isn't mobile *quickly* across these sectors? Can you walk through how the time dimension might play out? People needing to be trained up for different kinds of jobs? That may not be true if it's within sectors, but certainly across sectors, and curious how you all thought about that.

***Mr. Gorodnichenko*:** The model focuses on relocation of labor. And I think it's very, very important, but, at the same time we should also think about capital flows. Capital has to move from one sector to another, from one firm to another. And we know that expansionary monetary policy helps capital markets to run smoothly, have low borrowing costs, support resale prices, and so on. I was thinking that maybe in a more general model, where it's not just labor, but also capital, there is a stronger case for an expansionary monetary policy in current conditions. I was wondering what the authors think about this.

Ms. Guerrieri: Heather (Boushey), I think that, of course, we have to think carefully. We didn't bring the models to the data yet, but we want to think about within which sectors here it's easier to have mobility, of course. It's not that if you work in a restaurant as a waiter, you are going to become a doctor quickly. But you may go from a restaurant to work as a cleaning person or something. So, of course, it is an issue of thinking about which type of reallocation. And then this is important in terms of empirical analysis, and to get the question right

Mr. Lorenzoni: I can answer Yuri (Gorodnichenko). It was a question about capital mobility. You're absolutely right, that capital mobility would, I think, go in the same direction.

Mr. Werning: To emphasize that what Heather brought up is exactly what we do in our model, relative to the previous literature. Some literature had multiple sectors, and essentially assumed labor's perfectly mobile. So, that's the work that Veronica mentioned, by Michael Woodford. And what we're doing is exactly putting in that it's costly to move people. And that means they need greater signals from prices and wages to get moved.

Mr. Obstfeld: This follows up a little bit on Gita's comment. The ECB just completed a monetary policy review, the result of which was to slightly increase their inflation target. And your analysis suggests that if we think about the optimum currency area literature, we never really asked what is the mandate of the central bank that is running the currency area? The Fed, of course, has a dual mandate. And that was very clear in Chair Powell's remarks. The ECB's mandate is price stability only. And it strikes me that, although this was a political decision for Europe, if you want to have an optimum currency area in European conditions, having a central bank with only that one mandate, price stability, when society cares about unemployment, is a really bad decision.

Mr. Lorenzoni: I completely agree with Maury (Obstfeld) about the dual mandate. It's surprising that it seems easier to convince the ECB to take on climate change than to add unemployment to their objectives. But that is it.

Mr. Werning: Thanks for commenting. I think it doubles up with Gita's great comment. There's a lot of synergy between the international ideas. And, these ideas, we can go back and forth. Thanks.

Ms. Guerrieri: Exactly. Totally agree. Thanks.