

General Discussion: Pass-Through Efficiency in the Fed's New Monetary Policy Setting

Chair: Peter Blair Henry

Mr. Song: Since the financial crisis broke out in 2008, major central banks have adopted quantitative easing monetary policies. Some of them have gotten a very good result and made the economy recover very successfully, like the United States. But some, like the European Central Bank and the Bank of Japan, maybe are not very successful and they also have taken some negative interest rate policy. The arguments may be that there is little room for the central banks to further implement easy monetary policy. They think that maybe their fiscal policy will play a more important role in making the economy recover soon. Do you think this is right? Do we need fiscal policy to be more important than the monetary policy to have the economic recovery for the global economy? If so, how can the central bank coordinate its monetary policy with the fiscal policy for the global economic growth?

Mr. Kohn: I thought this was a terrific paper. Understanding, getting into the plumbing and how policy is passed through is critical, and then having a diverse set of depositors brings some reality or realism to it, and hopefully diverse banks and other things will come along with the model. It's a great start. I do want to underline a point you made in the paper, and that Minouche Shafik made, that these regulations of money market funds and whatnot have costs, but

there are tremendous benefits here. The point of the regulations is to internalize the externalities, particularly the externalities of financial instability. One question is whether some of the dispersion and lack of pass-through we see now is actually a result of internalizing externalities. It's not what we had before where dispersion was arbitrated out, but we found that what we had was sort of illusory liquidity that disappeared in the crisis, and maybe the sand in the gears is giving people a little more realistic view of how liquidity works, even though there might be too much sand in some cases. Second, of the things you list that we might do to tweak the regulations or to raise the RRP, how would you sequence them? What would you do first? What's the most important thing you think would be most helpful? And the RRP themselves have costs, as you note in the paper, because they promote disintermediation from the banking system and hurt some depositors and presumably loan customers of the banks. As a policymaker, how would you prioritize what to do?

Mr. Goodfriend: I think my question is closely related to Don Kohn's. There's a sentence in your paper which says, "With regard to the banking sector, we do not see much reason to be concerned about the potential adverse impact on financial stability of a heavily used RRP facility." I'm willing to go along with that, but what I'm worried about is if you used the RRP facility heavily, you're pulling money market rates up closer to the interest on reserves rate. The key feature of U.S. money markets is that they are net suppliers of funds to the banking sector; banks take up the wholesale funding and thereby pull money market rates up with Fed policy. If you tighten the interest on reserves spread with RRP rates, then you're giving lightly regulated money markets an advantage relative to heavily regulated banks, which must take up wholesale funds at a larger spread below interest on reserves to cover their required leverage ratio costs. In so doing, a tight spread would tend to disintermediate banks and weaken financial stability.

Mr. Krishnamurthy: Let me offer some answers and then turn it over to Darrell Duffie for further ones. First, I thank Minouche Shafik for her discussion. Many of the points she made were from the U.K. perspective and it was reassuring to see that the factors she

identified are similar to what we have identified for the United States. So in that sense, her discussion confirms some of the analysis we went through. Let me respond to a couple of the comments. I think we agree with both Minouche and Don Kohn about the balance between regulation and costs, and what we're focusing on in this paper is pass-through. For example, you mentioned money market fund reform, and our take is that this a net benefit. Now the reform has consequences which we have seen over the last few months. It increases dispersion and creates an increased demand for government paper relative to private paper, and that changes the mix of funding that's available in the world and also changes market rates. So in that context, further steps to reduce dispersion, for example, Darrell in his talk mentioned expanding the supply of T-bills, would help. The RRP facility would also help in this regard. It increases effectively the supply of government paper when dispersion is rising. So our analysis asks if there are additional tools that are in existence that can counteract some of the negative effects on dispersion, for example, of the regulation of money market funds. But it's certainly our view that on net money fund reform has been a benefit. This answer is also similar to the one I would give Marvin Goodfriend, who points out that the RRP facility disintermediates. I think that's right. But in the process of disintermediation, it's increasing competitive forces. On net, that's increasing pass-through. From our analysis, it seems that's a good outcome. Darrell, do you have more to say?

Mr. Duffie: Don Kohn asked, in terms of a practical policy maker's position, what sorts of things could you actually do and how would you sequence them. Minouche Shafik described that in the course of one month the Bank of England has changed the supplementary leverage ratio rule. I think that would be quite feasible to do in the United States; feasible I think both from the viewpoint of implementation and also politically. If for some reason, that's not possible, the next step—which might take a bit longer—would be to raise risk-weighted capital requirements so that the supplementary leverage ratio rule is simply not a consideration for banks when they choose what to put on their balance sheets. Arvind Krishnamurthy already mentioned the issuance of more Treasury bills. That's not the Fed's decision, as a policymaker, but the Debt Management Office of the

Treasury, I would say. Also, looking ahead to the paper that Jeremy Stein, Robin Greenwood and Sam Hanson will present, I would say that's somewhat of an easy decision to make, in terms of results, for the Treasury Department. I also mentioned in my remarks that the private sector could pair with the public sector to provide better market infrastructure for the repo market that would cure some of these unnecessary intermediation frictions. And that's been happening in fits and starts. Those are some of the near-term feasible improvements that could be made.

Mr. Spriggs: I want to follow up on the last question and point it to what you're telling us is a lack-of-competition problem. But, as the previous question suggests, do we want competition from an unregulated versus regulated sector; or should we be focusing, as many of us are concerned with the size of banks and concentration, on regulations to create more competition by breaking up the concentration in the regulated market? It doesn't seem to me that—I share the concern—the best answer is, let's have unregulated actors create the competition; instead, let's have regulated competition to provide the safety in the system, and let's figure out a way that we can increase regulated competition. That's what I'm hearing, I hope.

Mr. Hoenig: I just have to ask the question in terms of the movements the Bank of England has taken on the supplemental leverage ratio. I think it first assumes you are at a binding level for the supplemental leverage ratio, and as you then engage in these market transactions, you are taking assets out, putting them in the central bank, putting new reserves in their place. As these reserves are engaged in new asset acquisitions, you would be migrating to a higher risk type of asset over time. This, in a sense, is indirectly undermining your financial stability goal as you weaken the role of your leverage ratio. I think you need to be mindful of that as you move this along because then there will be increasing pressures to weaken that leverage ratio further over time as a binding effect continues on. I think that's where the assuming away the importance of financial stability may be a very unhealthy thing to do for the long run, and I'd just like your reaction to that.

Mr. Reis: Two related questions. First, you didn't consider as a policy option allowing nondepositor institutions to hold reserves at the Fed. I'd like you to discuss the advantages and disadvantages of that from the perspective of your paper. I can see some pros and some cons, but relative to your proposal it seems like a very direct policy to address some of the issues that you raise. Second and related, take as given that maybe the supply of Treasury bills will not increase in the near future. Given the comments earlier by Chair Yellen, there's an expected decline in the balance sheet of the Federal Reserve and therefore a contraction in the amount of reserves. Would you, therefore, forecast that, say 10 years from now, if reserves get back to their old level, wouldn't the pass-through then get even worse? Won't monetary policy be even more difficult and imperfect in its pass-through if there are less reserves out there?

Mr. Carstens: I appreciated very much both the paper and the commentary. Both pretty much went to what has been called the plumbing of the money market system. Now, having a broader view, this pass-through discussion is basically precisely only if the problem is effective or not and what are the impediments of the revelation. I would say it's a very pedestrian type of analysis. I think that the very important role of monetary policy implementation is, let's say the expectations challenge. If the Fed wants to increase the fed funds rate and wants to avoid at least short-term rates in the market, I think in most cases a simple announcement could do most of the cure. How do you weigh the expectation model of the market versus the flow analysis because, as we know, the price of an asset can change without a single transaction taking place. So, how do you balance? What is your opinion about this relatively important challenge?

Mr. Krishnamurthy: Let me answer a few questions and then turn it over to Darrell Duffie for some other answers. To Bill Spriggs' point, in our analysis, search and matching frictions, and imperfect competition lead to dispersion and we study the utility of monetary policy tools to reduce dispersion. If there are other ways to reduce dispersion that should also be studied, so I don't think we disagree with anything you say. Our analysis is more, we've had some new tools developed over the last few years, and the question is what is the utility of these tools going forward, and our answer is there is some utility

to these tools. Let me also take Ricardo Reis' question. Ricardo asked is there a benefit to offering reserve accounts effectively for nondepositor institutions, and the answer from our analysis is yes. To some extent, our analysis of the RRP facility points this out. Changing the supply of T-bills will also have similar effects to offering reserve accounts to nonbank institutions. There is a policy proposal by some economists from the New York Fed who have suggested a segregated balance account, which is another way of allowing nonbanks to have reserves at the Fed. While we don't look at this explicitly in the paper, I think our analysis would be very similar to having more T-bills in the system, and I think it would be a net benefit. So I think we're broadly in agreement to what you said. The other question you asked is about the evolution of policy going forward. Rather than the balance sheet size issue, I would point to the expected changes in rates as monetary policy normalizes. One of the things that we know both empirically as well as through the model's analysis is that as rates rise, spreads will rise and dispersion will rise, and that will have attendant effects on pass-through, and in this circumstance some of the facilities we study might be additionally useful.

Mr. Duffie: First, let's take Tom Hoenig's question about the efficacy of relaxing the supplementary leverage ratio rule. I'm not sure I understood entirely your analysis, but the analysis that we do in our paper suggests that as the supplementary leverage rule binds, financial institutions shift more toward risky assets, not more toward safe assets. And that's because of the distortion associated with the shadow price for balance sheet base for risky versus safe assets. If you require the same amount of capital no matter how the risk, you're going to get that kind of distortion. Turning to Governor Carstens' question, on the role of communication of central bank policy on the one hand versus the plumbing, and the pass-through of those communicated rates into money markets, there is no doubt that good communication adds to the effectiveness of monetary policy. And as we say in our paper, there's no doubt that the Fed can, in its current monetary policy framework, move rates up when it desires to do that. The question that we're addressing is not whether average rates in money markets will go up. The issue is, because pass-through is inefficient, you're getting more dispersion across markets. So you

have to move the policy rates even higher than you otherwise would, if pass-through is weak. So, communication and pass-through efficiency are complements to each other. Good communication and good choices of when to move the policy rates, and then getting more efficient actions from those communications by better pass-through. Some of that improvement in pass-through is pedantic, you know, plumbing related. Some of it is policy related issues that, as the discussion has suggested, have a wider bearing and involve trade-offs. But I think working hard on both is very important.

Ms. Shafik: Responding to Tom Hoenig's question: You're quite right that if we simply removed central bank reserves from the leverage ratio and mechanically did that, it would mean that the nominal amount of capital that banks would have to hold in order to meet the leverage ratio standard would fall. That was not the Financial Policy Committee's intent when they made this decision. So we will recalibrate the leverage ratio so that when you take out central bank reserves you will still achieve the same level of financial stability that we had intended to achieve when we initially set the leverage ratio. So we will recalibrate to compensate for that effect.

Mr. Signorini: The issue has already come up in the other questions, the issue of the leverage ratio. The paper assumes the leverage ratio is normally binding, and you say it's consistent with the observation of market behavior. But as you're surely aware, at the international level the introduction of the leverage ratio was seen as a complement, not as a substitute for the risk-based capital requirements. So, quite apart from any unintended consequences in terms of transmission of monetary policy, it was not intended that the leverage ratio normally should be binding, for exactly the same reason that you just mentioned—that it would be a complete distortion. It probably boils down to an issue of the correct calibration. If the calibration of the leverage ratio is moderate, then the distortion side effects are contained. As it goes up and up, then those distortionary effects, the trade-off, changes in the wrong direction.

Mr. Ingves: To Darrell Duffie and Arvind Krisnamurthy, in your paper you say that an alternative to the leverage ratio would be to jack up the risk weights and kind of run the system having the risk

weights binding instead of the leverage ratio. Well, that certainly is fully possible to do, but then the most likely thing to happen would be that the banks turn around and say we love the leverage ratio. So, the issue doesn't go away. My question then is what kind of risk weights then would you have in mind?

Mr. Duffie: To Federico Signorini, thank you—I think we have a common view on that. Stefan Ingves, here is an issue of private benefits versus public benefits. I agree with you that the banks would not be happy with either form of increases in capital regulations. With respect to the safety and soundness of the financial system, a given amount of capital, assuming the risk is held the same, it is what it is. Whether you move leverage-ratio-based capital up, or you move risk-weighted-asset-base-capital ratios up, in both cases you're getting safety and soundness and bank shareholders are going to bear some of those costs for making the bank safer and improving the value of debt. The question that we're addressing is where do you get the most action for moving the capital ratios up, in terms of social benefit? As far as pass-through, the supplemental leverage ratio rule is causing some pass-through distortions; and separately, although not in this paper, we could argue, I think I could argue at least—Arvind can tell me if he agrees—that you get more bangs for the buck in terms of financial stability also by using risk-weighted capital requirements. By the way, I'm not actually sure that the banks are confident that it's binding. They're worried that it may be binding; they haven't done the sharp calculations necessary to be sure of that. But the evidence that we suggest in our papers does seem to suggest they're behaving as though it's binding on them and causing these distortions.