

General Discussion: Redistributive Monetary Policy

Chair: Stanley Fischer

Mr. Geanakoplos: I may be peculiarly sympathetic on this subject, but I thought both the talk and the discussion were wonderful, and I just want to elaborate on one of the many cycles to which Markus has referred. It is important, and I would suggest it might help guide both prudential policy and monetary policy. I refer to the leverage cycle, a subject I worked on 10 years ago and actually spoke about two years ago here at the Jackson Hole symposium. The idea of the leverage cycle is that you can start with assets at some level, and typically borrowing is much smaller because the loan-to-value ratio is low, but when volatility stays low for a long time, and there's innovation, the loan-to-value ratio rises. And the crucial thing that I think is sometimes overlooked is that higher loan-to-value ratios raise the asset prices. That's the critical thing. Higher loan-to-value ratios raise asset prices and cause bubbles. And then, with a higher-valued asset, you can borrow further at the higher-percentage, loan-to-value ratio, so the borrowing goes up twice.

Then, when there is some bad news, maybe not even terribly bad news, that causes the asset prices to start to fall. Just as our discussant said, the leveraged buyers, the optimists, they're the ones who particularly like the asset. That is why they leverage. They're the ones who lose all the money, so the best buyers suddenly disappear and

then the most important thing that happens after that, in the deleveraging, is not just that there are people in debt; it's that the new loans are at much lower leverage. And the people who are left to buy can't borrow anymore. The down payment on a house goes from 20 percent to 1 percent to 50 percent, and so the new buyers can't get loans and prices collapse even further.

You have a huge debt, and a low asset price, and when you're left in that situation, really the only thing that we can do is to get rid of some of the debt. It's the only way to have a quick resolution to the problem. You get rid of the debt by letting people default in a hurry. We've chosen not to do that. We've left people in their houses for three and four years, who have defaulted. You can forgive the debt, which I advocated in 2008. You can make the lenders better off if we had forgiven the debt in 2008 or 2009. Forgive the debt of people who haven't defaulted yet, so no moral hazard.

Another approach is to inflate away the debt. So my point is that the standard ways of getting rid of the debt overhang, we've ignored; and I think what we need to do is to focus on preventing leverage from rising in the future, not by limiting banks, but by limiting the borrowing of households, limiting the loan-to-value ratios on any assets. And secondly, we have to find resolutions to debt right away and not ignore them.

Mr. Hatzius: I have two brief questions for the authors. First, I'd be interested whether you could say a little more about the monetary policy rule that you have in mind. Essentially, what's on the left and what's on the right? Second, you say there is a high risk of both inflation and deflation, essentially in the aftermath of an asset price boom. Would you agree that in practice, in the aftermath of these asset price booms though, we've generally seen deflation risks, rather than high inflation?

Mr. Evans: There is a lot of discussion about monetary policy implications here. Could you clarify what comes out of the theory? You put a bright-line focus on deflationary spirals, so in theory, is it the case that the Friedman rule is optimal? One thing that we like to ignore from so many of these theories is that optimal policy would

have perhaps -2 or -3 percent inflation. And so is it inflation relative to expectations that is the problem, or is it actually putting a bright line on zero? That's a hard thing to get. And if in fact, it's inflation relative to what was expected, you're going to have a lot of periods where that's going to imply these types of effects, which is good for the empirical analysis because you've got a lot of refutable implications to work with.

Mr. Woodford: I very much endorse the authors' call for focusing more on heterogeneity and financial frictions in monetary modeling, which I think is going to add importantly to our understanding. I think though that the presentation maybe overemphasizes how much of a difference this analysis makes for traditional doctrines. It seems to be presented as if a point of view which, a traditional point of view that separates thinking about financial regulation from thinking about the problem of monetary policy is one that would ignore the possibility of this Fisher deflation spiral that actually connects the two things. And I don't think that there are any traditional doctrines about what a central bank, which is only focusing on price stability and not thinking about what financial stability, would be doing that would, in fact, allow a Fisher deflation spiral. An inflation targeter—that is, someone following a Taylor rule, a traditional monetarist who targets nominal GDP—would not allow that spiral to occur. They would in fact hold the monetary base constant in the face of this deleveraging, which increases the demand for base money, and that is what is being assumed, in fact, in your model. But that is not at all traditional monetary policy.

Mr. De Gregorio: The authors focus on the separation of, and interaction between, differing concepts of stability. I would like to know whether you can also distinguish among the instruments. You may still have interactions between price stability and financial stability and sustainability, but perhaps you can use the required instruments separately. I am following Mike's point, I believe, that when you do see a debt spiral or Fisher deflation spiral, you still have monetary policy; you can still use policy instruments separately. Perhaps a complication arises with debt sustainability. When you appeal to the price level theory, then the separation of instruments may be more complicated.

Ms. Malmgren: The paper opens the possibility that the redistributive aspects of monetary policy are important, and that is due to transfers of wealth and risk between productive and nonproductive agents. But if you have a loss that is so large that it requires a historic, systemic bailout, I think you are no longer a productive agent. And if that is the case, then we have to think about prices falling. At what point can another productive agent come in? In your presentation, you noted that it is dangerous when prices are falling. But perhaps the business of prices falling is the business of reallocating wealth and assets to more productive agents, which raises the question, what constitutes an excessive price fall?

Mr. Redrado: One of the key conclusions I take out of the paper is the need to complement traditional monetary policy simple rules with a more complex reaction function that takes into consideration rebalancing monetary objectives with putting in par financial stability and macroeconomic stability. In particular in Asia and Latin America, we have been doing that for a number of years, looking at how to implement macroprudential rules with open market operations, and with foreign exchange operations. This involves basically having an overall view of how to deal with financial stability. In particular, I wonder if you have looked at the effects of capital inflows and outflows in our countries; that is, the effects on asset prices. These dynamics have led us, as policymakers, to come under pressure to use unconventional tools, in order to smooth the trend of inflows and outflows and their effects on asset prices and financial stability in Asia and Latin America.

Mr. Spencer: I believe my question follows up on the preceding question. The move away from separate policy assignments makes a lot of sense, but when you come from a practitioner's point of view, the implications for institutional arrangements are not so clear. For us, for example, price stability is for monetary policy and financial stability is for macroprudential policy. If you are considering blending them, I would be interested if you could elaborate on what you think the implications are for those institutional arrangements for governance and objectives. I think it is pretty clear how, with monetary policy, you can have a secondary objective of financial stability where policy

responds to extreme asset prices. But on the financial stability side for macroprudential policy, there's a real question about how you can use macroprudential policy for price stability objectives, that is, for traditional monetary policy objectives, if there is no justification in terms of a financial stability problem. In our case, we are currently grappling with this issue of objectives and governance for macroprudential policy. So, I would be interested in any comments you have on governance arrangements that might flow from your model.

Mr. Taylor: I found both papers to be fascinating and interesting, but one of the questions about monetary policy is: what difference they would make, compared with other, simple models (financial accelerator models, etc.)? One thing that I think has been useful in the past is a kind of robustness study. You take some simple rules, see how they work and build a model. Maybe it could be a model that combines the theories you're talking about. What we have seen from these kinds of robustness studies is, surprisingly, that simple rules tend to work pretty well. It would be very interesting to see if that's different in this case and in what way.

Mr. LaVorgna: My question is for Markus. How much do you think the volatility paradox might be due in part to imperfect measures of prices? The Federal Reserve focuses on traditional goods and service inflation, and has excluded asset prices for understandable reasons, but what kind of scenario would perhaps evolve if a broader measure of prices were considered?

Ms. Coronada: This is a question for Amir. I'm very sympathetic to your views on heterogeneity in households, and the drivers of debt, but what's nice about the BruSan approach is that there's an aggregate driver of the buildup of the imbalances. So you start with the premise that OK, you've got this house price decline, but what causes the house price decline? What causes the excessive build up and then collapse within your framework?

Mr. Brunnermeier: Yuliy and I would very much like to thank Amir for his discussion. We totally agree with him that one has to look at redistribution within and across sectors, depending on which sector is impaired. Right now in the United States, it is primarily

part of the household sector whose balance sheets are impaired. In the 1990s in Japan it was the corporate sector. Section II of our paper documents this fact.

Let me try to address at least some of these questions given the time constraint. I agree with John Geanakoplos' reference to the leverage cycle, which also arises in our setting. Jan's comment stressed the importance of deflationary risk. Our framework outlines the intricacies of the Fischer deflationary spiral. However, inflationary risks are as high as the deflationary ones especially when one incorporates fiscal debt sustainability considerations. Deflationary and inflationary forces push strongly in opposite directions and make the system difficult to govern. Hence, simply focusing on one force would be a big mistake. Concerning the monetary policy rule, and what's on the left side, and what's on the right side: it is a little bit difficult, because you have not only one interest rate—you don't have only one left side—you have to incorporate other components as well. In particular, what you would like to have are some proxies for the risk premiums, term spreads, credit spreads and other spreads; and averages over spreads should be part of any monetary policy rule. We have not done a lot of robustness checks on this framework, so we just see that the risk premiums shooting up.

Charlie Evans focuses on the deflationary spiral. Again, I don't want to emphasize only the deflationary spiral. That is one part of the story, and the other, the inflationary component, is equally important. All results in our framework are relative to expectations. The Friedman rule has to be modified as the central bank pays interest on reserves in our setting. Also, there is no price stickiness in our baseline model. Ideally, one would like to merge our "I Theory" framework with the New Keynesian framework with price stickiness and develop a meta model. We decided as a first step to switch off price stickiness altogether and study this polar case.

Mike's question raises a very good point. If one purely focuses on inflation targeting, one would also take care of the deflationary spiral. Our analysis adds to this point that there are different ways to conduct monetary policy with different redistributive consequences. An interest rate cut causes different wealth effects for banks than

forward guidance. The former widens the term spread, while the latter narrows it. In a model with heterogeneous agents that focuses on financial frictions the distribution of wealth matters and the form of monetary policy can lead to different outcomes.

Philippa Malmgren's question of what is a productive agent is important. It can be that borrowers were not truly productive but were simply riding a bubble. A price drop might then be simply a correction. However, there is still the possibility of an overreaction. My philosophy essentially is that you want to design a system in which bubbles burst early on. In other words, one wants to make it easy for the market to correct itself very early on.

Several people raised questions about the implications of our framework for the international aspects, like capital inflows and outflows. We have thought about it a bit. We have primarily thought about a small, open economy and its problems, how to deal with capital inflows and outflows in connection to monetary policy.

Some questions are concerned with the excessive buildup of risk. Yuliy and I think that the volatility paradox and financial innovation contribute to it. We have not finalized our thoughts about how this would then affect the composition of the Consumer Price Index. We were focusing on the connection between the volatility paradox and asset price and credit growth. When asset price volatility is very low, debt levels rise making the economy vulnerable to financial and potentially price instability.

