General Discussion: The Routes Into and Out of the Zero Lower Bound

Chair: Stanley Fischer

Mr. Hall: First of all, I certainly don't want to start a fight over this question of the role of banks on the business side. The story I'm trying to propagate works perfectly if you bring banks in there too. So I'm certainly going to study these pictures with that in mind. The reason I've looked to the stock market to try to infer something about discounting is that I feel strongly intuitively that the same mentality that resulted in the tremendous drop in the stock market would also influence investment decisions in firms just because they apply some discount rate and they become very cautious and risk adverse in a time like 2008. I use the stock market because finance has made it clear that the variation over time, the volatility of discounts must be very high. John Cochrane's presidential address to the American Finance Association a few years ago nicely reviewed that whole point, but again I really want to be very clear that everything that Hyun said about banks, I find very supportive. It's my West Coast bias I think, where banks don't matter, that was affecting me. I plead guilty completely to the notion that I didn't bring in any discussion of the financial vulnerability of the U.S. economy as of 2007 and all those topics, and also did not pursue the question of why real estate prices have risen so high. That is just a question of comparative advantage. You know I'm fundamentally a macroeconomist and a spectator on the finance side, so that's very much the philosophy of this paper, to say something happened, it's been well documented, we really understand it but let me try to contribute to the question of why it had this big effect on GDP.

Mr. Smets: A question about New Keynesian Phillips curve. You argue basically that it cannot explain the big output gap and the subdued inflation response. And of course we have to be aware of the implication of the New Keynesian Phillips curve in that what matters is not the current output gaps, but the expected future path of all output gaps. So, one explanation for why the inflation response may be subdued in addition to price stickiness is that basically this sort of persistent effect was not foreseen in the price setting. There is a paper by Marco Del Negro and co-authors at the New York Fed that actually basically shows that if you put in a financial shock the way you've calibrated, or the way that Hyun has shown, and you run basically the standard New Keynesian Model that they have there, that you can explain both the persistent gap and the very subdued inflation response.

Mr. Bullard: I thought the strength of the paper was to talk about integrating Diamond-Mortensen-Pissarides with sort of New Keynesian macro. One of the things that Carl Walsh, who was cited in your paper, does, is put together an analog unemployment gap and relates that back to monetary policy. So, with the FOMC putting more weight on unemployment, where do you come down on that kind of issue like, would there be an unemployment gap like the one that Walsh finds in your theory and how would that relate back to monetary policy? I couldn't quite get that from reading your paper or listening to the presentation here.

Mr. Meltzer: Bob, I'm glad to agree with you on two things. First, that the zero rate of interest paid on excess reserves is a problem. A zero rate of interest should be paid on excess reserves until market rates return to more normal range. Second, the Philips curve has misled economists at the Board—with the exception of the Volcker years, when he (and many of us) offered them over and over again the anti-Phillips curve. In the anti-Phillips curve, the way to get low unemployment was to have low expected inflation. Paul Volcker said that many times.

Re: a liquidity trap: I am baffled that you think we are in a liquidity trap. When Chairman Bernanke mentioned that the Fed might taper, bond yields rose by 1 full percentage point quickly. Even the announcement of a possible change in policy changed relative prices, lowered the stock market or depressed it, raised the long-term interest rate, changed the exchange rate. Those are not features of a liquidity trap, at least not one that I find in the literature where none of the relative price changes would occur. What is missing is that we have monetary policy without money. Money and credit growth is very sluggish in part because the banks are paying interest on excess reserves. Ninety-five percent or more of the reserve growth on the QE2 or QE3 have gone into excess reserves; the first-round effect of monetary policy is achieved, but not the subsequent effects. Money growth is low in part because banks have rebuilt capital, are paying bonuses and dividends, including foreign banks.

Here is some relevant evidence. Japan has been stagnant for 20 years. Now that Governor Kuroda has adopted monetary growth as one of the features of his policy, money output has increased noticeably. I am surprised you would describe the weak output response in the United States as a liquidity trap instead of low money growth.

Ms. Whitney: I just wanted to point out something you expressed in your paper related to the last recession of 2001. The banks and the bond markets have not been mutually exclusive from the bond market. In fact, the banks have actually controlled the bond market with the fall of Glass-Steagall. That's an important point to be made and just to point on that, the peak of the U.S. bond market from 2004 to 2007, two-thirds of the issuance was consumer debt issuance and that had been reduced to less than one-third of the issuance today. So I think that the issue of volumes associated with the bond market has more to do with lending standards with the banks than actually rates. I think that would be an interesting angle to look at with this paper. I would be curious to see what you think about that. The last thing I'd like to point out was with the Fed data that you were looking at, $2 trillion of consumer finance, be it credit card lines and home equity lines, has been cut from the system, more than two times that has been charged off so actually the pay downs have been relatively much smaller than the charge-offs and the line cuts. I think that is also an interesting point for your paper. Thanks.

Mr. Hall: On Frank Smets' point, the basic problem with the whole New Keynesian Model is that Calvo is there preventing firms from changing their prices, which just never made any sense. Everything that I know from work that I've done, consulting work with firms, I've never seen any evidence at all that they regarded their price as anything other than something that they negotiated on the spot in the business-to-business setting or was it a strategy variable with respect to consumer prices. I just stop instantly when I see that model because it's something that—I know it works, sort of, but I just can't see the whole Calvo piece of it—just doesn't make any sense to me. Of course, that's what brings the future into the story. There is nothing other than Calvo. There is no reason why inflation is responding to things in the future. You can think that whole apparatus was created to rationalize what seemed to be the brilliant things that Milton Friedman said in his 1968 presidential address, but I think gradually we realize it wasn't so brilliant. At least that is what my feeling is now. Sargent had it right, not Friedman. Read Sargent. The Sargent theme is inflation depends on the context of the situation. He wrote a paper called "The Ends of Four Big Inflations" which showed this discontinuous change of inflation in the context of a fiscal reform. There is no way that the New Keynesian Model would ever get that right, so read Sargent.

On Walsh's DMP paper, that's a New Keynesian paper and I think that is why it has that gap kind of feature. Nonetheless, I think it's a very important contribution, certainly something I've been citing in this discussion. This point that the lending standards need to be brought into the story, I emphatically agree. I think there has been a big increase in rationing lending by banks and that the implied shadow lending rate is even higher, so the spreads that Hyun showed actually understate the effective spreads because of the tightening of lending standards. I totally agree with him. Charge-offs are included; the Fed's number for charge-offs are included in the figures I've distributed. Whether that charge-off calculation does full justice to the relief that consumers have received by not having to pay off their loans is something that I think that is still up in the air, but I'm very aware that the charge-offs have risen dramatically—that's included in that figure.

Mr. Hubbard: I have a question about a fiscal policy intervention which is not mentioned in the paper, but common when thinking about tax wedges practically for investment and even for employment. Investment incentives can reduce the cost of capital, even mimicking negative real interest rates. And, of course, business taxation, whether corporate taxation or noncorporate taxation, would directly affect Q as well. Are these considerations something that could be incorporated in the model, or are you simply assuming that fiscal policy is inoperative in the current environment and focusing only on monetary policy?

Mr. Stock: Just to comment on the premise of the slow recovery—which of course is slower than anyone here would want—it is the case that unemployment rate dynamics and employment growth dynamics in this recovery are consistent with historical times series evidence especially when one takes in account the decline in the underlying growth rate in the labor force so the extent of which zero lower bound is pressing in those regards is one issue to take a look at.

Mr. Poloz: Just to follow Hyun Shin's argument one step further, in fact that small companies are at the heart of this wedge thing, and actually what I've observed is that the process of formation of new companies has stalled out. The population of companies has actually stopped rising since 2008, so that to me would connect closer to Bob Hall's definition of the wedge because it is more than an equity risk premium that stops that process out than bank lending.

Mr. Feldstein: Two comments, one about banks, the other about bonds. Banks are very important to small business and the banks that are important are the local banks. We have many small banks. There are some 7,000 banks in the United States with assets of less than a billion dollars. They cut back on their lending primarily because they were capital constrained as a result of the losses that they incurred or feared that they might incur after 2008. So that's why we saw an important role for the decline of bank lending.

The comment about the bond market, bond markets are important not so much directly but for their impact on mortgage rates. And as bond prices rose and bond interest rates fell, that carried through to mortgage rates and contributed to the eventual turnaround in real-estate prices and in real-estate investment.

Mr. Frenkel: Bob Hall's analysis indicates that the environment of low inflation together with the zero lower bound on the nominal rate of interest implies that there is an effective lower bound on the real rate of interest. He claims that this effective lower bound on the real rate of interest imposes a significant constraint on the economy, since a lower real rate of interest would help to stimulate investment and growth. Interpreted literally this would imply that a higher inflation would be a good thing since, for any given nominal rate of interest, it would result in a lower real rate and in fact the more negative the real rate gets, the more would be the stimulus to investment and growth. This is a very unfortunate conclusion since it ignores the devastating impact of high inflation on the functioning of the economic system. For those of us who have experienced very high inflation with the associated cost that had to be incurred during the subsequent periods of disinflation and stabilization, the idea that it would be good to accelerate the rate of inflation in order to reduce the real rate of interest seems to be very dangerous. We need to recognize that high inflation exerts great distortions on the economic system and that one should find better ways to provide incentives for investment and growth.

Mr. Shin: This phenomenon of feast and famine side by side is really interesting. One of the ways we could address it is somehow to drill a hole from the bond market into bank loans so that liquidity can flow through. Meredith Whitney was talking about that briefly. There are not very many good ways of doing that. You have to securitize the loans to small business and they are not really amenable to securitization in the way that mortgage-backed securities tend to be. This is the problem that the eurozone actually faces now. For jobs growth, working capital is key, and working capital seems to me to be a hugely understudied subject. Availability of working capital is about the uncollateralized overdraft rate. The bond spread is a highly misleading indicator of credit standards for new businesses.

Mr. Hall: First of all, this question of big business vs. small business. I think it is really important to understand that employment in both those sectors declined tremendously and by about the same amount and this notion that somehow either big companies or small companies are the thing to think about is not supported by the numbers. The numbers rather give the boring conclusion that they both matter. So we should be thinking to the extent that if we have any ideas about policy it should be focused broadly in the labor market. I guess the other comment that I would make, Jacob Frenkel raised this issue, it appears, and certainly if you read Krugman you'd be convinced that we'd benefit tremendously by a surge of inflation, and for a long time I thought that. I said for many years that Ben Bernanke would give up his MIT Ph.D. for 1 percentage point more inflation. But now that I've come to this model, the idea that I presented at the end of my talk, I'm not so sure that the zero lower bound is really central. I'm particularly not sure that relieving the zero lower bound with more inflation would have the benefit that some models suggest that it would, so I've somewhat changed my view on that and of course I agree, and all of us agree that inflation rates of the types we had in the 1970s and early '80s were destructive and we should be very careful. I touch on this at the end of the paper by observing that rather than moving to higher chronic inflation we would be much better off to build a more robust financial system. I think we've moved very much in that direction. The whole concept of stress testing is the right way to think about managing the financial system and we should abandon ideas like capital requirements because they are so easy to evade. Intelligent, properly conducted stress tests are the right way to ensure the stability the financial system. If we did that we could continue to run a very low inflation policy.

Mr. Fischer: You started by emphasizing we should do more micro economics. It seems that the key price variable that you have in your model is the intertemporal terms of trade in terms of hiring labor. Are there tax or other micro interventions that would affect that relative price?

Mr. Hall: Glenn Hubbard raised that point, I meant to answer, but didn't respond to it. Because there is so much paralysis in fiscal policy I didn't discuss it. Obviously it was something I've thought about on and off throughout my career, both with respect to investment and jobs. One remark I would make is that the DMP model is fundamentally a model which describes the hiring process as an investment process and that's why the rate of return becomes so important in it, or the rate of discount. Hyun Shin's remarks connecting it to Q theory are right on point so investment incentives on both sides would play a role. Whether we would every get Congress and the administration to do that, it's something that Larry Summers was pushing hard when he was in the White House with some effect, but probably not aggressively as we would like. Certainly the model points in that direction, that the right intertemporal incentives to create jobs and to invest in plant and equipment would both have been beneficial and even today would be beneficial.