General Discussion:
Challenges for Monetary Policy: New and Old

Chair: Ian Macfarlane

Mr. Macfarlane: Thank you very much, John. The floor is now open for questions on Meryvn's paper. First one here was Chuck Freedman.

Mr. Freedman: I just have a couple of quick comments. First, although I am very fascinated by the notion of the potential use of price level targets in addition to or instead of inflation targets, one issue that I do not think is addressed either in Mervyn's paper or Lars' paper is the question of which measure of prices should be used. This is less important when you are looking at inflation because the GDP deflator and CPI tend to move together. But if you actually look over periods of ten, twenty, or thirty years, the difference in price levels—especially in economies that are producers of raw materials, some of which are represented here—can be quite substantial.

In the paper I gave at this conference three years ago, I calculated the ratio of the GDP deflator to the CPI for Canada, and there was about a 20 percentage points movement over a twenty-year horizon — first up and then down. That becomes very relevant.

My second point is on policy rules. These have been developed for a closed economy by and large. There are a couple of papers, one by Lars, one by Larry Ball, which treats them in a small open economy.

But if they are to be treated more seriously for a small open economy, the role of the exchange rate has to be treated more explicitly.

My third point is when we had a monetary aggregate target in Canada from 1975 to 1982, one reason for abandoning it was that the monetary aggregate we used, M1, had a very high interest rate elasticity. And that basically meant that when output and inflation picked up and M1 picked up, the extent of the needed interest rate rise, which of course came out of M1 increasing, was such that we did not have to raise interest rates very much.

In other words, looking back, (and it was not as apparent at the time as it is now) the interest rate response to an inflation shock was too low, and we were constantly not getting that coefficient greater than 1 or close to 2 that we now see is necessary. The monetary aggregate target was, in some sense, misleading from the longer-run stability point of view because you did not need that much interest rate increase in response to inflation shock to bring monetary aggregates back to target.

Mr. Woodford: I wanted to suggest the connection between two different parts of Mervyn's paper that, perhaps, were not drawn out in the paper itself. This was the issue that had come up about the desirability of modifying the Taylor Rule and the direction of what he calls a more aggressive Taylor Rule that, in particular, involves the interest rate change being made a function of inflation deviations rather than just the level of the operating target for the interest rate.

And, secondly, the question of whether it is desirable to put in a price gap term and have a price level target as opposed to just an inflation target. In fact, I think these two directions of modifications are practically equivalent. They are certainly very closely related. The idea of having a price level target instead of an inflation target would mean that if inflation temporarily went above your desired target level, but then returned to the target level but leaving the price level permanently above its previous path, you would keep interest rates high until the price level itself returned to normal. But if you put in the interest rate change term instead of the interest rate level, as in the aggressive

Taylor Rule, that says exactly the same thing. It says that temporary inflation makes interest rates higher, and then they would stay higher unless there was subsequently a period of inflation below its long-run target level to give you a negative interest rate change.

In fact, in the Rotemberg and Woodford model simulations that are referred to in Table 1 of his paper, the aggressive Taylor Rule has exactly the same properties as a price level targeting rule. Our paper in John Taylor's conference volume, in fact, has a little bit of a discussion of that where we also do simulations of price level targeting rules.

These two questions, which I think are both very interesting, are very closely related. And that is why I am a little puzzled that John seems to react oppositely to the two of them—liking the idea of putting in some response to the price level but being very suspicious of having strong dependence on the lagged nominal interest rate. Really, the two are just different ways of doing basically the same thing.

Mr. Sinai: This question is for Mervyn and Alan. In this decade we have had so many structural changes and maybe, Mervyn, this was not in your paper as a challenge to monetary policy, it is one of the major challenges. What I am about to say is perhaps more obvious in the United States. I am wondering about the formulation and implementation of monetary policy in a world where you get structural changes, departures of significance from history, and the one that is mentioned here all the time is technology. Let me give you two other examples for the United States. If monetary policy in the U.S. had continued to follow the natural unemployment rate notion of 6 percent the trigger for spiraling inflation, in the face of structural change, perhaps the natural rate not being not 6 percent, some other figure or perhaps not even existing, where would we be today if policy had followed the old policy rule that the natural rate suggested? Or using another example, if the conventional notion of potential output growth in the United States, which in pervious years was around 2.25 percent, had been followed in the making and implementation of monetary policy, what would the performance of the U.S. economy have been?

Now, those old numbers and notions, perhaps today we might agree,

have changed because, to some extent, of structural change. And, I would ask you what would happen if something similar happened in the U.K.?

In the formulation and implementation of monetary policy as a challenge to monetary policy in a low inflation environment, how should central bankers take account of structural changes? A prime example is the one in front of all of us today. It is talked about mostly in the U.S., but I think that it is also worldwide—that is the new technology, the Internet, and IT.

Mr. Schoenholtz: Just a question for Mervyn about the liquidity issue. You had suggested the policy implications of the two outcomes would be potentially quite different. I am not quite sure about that. If you make the assumption that there is no effective policy, what is the downside from running an expansionary policy? If you assume that it is effective, clearly that would be the right outcome.

Mr. Makin: I have a question for Mervyn. The introduction of the horizon provides a nice linkage between the discussion of inflation and price level targeting, and your introduction seems to be a little bit in terms of an arbitrary horizon. Is it possible to endogenize the horizon? That is, to set up an objective function that is expressed in terms of the volatility of inflation and output and then solve for the appropriate horizon over which you would want the price level to return to a predetermined level and, thereby, kind of close the circle between inflation and price level targeting?

Mr. Macfarlane: I think we will try to get back on schedule. However, we ought to give Mervyn an opportunity to respond to some of those questions; but, Mervyn, I would ask that you be brief.

Mr. King: First of all, let me thank John Taylor for his characteristically thoughtful and balanced comments. I agree with what he said, and I do not really want to say much except to make, perhaps, one comment on his final remark.

I agree that the use of these policy rules is to illustrate the problem

facing the central bank. We do use Taylor Rules and other rules to simulate or ask ourselves the question, "What do these rules suggest we should be doing in these circumstances? Why might one want to deviate from that?" Chuck Freedman mentioned exchange rates. That has been a particular problem. You could try to extend the rules to include the exchange rate. You could look at asset prices too. They prompt thinking about the decision in the right way. They are very useful, but they are not to be applied mechanically. You made that point very clearly and I agree with you.

I think the challenge for those of us using explicit inflation forecasts as part of our process is to explain why, in many ways, such targets are trying to achieve the same thing as other processes. I think one of the benefits of an inflation target and the decision process that follows directly from having a target for inflation is that since we do not have a long track record of successful macroeconomic policy, credibility may follow from demonstrating that the reputation of the Monetary Policy Committee depends on its success in meeting the inflation target. It is a way of getting the commitment to the inflation target that many of the models of time inconsistency or other aspects of macro policy say are important. But I think this is an interesting area for further discussion. I certainly do not disagree with your characterization of the use of policy rules.

In terms of the other questions that were asked, I will be selective here. John Makin asked about whether the horizon could be endogenized. I think that depends critically on trying to identify the cost and benefits of long-run price stability. They are genuine. But trying to quantify them is difficult. I think Chuck Freedman made a very good point, which is that when you come to thinking about stability of the price level, it matters a great deal which particular measure you are looking at.

So, I think that requires more research. And I certainly do not suggest this as a practical change in policy now, but I think it is worth considering for the future because what I hope the contribution of the paper is is to show that the clash between price level targeting and inflation targeting is not quite as great as some might think. Mike

Woodford made a very telling point. There is no doubt that many of the directions in which research has gone have been closely linked, and I think that is a good point to make.

The question I will put to Mike for tomorrow is: How far do some of the results that he talks about depend on the particular model of the transmission mechanism, namely forward-looking behavior? John Taylor made, I thought, a very telling point by saying that you have got to be careful—when thinking of policy rules that are useful in the discussion on monetary policy—to choose something that seems relatively robust. Much of Mike's work in the last year or two has been to produce tractable small macro models within which to discuss quite difficult and deep issues. Nevertheless, when taking interest rate decisions in practice, one cannot just be content with small tractable models. One has to worry about the empirical applicability of them and that is where robustness comes in. But, nevertheless, they are clearly linked.

The last point I will make concerns policy in the face of structural change. Well, if you think there has been structural change in the level of the natural rate of employment in the U.S., you have not seen anything compared with what's happened in the U.K. People here worry about changes in the natural rate of a half of a percentage point. We worry about 3 or 4 percentage points changes in the estimates by labor market econometricians of the natural rate over the last ten years. So, I would rely less on formal econometric estimates and much more on direct observation about what is happening to cost pressures. The reason why we have our regional agent is to go around the country and actually try to learn and listen from people in the field about what they think is determining pressures in the labor market.

We have not had evidence of the sort of structural change in productivity growth that you have had in the U.S. There are many similarities between the U.S. and the U.K. economies. But productivity growth is not one of them. We have had low productivity growth in the last three years. You have had high productivity growth. But the one that I find most difficult, in terms of making policy decisions, is the one that Alan spoke about this morning, namely asset prices, because when you

attempt to quantify the impact of changes in asset prices on the outlook for inflation, asset prices are usually the source of the biggest amount of news over the previous month or two months. You can see that particularly in smaller countries where the exchange rate is important, and that is why some countries have tried to use monetary conditions indices. Now, I do not like those at all because they do not tell you, as such, about the reasons for the change in the asset price. As Alan Greenspan pointed out this morning, there are different reasons for asset price changes. For example, changes in corporate earnings that might persist or changes in the rate of discount reflecting risk premia may have very different implications for patterns of spending, and, hence, the short-run outlook for inflation. But there is no doubt that changes in asset prices quantitatively provide very big headaches for those making decisions on a month-to-month basis and we know very little about them. It is unfortunate that the things that seem to matter empirically always turn out to be the things about which we know the least. But I suppose that is in the nature of the challenge presented to central bankers. You do not have to wait ten years for that challenge to be a reality. That is with us now. Thank you.