

# General Discussion: Using Monetary Policy to Stabilize Economic Activity

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*Chair: Alan Bollard*

**Mr. Taylor:** I find this an excellent and fine paper. I have four quick comments.

I think your Chart 3 definitely illustrates how putting inertia into policy rules is a serious mistake. I've always thought that. You really have to adjust more quickly. That dashed line comes down so slowly it obviously would cause damage.

Second, as you look at Chart 3, it opens the question about whether the rates in late 2007 and early 2008 may have been for a while too low. There was a strong dollar depreciation at that point and rapid oil price increases so, in reviewing history, that little gap there is worth looking at—the gap between the regular Taylor rule and the actual policy.

Third, in Table 1, there is an estimate—equation 1, which is a Taylor rule—that has a very large coefficient on unemployment and therefore on the gap, much larger than I recommended. I think it is because the equation was estimated over periods where rates were really too low for a while. That is why I think it's best to stick with the original Taylor rule, rather than put in estimates like this.

Finally, I wonder, Carl, if a lot of the optimal policy in your paper is really going in the direction of too much fine-tuning, compared

with where the consensus was several years ago, which was simulating alternative policy rules in many different models and seeing how they work. Your paper seems to me to have a lot more of the fine-tuning aspects that we used to complain about and that actually led to difficulties in earlier periods.

**Mr. Mishkin:** I have two points. First, Carl talked about the issue of the zero lower bound, requiring the end of gradualism in a sense. But I'd like to argue that if you think about the reason for that, it is because the zero lower bound creates an inherent nonlinearity. And, if you think about it, there is another inherent nonlinearity, which stems from financial crises. They are inherently nonlinear and they create this tail risk you have to deal with. That is another very strong argument for why, during an episode where you have a financial crisis, you have to be very nonlinear, which is be very aggressive in terms of easing very quickly. But then, when in fact things start to recover, you actually then have to tighten very quickly.

Now it turns out that in most cases if you think about when the zero bound is going to be relevant, it's going to occur when there is a financial crisis. But there's another reason for saying that gradualism should be dead when you're in a situation where you get the kind of financial disturbance that we had recently.

The second issue is this issue of price-level targeting versus inflation targeting. There is no question, from a theoretical viewpoint, that price-level targeting has very big advantages when you are in a very low-inflation environment, which is a good thing.

The big problem I always have with this is the issue of communication. It relates very much to this point that Carl was talking about in terms of credibility and, of course, why you wouldn't want to implement this during a crisis.

But here is the basic problem. With inflation targeting, it is fairly easy to communicate. You say, "We want a 2 percent inflation number."

That is fairly understandable. It would be very easy to price-level target, if zero inflation was the right optimal inflation rate. But we know that is not true. You need some upward path of the price level in order

to deal with some of the issues of zero lower bound and other things. The problem is it is a little bit more difficult to describe because you have to keep on saying we want to get back to a path, which in fact has an upward slope, and that gets very complicated to explain.

One of the challenges that we are going to have to think about—particularly after this episode, which says that something moving more toward some price-level targeting-type framework has advantages—is to think very hard about how to do better communication.

**Mr. Stark:** I am very grateful for this paper. It raises an issue of a fundamental nature. It has to do with the monetary policy strategy and the analytical framework on which the assessment of the economic activity and price development is based upon.

From a fundamental nature, I said; but in my view it does not go far enough, because monetary policy strategies, in principle, should be robust and should be as robust to withstand a crisis. Now to discuss a change or shift in the strategy, in my view, could undermine the credibility of the central bank. The analysis provided this morning does not go far enough and does not reflect what we, in continental Europe, have introduced. This is a rather robust strategy, so there is no need for any adjustment to move from inflation targeting to flexible inflation targeting or to price-level targeting. We have a very broad and predictive framework based on two pillars. We have a clear mandate. We have medium-term orientation. This helped us to anchor inflation expectations very firmly. This is a big achievement.

The second point I would like to make in the context of the zero lower bound: It is said in the paper that the costs of the zero lower bound is quite small. Maybe, according to most analytical work that has been done so far; however, the impact of the zero lower bound on the behavior of financial markets is uncertain. At least, this has to be admitted. The zero lower bound may interfere with the functioning of financial markets, thereby offsetting the stimulative impact of very low rates and also may create the basis, or lay the basis, for a new set of financial and economic imbalances and, thus, for future instability. Not to refer to the exit strategy, I think you—rightly so—made

this point that there is a risk that rates remain too low for too long a period of time.

The last point, the point which was made by Mark, is the tradeoffs between the primary objective of central banks—the primary objective of price stability and financial stability. There is a risk that the central bank compromises the primary objective. The time horizon, which was referred to by Mark Carney, is really key—that the central bank with a dual mandate to maintain price stability and to deliver on financial stability may compromise in the medium term on the price stability objective in favor of the very short-term risk to financial stability. This is a key point in the end on which the credibility and the reputation of a central bank can suffer. We have to be very clear what the central bank can do and should not do at all.

**Mr. Romer:** Christy's super-cautious chief of staff asked that I preface any comments by being explicit that I speak only for myself.

I have a big-picture comment about the conference, which is that there is an important subject that's largely been missing. Let me quote from the prospectus from the conference:

*While a new financial architecture may be needed in the aftermath of the crisis, a more immediate concern is how macroeconomic policy can best be marshaled to limit the impact of the crisis on financial markets, institutions and real economic activity.*

But when you think about what we've heard for the last day and a half, we've heard a lot about the causes, we've heard a lot about how we avoided catastrophe, and then we've moved almost entirely on to long-run issues. What should policy and the policy framework look like after we've come out of this? We've heard relatively little about the medium term.

The reason this is important is that if you look at consensus forecasts for the United States and other countries for the next several years, they look pretty lousy from the perspective of maximum sustainable employment and price stability. They look a lot better than a second Great Depression, and we should all be very pleased and in

many cases proud of that accomplishment, but there's a lot of work still to be done. Carl in his paper, which I like a lot, touched on this issue, but came out only with negative conclusions about some tools you might think about—negative on trying to raise expected inflation, negative on targeting a price-level path, negative on buying long-term government debt. But he didn't address the question, Is there anything we can do?

My basic point is threefold. First, it would be incredibly valuable if more could be done on the monetary policy side to stimulate the economy. Second, it's not obvious that nothing can be done. And third, it's also not obvious that something can be done or what set of tools would be best and what the tradeoffs are in using them. What I take from this isn't anything close to a specific prescription about what policy should be doing. It's simply that thinking about what monetary policy makers can do over the next couple of years, using the tools at their disposal and any additional ones they might try to obtain, to get closer to maximum sustainable employment and price stability seems like a first-order issue and one that deserves a lot more attention than it has gotten over the last day and a half.

**Mr. Redrado:** From an emerging markets perspective, there is one key factor that has not been taken, in my view, into consideration, particularly when we saw massive capital outflows and a flight to quality and risk aversion after the Lehman Brothers episode. The traditional set of tools that we have in emerging economies has not been enough to deal with the shocks. Some of the countries in Eastern Europe and in Latin America have used a smooth management of the exchange rate, and it has proven to be the correct approach because it has proven to achieve monetary stability and financial stability.

My point is that basically in countries that have segmented capital markets, no hedging instruments and very shallow financial markets—clearly, many authors claim that less flexibility in the exchange rate is appropriate for cases of incomplete capital markets. When you look at inflation targeting for emerging economies, you see that in the reaction function nominal exchange rates have an important coefficient there. In particular, when you look at the high volatility or depreciation and the effect that has on inflation in emerging

economies, the exchange rate and, in particular, also the correlation between the exchange rate and money demand, in my view, should be taken into consideration.

My suggestion is that, although there is some literature in that case, further literature should be explored in order to have a more solid understanding on how this element works in financial crises in order to improve our monetary infrastructure.

**Mr. Walsh:** One of the topics discussed more fully in the paper, and which I was reacting to, was the view that even at the zero lower bound central banks essentially have lots of policy tools because they can manipulate future expectations about the policy interest rate path. In such an environment, it is true that the cost of the zero lower bound is fairly small because you still have lots of instruments available. However, that vastly overstates the extent to which central banks have policy instruments. This is one reason why, in practice, central banks have focused on trying to ensure that inflation expectations remain anchored, as opposed to doing what our theory says they should be doing, which is manipulating these expectations in ways that help stabilize the economy. This is also a potential disadvantage of price-level targeting. It works in part by making inflation expectations more variable. If it is credible, price-level targeting works well in model simulations, and it might be better than inflation targeting. But that is a big “if.” Certainly, an unstable environment is not when you want to experiment with an alternative policy strategy, even if it might be somewhat better in theory than one’s current policy.

This comes back to John Taylor’s point, as well. A few years ago in looking at the models that represent the “science of monetary policy,” it struck me that we may be getting a little presumptuous in terms of how successfully we can design optimal policy rules to fine-tune the economy.

An issue that several commentators—Rick Mishkin included—touched upon was this one of communications, which is a very critical issue. One of the advantages of inflation targeting is that central banks who are flexible inflation targeters (and the ECB may not admit it, but I see them as a flexible inflation targeter) do look at what

is going on with the real economy and do not just look at inflation. But having inflation as the primary responsibility of a central bank provides a mechanism for communicating with the public. You can talk about why there may be deviations from the target, for example, because of developments elsewhere in the economy, the state of the real business cycle, or because of financial instability. But inflation targeting gives you a focus for your communications, and this has helped in creating the credibility that many central banks have today and is also something that may be more difficult to achieve under—as Rick pointed out—price-level targeting, where you also have this drift in the target path that may be a little more difficult to communicate. And clear communication is really critical.

The issue of communications also arises in thinking about more formal mandates for financial stability. How do you translate that into something that can be communicated clearly and easily to the public so that they understand why you may need to have made a temporary deviation from the inflation target because of something else that is going on in the economy? I certainly agree with Mark about regulation being the first line of defense. I really didn't touch upon that; I took it for granted.

In most academic models that focus on inflation targeting, one of the big factors that creates policy problems is what we call price markup shocks. In those models, the first best policy is to have a time-varying tax or subsidy policy that deals with variations in markups and deals with distortions generated by imperfect competition. But, given the absence of these alternative policy tools dealing with fluctuations in markups, monetary policy needs to take into account fluctuations in the real economy. That's the context in which I think of financial distortions as also potentially affecting the goals of monetary policy.

Yes, the first line of defense is regulation. That may eliminate a lot of the steady-state distortions, but it is not clear that it is going to be designed well enough to provide the cyclical responses that will help neutralize fluctuations due to financial disturbances. If that isn't done completely, then central banks will have to take financial disturbances into account in thinking about their policy actions.

A final point on the emerging market context and the role of exchange rates, and, again, these are important issues. One of the key advantages of policy regimes like inflation targeting is that they provide a focus on the objectives of policy. And then the tools you need to use to meet those objectives can vary, depending upon the financial structure and the openness of the economy and so forth.

I cannot disagree with David's question concerning "What do we do over the next two years?" In some sense, I share the view that the worst of the financial crisis is over. It is going to be a long time, however, before the economy as measured by things like unemployment is where we would like it to be. That is one of the challenges in managing the exit strategy because it is likely that when we reach a point where interest rates should start rising, unemployment will still be at an undesirably high level.

**Mr. Feldstein:** Carl, in his paper, discussed the fact the Fed and other central banks are promising to keep short-term rates near zero for an extended period of time. He then reviewed the academic theory that the purpose of that in the academic theory is to increase inflation expectations in order to reduce expected real interest rates. I just want to stress that I think that is only an academic view and that the Fed and others continue to maintain the price stability goal of low inflation—and I think that's the correct policy. Any talk about increasing inflation expectations for some period of time would only confuse the public and would lose the low-inflation anchor. It would be a real mistake for the Fed to say, "We're keeping interest rates low in order to increase inflation expectations."

So it raises the question of, Why, then, does the Fed promise to keep the interest rate low for an extended period of time? And the answer is to shift the shape of the yield curve to stimulate aggregate demand that depends on medium-term nominal interest rates. I have in mind, particularly, the mortgage rates that price off, roughly, the five-year part of the curve.

Then that raises the question of, What about the actual effect of the extended low interest rate on inflation? There, for better or worse, we face excess capacity for several years into the future. That's

going to keep inflation low, even if the economy manages to have a recovery over the next several years. So, it's not inconsistent for the Fed to promise an extended period, say, two years or more, of very low short-term interest rates, while at the same time expecting to keep inflation low.

**Mr. O'Brien:** Both speakers emphasized, correctly of course, the importance of expectations in monetary policy. I'd like to focus attention on what I think is the fairly incredible fact that inflation expectations have remained so stable through massive economic shocks and changes to the implementation of monetary policy that, at least in my experience, the public really doesn't understand.

Many major central banks are taking this stability of inflation expectations as a validation of policy. But it could be just inertia. Inflation has been fairly stable until recently. One of the most interesting inflation surveys I saw was in the Fed's monetary policy report, where some fairly well-informed people have a range of expectations for 2011 from 0.5 percent up to 2.5 percent, which is an amazing range for a variable that is usually pretty stable.

So the question is, How do central banks think they affect inflation expectations, and how confident are they that the current stable expectations really represent understanding of policy and confidence that it will succeed?

**Mr. Sinai:** This actually goes to Carl and Mark because he made a comment on this. You said in your conclusion that once the policy rate rises, it needs to happen aggressively. Let me ask the following: If financial stability is one of the goals of monetary policy, would the risks of creating renewed instability in financial markets and credit flows or in asset prices, then the economy, then back to financial instability—should the aftermath of the crisis and zero lower bound for monetary policy under price stability really be symmetric—you didn't say so but it is implied in your conclusion—or asymmetric on the policy rate?

**Mr. Gertler:** I agree with a lot of what Carl had to say, but there is one point I have to clarify.

It's true the early literature on asset prices and monetary policy presumed an exogenous objective of inflation and an output gap, but subsequent literature, in fact, endogenized the objective and took into account this financial friction, and I refer you to a paper by Tommaso Monacelli and Ester Faia. In fact, they found exactly the same conclusions that the earlier literature did.

What I think is going on is that this literature was really built up around the equity price bubble. The numbers that were fed into the model, in particular, the leverage ratios that were fed in, were those that were relevant in that time period, which were low. We know the effect of financial disturbances depends upon the leverage ratios.

It could be if you feed in the much higher leverage ratios that are relevant in the current crisis, the conclusions may change. This is something worth doing. But two points here in designing policy rules going forward: It is important to take into account what we thought about earlier, and that is that we have very little idea of how asset prices are going to respond to interest rates. There is a lot of uncertainty.

The second point is that the policy has to be robust across different episodes. We agree maybe things should have been different for the housing boom, but let's think back to 1996 when we had the tech boom. Should we really have raised interest rates to kill off the tech boom?

**Mr. Frenkel:** I have two quick points, both on expectations. Like Marty, I am very concerned with the idea of trying to overcome the zero bound by pushing future expectations up. Here, I want to highlight the difference between two types of countries: those countries that have had a long history of price stability while inflation is a non-issue. For them, raising future inflation expectations is one thing. For countries that have just completed a long journey of stabilizing and arriving at price stability, for them to start adopting a policy of future inflation would really create extraordinary confusion.

But I am not sure there is a big difference between these two types of countries. Look at the United States. We have, since the Volcker

era, everyone who was at the time, say, 15 years old, is 40 today. The population below 40 in this country has never lived in or cared about inflation. They take low inflation for granted. That is a very, very dangerous situation to be in.

Second point about inflation targets: You suggest that the way to convince people credibly that there is going to be future inflation is to raise the target itself. I also find it somewhat dangerous because it is not a policy action; it undercuts the entire foundation of the inflation-targeting approach.

If you want to go in this direction, I would rather speak about a range. The target is a range. You don't change the range, but you may tolerate where you are within the range, and that at least maintains the credibility of the inflation target strategy.

My last remark—not a question—has to do with the fiscal side, which we don't mention, and the danger of overburdening monetary policy. Alan will speak later about the fiscal side. But the fact is we are now in a situation where we have huge budget deficits all over the world, rising debt all over the world, very likely high long-term real interest rates coming up just from that point, low potential growth, and in this context to start speaking about now what monetary policy, should do and all of that, sounds like a big challenge.

We really know the big elephant in the room. I don't know if we need to put it now on the table, but I think that is the real issue. To me when you speak about "exit," when nobody speaks about exiting from the budgetary debt issue and nobody speaks about what future taxes are going to be raised, that is a problem.

**Mr. Kohn:** Four points: One to reinforce Mark and Marty on what Carl sees as the inconsistency of low rates and stable inflation. I don't see any inconsistency at all. Mark's point that these are conditional commitments is important; it certainly is in the case of the Federal Reserve and the Bank of Canada and every other central bank that has talked about how long rates are going to be low.

Secondly, Marty's point is accurate. At least to this policymaker, the commitment to low rates is designed to keep inflation from falling and

falling persistently below what we might want it to be for a long time. It's not designed to raise inflation expectations. There is no inconsistency there.

Third, on Carl's skepticism on nontraditional policy, I agree that the long-term empirical evidence is very uncertain about the imperfection of the substitution among these assets. The whole problem that we are in is one of a flight to liquidity and safety, even short of the panic stage that Ben was talking about yesterday. In this situation, these assets become much-less-perfect substitutes. There is a lot less arbitrage going on between the markets, and that gives us a central bank with a different utility function from the private sector, with a different time horizon from the private sector, considerable scope to step in and affect relative prices among these assets. I was struck by the market's reaction to the U.K./Bank of England announcement a week or two ago that they were stepping up their purchases of Treasury securities. Interest rates fell. The market must perceive that there is some effect there.

The fourth point is, Why isn't debt management a perfect substitute for central bank purchases of government securities? The debt managers have other objectives. They have a long-term relationship with the markets. They have been told over and over that regular and predictable issuance is the way to minimize the cost of the debt over very long periods of time. The purchases of government securities by central banks are countercyclical efforts, so they are not perfect substitutes when you think about what the debt manager is trying to do over time.

**Mr. Walsh:** I'll make some general comments that hopefully will cover many of the specifics that were raised.

The discussion in the paper, which is more extensive, focuses on the notion that, particularly after the Japanese experience, the standard recommendation that came from people like Krugman and Svensson and McCallum and others was that at the zero lower bound you need to create expectations of inflation. In part, that is why the focus of the discussion was on the strategies that have been explored in terms of dealing with the zero lower bound. It's clear that you

can keep rates low for a while without inflation expectations rising. And, certainly, it has been very valuable and a benefit of the stable inflation regime that we have come out of that inflation expectations have remained relatively anchored. But, at some point, it becomes the balancing act of how long do you keep rates low before you have to start raising them. That is one of the challenges I see that the Fed will be facing in terms of determining when that point comes and they actually do have to start raising rates.

The case of the Bank of England that Don just mentioned is a good one that relates to Allen Sinai's point as well. One of the potential factors that might moderate how aggressively you respond, either approaching the zero bound or coming out, is the information conveyed by your announcements. When the private sector and the central bank aren't completely aligned in terms of their forecasts, aggressive action by the central bank may send signals to the private sector that—say in the case of an aggressive interest rate cut or an expansion of a quantitative easing program—the central bank is more concerned about the outlook for the economy than the private sector thought it was, and that can actually have an adverse impact on expectations.

The same would apply in coming out of the zero lower bound—that you need to be careful in terms of being transparent about the policymakers' view of the economy so that markets understand the nature of the interest rate increases. But it is also the case that part of the balancing act of flexible inflation targeting, in general, is that you don't just move interest rates solely on the basis of what inflation is doing. You have to take into account the state of the real economy, and that would include also the fragility of the financial sector.

Finally, I certainly agree with Jacob about the fiscal challenges. One of the difficulties of interest rate rules is that the constant term is an equilibrium real interest rate that we don't observe. That's clearly going to be a lot higher because of the fiscal situation than it was earlier. How central banks figure out the right level of interest rates consistent with their other objectives is going to be another challenge they'll face.

In response to Mark, yes, there are a number of recent papers that have looked at more consistent policy objectives that account for financial frictions. However, I don't think we are at a state where we really know how best to model financial frictions. The Bernanke-Gertler model, the workhorse model of financial frictions, has been incorporated in DSGE models, but it doesn't capture the types of market breakdowns that we saw in the current crisis—in that model, markets continue to function, interest rates are sufficient statistics for the cost of credit, and so forth. I am not sure we really have frameworks yet that provide us the level of confidence we'd like to have about the role of financial frictions and how they might affect the design of policy.

*Mr. Carney:* On this question of the asymmetry coming out with financial stability, I wouldn't want to leave any ambiguity. The policy rates are going to be set consistent with the current frameworks and consistent with inflation-targeting frameworks. The work that is being done and is partially an answer to David Romer's question, with some urgency in terms of restructuring financial systems, where there needs to be restructures, will ensure that policy can react accordingly. And the timelines are realistic for both. That is going to make as big an impact on moving those consensus forecasts up, by having that combination.

What will not make a big impact, or what can make a deleterious impact, would be to go off the policy path and the core objectives in monetary policy.