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The Target Problem As Seen "On the Inside"

by Allan H. Meltzer *

As a long-term participant in the discussion of targets and indicators of monetary policy, I want to take the opportunity presented by the appearance of a book on Federal Reserve operating procedures [1] written by "insiders" to look at the progress they have made, or failed to make, in developing an analysis of operating procedures. It is now almost eight years since Karl Brunner and I [2] tried to disentangle the several functions of free reserves or short-term interest rates in the Federal Reserve's descriptions of policy actions and operations. At the time, we identified three main functions which we named the target, indicator, and causal role of free reserves. In later work, we attempted to formalize our analysis.

The target problem is the problem of choosing an optimal market strategy (or strategies) to guide monetary policy operations under conditions of uncertainty and lags in the receipt of information about such remote goals of policy as employment and price stability. [3, p.2] Although the paper by Kareken et al. [4] and by Poole [5] that I have been asked to discuss use different verbiage, they both are directed at the target problem.

I believe that it is correct to say that during the last few years some discussion of the target problem has shifted from the tired issue of rules versus authority to four more fruitful questions.

(1) How much variability should policymakers permit a target variable to undergo during a particular time span?

* I have benefited from my continuing discussion with Karl Brunner.
(2) How much of the variability of target, indicator and goal variables is the result of past policies?

(3) What are the consequences of choosing a particular variable as the target of monetary policy?

(4) What are the properties of an optimal target variable?

To focus my discussion, I will confine my attention to the ways in which the two papers attempt to answer the four questions.

The paper by Kareken et al. candidly admits that it does not contribute anything of value to the solution of these, or any other relevant questions, and I agree. But I do not agree fully with the reason the authors give for deprecating their work. They claim that the weakness of their paper is that the type of analysis they use must be restricted to the case of myopia -- the monetary authority is concerned only with the events that occur in the current period.

I have two criticisms. First, the analysis of optimal policy has been extended to the multi-period case. [6] There are now studies of the welfare gain or loss that arises if a policymaker accepts lower income now for higher income later, or as a practical example, a policymaker trades unemployment now for less inflation later.

Second, their analysis is restricted to the case in which there are two main types of uncertainty. One type of uncertainty is represented by the error terms in the equations. Presumably, these terms have zero mean and constant variance. To put the point in a less technical way, monetary policy does not maintain the desired level of income every period,
but it does not miss on the average. This is an optimistic and, in my judgment, incorrect view even if the only goal of policy is, as in much of the paper, to maintain nominal income. Once the goal becomes some variant of the familiar full use of resources without inflation or deflation, there is no basis for the assumption that errors are offsetting or uncorrelated. I have no quarrel with the underlying statistical theory that makes the mean error from any equation equal zero. I question that the errors in a multi-equation model are uncorrelated and, more importantly, I question the usefulness of treating errors in the equation as the central uncertainty. Doing so presumes that we know the error free values of interest rates and real income.

The second type of uncertainty acknowledged by Kareken et al. is uncertainty about the current values of variables that are taken as exogenous (or pre-determined) but are not under the control of a monetary authority. Exports, government expenditures and transfer payments are among the principal candidates.

Poole acknowledges the same types of uncertainty as Kareken et al., and correctly chooses the unforseen and unpredictable changes in relatively exogenous variables as the more important source of disturbance. But neither Poole nor Kareken et al. pursues this analysis. Neither paper addresses the question that seems to me to be central to the entire discussion: how much of the variability in output, prices, employment and other goals are the consequences of policy actions already undertaken.

A main uncertainty about policy is whether policy actions are stabilizing or destabilizing. The case for less variability in monetary
and fiscal policy is based on the conjecture -- partly supported, partly not -- that most of the instability in a modern economy is the result of large swings in public policy. To ignore this type of uncertainty -- uncertainty about the current and future consequences of past policies -- in an analysis of the target problem is, I believe, to ignore the first two of my four questions.

A principal reason that leads many economists to conclude that the central bank should exercise control via a monetary aggregate, and not via market interest rates, is that they believe there is evidence showing that the feedback from past policies and from the consequences of past policies is much greater for interest rates than for money or the monetary base. If we could reliably separate the effects of past fiscal and monetary policies from other factors affecting market interest rates, and to a lesser extent affecting money, and if we could predict the short-term consequences of policy actions already taken, we would know, in the terminology of these papers, whether we had shifted to a new IS curve or moved along an existing curve. We would also know whether the policy actions previously taken would, in the next period or periods, move the market rate closer or farther away from the equilibrium rate.

In the first section of Poole's paper, he assumes that we know the equilibrium market rate and income at which we want IS and LM to intersect. Because there are errors in both equations, we may not have attained the equilibrium values, but our only problem is to find the most reliable way of offsetting random errors each with zero mean. Later, he admits uncertainty about the current position of the curves resulting from misperception or lack of information about the values of exogenous
variables. To take a current example, we may take drastic action thinking that the balance of trade deficit is $2.5 billion only to find out two weeks later that the deficit is $0.5 billion. When we get correct information, Poole would say, we can reverse our previous policy. Again, we know the level of income and rate of interest at which we want the curves to intersect. If we make an error, we know how to correct it.

There is a third type of uncertainty, uncertainty about the relevance of the hypothesis used in the analysis. Poole expresses doubt about the extent to which the Fed-MIT model describes the true state of the world, but he expresses no uncertainty about the quality of the IS-LM analysis. I have to question the usefulness of an analysis of the target problem in which (1) anticipations are known and unaffected by past and current government policies, (2) new issues of government debt have no independent effect on current market rates of interest, (3) changes in the prices of existing assets relative to new production have no effect on output except via the short-term cost of borrowing, (4) no distinction is made between real and nominal rates or between anticipated and actual rates. Add to this uncertainty about the values of particular parameters in the standard hypothesis or one of the many augmented versions.

Is the long-term Phillips curve vertical? Or, is it relatively flat? Is the interest elasticity of investment relatively low, or relatively high? Economists' descriptions of the effects of monetary policy shifted in less than a decade from the belief that monetary policy has little effect on investment to the belief that monetary policy has a very large effect on some types of expenditure, particularly investment in
housing. Even within the standard hypothesis, different conjectures or estimates of elasticities and lags offer different policy prescriptions.

Poole's analysis gives very little basis for his rule and offers very little evidence that policy would be stabilizing rather than destabilizing. As far as I can see, the rule has no clear connection with the analysis. However, we can consider the rule on its own merits.

Poole's rule has the advantage over current practice that it restricts the monthly growth rate of money to annual rates of from 1% to 8%, a smaller range than is now in use. However, the rule makes no provision for the welfare loss from inflation or for that matter from deflation. I believe Poole's rule is inferior to Bronfenbrenner's Rule in this respect and also in tying monetary policy to the current unemployment rate without any mention of the length and variability of the lag in the effect of past monetary policies on current unemployment.

Nearly two hundred years ago, Henry Thornton offered the following as a guide for monetary policy:

"To limit the total amount of paper issued, and to resort for this purpose, whenever the temptation to borrow is strong, to some effectual principle of restriction; in no case, however, materially to diminish the sum in circulation, but to let it vibrate only within certain limits; to afford slow and cautious extension of it, as the general trade of the kingdom enlarges itself; to allow of some special, though temporary, encrease in the event of an extraordinary alarm or difficulty, as the best means of preventing a great demand at home.... To suffer either
the solicitations of the merchants, or the wishes of the government, to determine the measure of the bank issues, is unquestionably to adopt a very false principle of conduct." [7, p.259]

I believe a properly interpreted version of this rule or statement of principle is superior to Poole's Rule.

Finally, I cannot accept the basis on which Poole chooses money rather than credit as a target. [5, p.168] The answer to this question depends on the interest and wealth elasticities of the credit and money market equations. Poole ignores these elasticities and the effect on wealth of a change in reserve requirement ratios.
References


