

THE CASE FOR INFLATION TARGETING

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Is inflation targeting suitable for the United States? Given that the Federal Reserve has not announced an explicit inflation target, how does one answer that question? If the answer is that inflation targeting is not suitable for the United States, what follows? Does the central bank not control inflation? Alternatively, if the central bank does control inflation, is there no need in a democracy for the central bank to make public its intentions with respect to inflation?

Some members of the Federal Open Market Committee (FOMC) who have opposed an explicit inflation target have also answered the question of whether the central bank controls inflation in the affirmative. So there is something too simplistic about the follow-up question about central bank accountability. Surely, there is something more to the opposition than a desire to avoid accountability. Laurence Meyer (2001: 12), when a Federal Reserve governor, explained the complication as follows:

The most important question that has to be addressed in order to assess the costs and benefits of a move in this direction [announcement of an explicit numerical inflation target] is whether it could be accomplished without reducing the flexibility the Fed now has to pursue a dual mandate.

The Fed's Dual Mandate

What is the dual mandate? The Federal Reserve Act instructs the Fed "to promote effectively the goals of maximum employment [and] stable prices." However, the language is vacuous. "Maximum employment" suggests a target of 100 percent labor force participation. Even

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if one substituted a phrase like “full employment” for “maximum employment,” the mandate would still be vacuous because it lacks an assumption about whether a tradeoff exists between the two goals. In fact, Congress has simply delegated responsibility to the Fed for deciding the U.S. monetary standard. The question then arises whether the Fed has a responsibility to articulate the nature of the monetary standard it has constructed.

So far, this line of inquiry has done nothing to elucidate the concerns that have prevented the Fed from adopting an explicit inflation target. It is more fruitful to rephrase the initial questions and to examine what answers FOMC members have given to them. First, does the FOMC control inflation? Second, how does the dual mandate constrain the way that the FOMC implements monetary policy? Answers to these questions depend upon the theoretical assumptions used.

Does the Fed Control Inflation?

A policymaker who believes that inflation is a “nonmonetary phenomenon” is predisposed against an explicit inflation target. By this characterization of inflation, I mean the belief that monetary policy actions are just one influence on trend inflation. The Fed can exercise complete control over inflation, but the social cost in terms of unemployment depends upon whether the nonmonetary factors affecting inflation are virulent or benign. Former FOMC Chairman Arthur Burns (1979) contended that the inflation of the 1970s emerged because the politically acceptable unemployment rate was too low to offset the inflationary impact of powerful nonmonetary forces.

Burns’ student, former FOMC Chairman Alan Greenspan, also understood inflation as a nonmonetary phenomenon. He explained the near-price stability at the end of his tenure through the fortuitously felicitous occurrence of benign nonmonetary factors affecting inflation. Greenspan (2004: 33) wrote:

I am increasingly of the view that, at a minimum, monetary policy in the last two decades has been operating in an environment particularly conducive to the pursuit of price stability. The principal features of this environment included (i) increased political support for stable prices . . . , (ii) globalization, which unleashed powerful new forces of competition, and (iii) an acceleration of productivity, which at least for a time held down cost pressures.

Similarly, Kohn (2005: 340) wrote:

The level and stability of core PCE inflation since 1997 are as much a consequence of unexpected developments as of deliberate policy choices. Importantly, the speedup in productivity growth . . . seemed to have greater disinflationary force than anticipated; the broad-based strength of the dollar and the weakness in global commodity prices that accompanied the East Asian crisis that began in 1997 put substantial downward pressure on prices in the United States, and, more recently, the recession and resulting output gap have provided another unexpected source of disinflation.

The logic of the nonmonetary view of inflation is that an inflation target would lock the Fed into achieving a low inflation rate. However, if the nonmonetary forces that influence prices are inflationary, achievement of this target could require an unemployment rate that is too high to be politically acceptable. Chairman Greenspan (1996: 67) told the FOMC:

The question is basically whether we are willing to move on to price stability. . . . [T]his type of choice is so fundamental to a society that in a democratic society we as unelected officials do not have the right to make that decision. Indeed, if we tried to, we would find that our mandate would get remarkably altered.

How Does the Fed's Dual Mandate Affect Monetary Policy?

A common attribute of policymakers who oppose an explicit inflation target is the belief that the central bank manages the real economy in the sense of exercising ongoing discretionary control over the breakdown of aggregate nominal demand growth into its real and inflation components. (Not all policymakers with this belief oppose an inflation target.) I term the combination of the beliefs that inflation is a nonmonetary phenomenon and the central bank exercises discretionary control over real variables the fine-tuning view.

As an illustration of this view, consider the simulation using the Board of Governors FRB/US model reported in the January 28, 2000, *Bluebook* (Board of Governors 2000b) prepared for the February 2, 2000, FOMC meeting. (FOMC materials are confidential for five full calendar years.) Although the contemporaneously available four-quarter average of core PCE inflation (1999Q1 through 1999Q4) was 1.5 percent, the staff used a value of 2 percent for the contemporaneous core PCE inflation rate, which was close to the estimated value

for 1999Q4.¹ One of the *Bluebook* simulations was a “price stability scenario [which] brings core PCE inflation down to 0.75 percent—close to the estimated measurement bias in this price index.”

The Phillips curve is the key behavioral relationship that determines the inflation-unemployment trade-offs involved in simulations of the FRB/US model. The *Bluebook* stated of the Phillips curve in particular and the model in general:

Expectations of inflation . . . are formed in a forward-looking manner, but with incomplete knowledge of the structure of the model. . . . The model has a long-run sacrifice ratio of about 3.75. That is, the equivalent of a 3.75 percentage point increase in the unemployment rate sustained over a year would eventually yield a 1 percentage point lower rate of inflation.

The staff also assumed that the “NAIRU [full employment rate] is about 5.25 percent and growth of potential output is initially around 4 percent.” At the time, the contemporaneously available unemployment rate (1999Q4) of 4.1 percent was below the NAIRU. As a result, the unemployment rate would have to rise just to maintain 2 percent inflation. Going into the February 2000 FOMC meeting, the funds rate target was 5.75 percent. In the simulation, the FOMC raises the funds rate gradually “to a peak of about 7.75 percent by late next year. This policy . . . [pushes] the unemployment rate up to 6.5 percent by the middle of the next decade.”

The “stickiness” in expectations, which endows inflation with a persistence independent of monetary policy, gives the FOMC control over the real funds rate, which the staff forecast would rise from 4.25 percent to a peak of 6.25 percent (the funds rate minus lagged four-quarter percentage changes in core PCE inflation). Although the forecast was for the inflation rate to fall to 0.75 percent in 2007, the unemployment rate did not return to its NAIRU value until 2010. The *Bluebook* also reported:

Although GDP growth slows to below trend, the economy does not come close to falling into recession in this scenario; the faster growth of potential that has developed in recent years means that a substantial rise in the unemployment rate can occur even with a significantly positive pace of economic expansion.

Given the assumed sacrifice ratio of 3.75 percent, the reduction of inflation by 1.25 percentage points (from 2 percent to 0.75 percent) in the simulation requires monetary policy to create 4.7 man-years of

¹These figures are from the January 27, 2000, *Greenbook* (Board of Governors 2000a).

excess unemployment. (Given an Okun's law relationship of two between unemployment and output gaps, the cost of returning to price stability is therefore 9.4 percent of GDP.) Spreading that unemployment out over a long period of time avoids recession. Over the years, a policy of reducing inflation without creating a recession has gone under a number of names. In the Nixon years, it was "gradualism." More recently, the monikers have become "opportunistic disinflation" and "flexible inflation targeting." Adherents of this school label "strict inflation targeters" as "inflation nutters."

Consider the following comments. Kohn (2005: 339) wrote that a "key" element in inflation targeting is that the central bank "would return it (inflation) to the target promptly if shocks pushed it away." Such a policy would force a clear association between funds rate increases and increases in unemployment. The FOMC would then have to defend a deliberate increase in unemployment.

Earlier, when inflation was 3 percent, Cleveland Fed President Jerry Jordan (1996: 42) commented:

If we supply a number for inflation, my own number would be 2 percent for 1998, and then the staff puts together a matrix that indicates how many people would have to be thrown out of work and how much output would have to be sacrificed to get to 2 percent inflation in that year. I am not going to want to publish that.

In short, according to the fine-tuning view, inflation shocks push the inflation rate above target. Given persistence in the propagation of inflation, the FOMC must raise the unemployment rate to return inflation to target. Given the invariance of the sacrifice ratio, the number of required man-years of excess unemployment is hard-wired. Among proponents of this view, there is concern that an inflation target would bias policy toward accepting additional variability in unemployment to stabilize inflation. There is also concern that by removing the "flexibility" to distribute over long periods of time the unemployment necessary to control inflation an explicit inflation target would engender criticism of the Fed's implementation of the dual mandate.

The question is whether this characterization of the world is valid. It derives from a Phillips curve tradeoff between unemployment and inflation that is invariant to the systematic part of monetary policy. The argument for this assumption is often the simple appearance in the data of persistence in inflation. However, there are two problems with this logic.

Problems with the Phillips Curve Logic

The first problem is that only inflation persistence that derives from price setting based on the extrapolation of past inflation (as opposed to the policy rule of the central bank or its anticipated future behavior) implies such a cruel unemployment-inflation tradeoff. Inflation shocks impart persistence to inflation, but such persistence implies no such tradeoff. As long as the central bank has a credible inflation target, such shocks do not propagate. It can allow them to affect the price level with the expectation that they will largely wash out over time.

The second problem is that monetary policy itself could be the source of the inflation persistence. The strategy of “opportunistic disinflation” could itself impart such persistence. One way to make this strategy operational is to lower inflation by imparting a small amount of inertia to funds rate decreases when the economy weakens. Policy is then contractionary but without an explicit association between increases in the funds rate and unemployment. How does this strategy work in practice?

Periodically, trend inflation rises above its desired level. In principle, such an overshoot could derive from an inflation shock. In practice, it has almost always derived from an expansionary monetary policy. During the expansionary phase, output grows faster than potential, the unemployment rate falls, and the FOMC raises the funds rate in measured but steady steps. Eventually, the funds rate reaches a level where monetary policy is restrictive.

To deal with the inflation overshoot, the FOMC could publicly announce an inflation target and commit to it. Commitment would involve a stated willingness to raise the funds rate in a measured way as long as expected inflation measured in financial markets exceeded the inflation target. In practice, however, the FOMC keeps the funds rate at its peak value when the economy weakens initially and then lowers it only slowly. The FOMC thus avoids any explicit association between an increase in the funds rate and rising unemployment. Output grows less than potential and the unemployment rate rises.

Eventually, a negative output gap lowers expected inflation and actual inflation falls. However, expected inflation (and as a result actual inflation) falls only slowly in the absence of explicit guidance from the FOMC about its target for inflation. As a result, these procedures impart to the data a high “sacrifice ratio.” The public must learn the FOMC’s inflation objective through the brute force of excess unemployment.

FOMC's Reluctance to Adopt Inflation Targeting

The resulting inflation persistence and high sacrifice ratio, even though artifacts of monetary policy, make the FOMC reluctant to announce an explicit inflation target. The FOMC judges that a significant number of man-years of unemployment are required to lower the unemployment rate. It therefore wants to spread out those years of excess unemployment so as to avoid questions about its fidelity to the dual mandate. The policy perpetuates itself.

In what kind of world does the central bank live? In the 1970s, when the primary objective of monetary policy was low, stable unemployment, the policy issue from the fine-tuning perspective was how much inflation would the Fed have to allow in order to stabilize unemployment? Proponents of rational expectations argued that the question was irrelevant. Because the Phillips curve is not exploitable, they argued, the Fed cannot control unemployment. When the primary objective of monetary policy became low, stable inflation in 1979, the policy issue from the fine-tuning perspective then became, How much output variability would the Fed have to allow in order to stabilize inflation? Although the policy issue changed, the economic issue remained the same. If the proponents of rational expectations were correct about the nature of the Phillips curve, the newer policy issue was as irrelevant as the old one.

So, what is the nature of the Phillips curve? Can the central bank, which controls only a nominal variable (the monetary base), control real variables like unemployment? As already noted, inflation persistence itself possesses no implications for this question. The issue remains as defined in the earlier rational expectations debate. Is the Phillips curve invariant to changes in the systematic behavior of the central bank? An answer to that question requires observations of the Phillips curve across different monetary regimes.

In the words of Samuelson and Solow (1960: 1350), a "vast experiment" is required. They wanted to know what inflation rate would arise if aggregate demand management kept the unemployment rate at 4 percent. In their framework, they wanted to know whether the inflation that had arisen in 1956 with 4 percent unemployment was cost-push or demand-pull. If it were the former, aggregate demand management could move the unemployment rate down to 4 percent while incomes policies restrained inflation. With Arthur Burns' high money growth and Richard Nixon's wage and price controls, the country conducted the experiment envisioned by Samuelson and Solow.

Evidence that an Inflation Target Is a Suitable Target

In the stop-go era, policymakers took seriously the implications of the assumption that inflation persistence is hard-wired. Monetary policy can control real variables, while the control of inflation is costly. The combination of aggregate demand management to deliver low, stable unemployment with a range of incomes policies including outright controls to “soften” the Phillips curve trade-off engendered historically high inflation and unemployment. Lucas and Sargent (1978: 303) wrote, “This was econometric failure on a grand scale.”

However, when they wrote, the vast experiment was only half over. Because the Fed did not attempt to achieve a 4 percent unemployment rate with ever increasing inflation rates, the experiment with aggregate demand management left unemployment-inflation correlations in the data showing a relationship between changes in inflation and the difference between unemployment and a base value (the NAIRU). The implication of the Phillips curve based on these correlations as newly reformulated by Modigliani and Papademos (1975, 1976) was that the FOMC’s post-1979 objective of low, stable inflation would require increased variability of unemployment. In the event, both unemployment and inflation became more stable after the initial disinflation. Hard-wired inflation persistence is a bad working assumption for a central bank.

In conclusion, an inflation target is a suitable target for a central bank. It would improve both the conduct of monetary policy and central bank accountability.

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