INFLATION TARGETING IN THE UNITED STATES?

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Abstract

The paper begins by tracing the origins of the case for inflation targeting in postwar US monetary history. It describes five aspects of inflation targeting practiced implicitly by the Greenspan Fed. It argues that (1) low long run inflation should be an explicit priority for monetary policy, (2) as a practical matter it is not desirable for the Fed to vary its short run inflation target (3) strict inflation targeting can be regarded as efficient constrained countercyclical stabilization policy. Finally, the paper suggests that the Fed publicly acknowledge its implicit priority for low long run inflation, that Congress recognize that priority, and that in return representatives of the FOMC consider participating in a monetary policy forum to better inform the public and congressional oversight committees about current monetary policy.

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1 Introduction

In what sense can monetary policy as currently practiced by the Federal Reserve (Fed) be characterized as inflation targeting? And what, if any, features of an inflation targeting policy regime should the Fed adopt more formally? These are the questions implicit in the title of this paper. US macroeconomic performance has improved greatly since the early 1980s. The 1980s and 1990s saw two of the longest expansions in US history and two of the mildest contractions in 1990-01 and 2001-02. The paper argues that this success can be attributed in large part to inflation targeting policy procedures that the Fed has adopted gradually and implicitly over the last two decades. Much of the paper is devoted to explaining the origins of the Fed's implicit commitment to inflation targeting. Understanding the historical record suggests that some form of inflation targeting is likely to remain at the core of Fed monetary policy indefinitely.

Explicit inflation targeting is characterized by the announcement of an official target for the inflation rate and by an acknowledgment that low inflation is a priority for monetary policy. Inflation targeting also involves enhanced transparency of the procedures and objectives of monetary policy, and increased accountability of the central bank for attaining those objectives.[1]

To a large extent the explicit adoption of inflation targeting would merely continue the approach to monetary policy developed under Chairmen Volcker and Greenspan. Nevertheless, it seems worthwhile to consider whether more explicit inflation targeting procedures could help the Fed sustain good monetary policy in the future.[2] Detailed, explicit, and transparent inflation targeting procedures have been adopted by numerous central banks abroad to build and secure credibility for low inflation.[3] The main objection to some sort of explicit, public commitment to inflation targeting is the concern that inflation targeting would focus the Fed too narrowly on inflation at the expense of output and employment. Moreover, the Fed has achieved price stability and arrived at monetary policy procedures that resemble inflation targeting by "just doing it." So one might argue that the Fed has little need to adopt inflation targeting formally. Admittedly, the priority for low inflation is "in the water" at the Fed these days; but

[1] See Bernanke and Mishkin (1997) and Meyer (2001) for discussions of explicit inflation targeting policy procedures.

[2] Federal Open Market Committee (1995, 1996) contain early debates on inflation targeting. Saxton (1997, 2002) makes the case for inflation targeting. McCallum (2000) argues that the US should formalize its monetary standard by committing to a low long run target for inflation. A consensus among well-known monetary economists supporting a priority for low long run inflation is evident in Federal Reserve Bank of Kansas City (1996).

[3] See Bernanke, Laubach, Mishkin, and Posen (1999), Blejer, Ize, Leone, and Werlang (2000), Haldane (1995), King (1997), Kohn (2000), Liederman and Svensson (1995), Loayza and Soto (2002), McCallum (1997), Neumann and von Hagen (2002), Schmitt-Hebbel and Tapia (2002), Sterne (1999), and Svensson (2001).

on the other hand "bottling" it for the future might not be a bad idea.

The Fed has been extraordinarily fortunate in having two remarkable chairmen since the late 1970s who skillfully helped to turn monetary policy from a source of instability into a major stabilizing force for the macroeconomy. It is well to remember how uniquely qualified they were to lead the Fed. Each had decades of professional experience observing the business cycle before becoming chairman–Volcker at the New York Fed and Greenspan as a private business economist in New York. Each had an extensive knowledge of financial markets and market participants from having worked in New York.[4] Each had prior experience in Washington–Volcker at Treasury and Greenspan at the Council of Economic Advisors. And both were trained economists. Moreover, both men personally experienced and understood as professionals the disruptive consequences of inflation. It will be difficult to find a successor to lead the Fed with all these qualifications who can navigate the appointments process successfully.[5]

A second, more fundamental reason to consider the adoption of explicit inflation targeting is simply that in a democracy a central bank should be fully accountable for the monetary policy that it pursues.[6] Adopting inflation targeting procedures explicitly would improve the transparency of the policy process and the ability of Congress to hold the Fed accountable for monetary policy. For both of these reasons it is important to distill the essence of the implict inflation targeting procedures developed under Volcker and Greenspan and to consider how inflation targeting could be institutionalized to help the Fed sustain its improved performance after Chairman Greenspan retires.

The paper addresses these objectives in four parts. Section 2 describes the origins of the case for price stability in the US by reviewing postwar monetary policy as practiced by the Fed and enumerating the problems created by failing to make price stability a priority. In particular, Section 2 discusses the inflationary go/stop era and the Volcker disinflation, and describes the ways in which monetary policy as conducted in the Greenspan era can be characterized as implicit inflation targeting. Section 3 considers arguments for and against making low long run inflation a priority, and whether a quantitative inflation target is a good idea. Section 4 considers inflation targeting in the short run, including complications involved in managing departures of inflation from its long run target, the feasibility and desirability of strictly targeting a constant inflation objective in the short run, and the relationship of inflation targeting to countercyclical stabilization policy. Finally, Section 5 suggests how to make the Fed's inflation targeting procedures explicit in order to secure the commitment to low inflation, enhance transparency, and improve the Fed's accountability for attaining its monetary policy objectives. A brief summary concludes the paper.

[4] See, for instance, Martin (2000) and Woodward (2000).

[5] See, for instance, Stevenson (2002).

[6] See Blinder (1996).

2 Origins of the Case for Price Stability in the US

In order to appreciate fully the rationale for inflation targeting as implicitly practiced in the US today and why inflation targeting will likely remain at the core of Fed monetary policy in the future, one must understand the origins of the case for price stability in the US. These are found in three distinct subperiods of postwar US monetary history: the period of inflationary go/stop policy from the late 1950s to the late 1970s, the Volcker disinflation from 1979 to 1987, and the subsequent achievement of credibility for low inflation under Greenspan. The go/stop period illustrates the consequences of failing to make low inflation a priority for monetary policy. The Volcker period illustrates the difficulty in restoring credibility for low inflation after its has been compromised. And the Greenspan era illustrates how and why the Fed has come to target low inflation implicitly in recent years. Each subperiod is discussed in turn below.[7]

2.1 Inflationary Go/Stop Monetary Policy

The inflationary tendency evident during the period of go/stop monetary policy derived initially from a desire not to repeat the disastrous deflation of the 1930s. The disruptive potential of inflation was consistently underestimated, and each increase in inflation was tolerated in the belief that it would soon die down. Moreover, go/stop policy reflected the Fed's inclination to be responsive to the shifting balance of concerns between inflation and unemployment. In the "go" phase of the policy cycle inflation became a major concern only after it clearly moved above its previous trend; hence, the Fed did not tighten policy early enough to preempt inflationary outbursts before they became a problem. By the time the public became concerned about rising inflation, pricing decisions already embodied higher inflation expectations. At that point the Fed would *need a recession* to bring inflation and inflation expectations back down, and an aggressive increase in short term interest rates would initiate the "stop" phase of the policy cycle. At best, there was only a relatively narrow window of public support for the Fed to raise interest rates. That window opened when rising inflation was widely judged to be a problem and closed after tighter monetary policy caused the unemployment rate to begin to rise. Thus, the Fed found it difficult to reverse rising inflation, and the trend rate of inflation tended to ratchet up with each go/stop policy cycle.[8]

Another reason for the rising inflation trend was that deliberately expansionary monetary policy in the go phase of the policy cycle came to be anticipated by workers and firms. Workers learned to take advantage of tight labor markets to make higher wage demands and firms took advantage of tight product markets to pass along higher costs

[7] Goodfriend (1997) provides a longer-term historical perspective on the evolution of monetary theory and policy.

[8] See, for instance, Romer and Romer (1989).

in higher prices. Increasingly aggressive wage and price behavior tended to neutralize the favorable effects of stimulative monetary policy. The Fed persisted in trying to pursue what it regarded as a reasonable balance between inflation and unemployment objectives. But in practice it became evermore expansionary on average in the pursuit of low unemployment, which produced correspondingly higher inflation and inflation expectations. As a result, lenders demanded ever higher inflation premia in bond rates. In the absence of an anchor for inflation, inflation expectations and bond rates moved higher and fluctuated widely, which destabilized the economy and complicated countercyclical stabilization policy enormously.

In retrospect, the central problem for most of the postwar period up to the Volcker disinflation beginning in 1979 was that the Fed tended to justify its periodic inflation-fighting actions against an implicit objective for low unemployment. In doing so, the Fed made monetary policy a source of instability and wound up worsening both inflation *and* unemployment. Eventually the Fed recognized that it would be better to justify its actions to stimulate employment against a commitment to low inflation.

2.2 The Volcker Disinflation: 1979-1987

The case for price stability as we know it today was strengthened by the extaordinary difficulties encountered in dealing with inflation during the period of the Volcker disinflation from 1979 to 1987. In particular, the Fed experienced the adverse consequences of a near total collapse of credibility for low inflation, and learned how difficult it is to pursue interest rate policy to restore credibility for low inflation once that credibility has been thoroughly compromised. Although the challenges confronting the Fed during the Volcker disinflation were far larger than those today, their nature is similar and still relevant. This section considers, in turn, four features of this tumultuous period: the breakdown of mutual understanding between the Fed and the public, the loss of flexibility to use interest rate policy to stabilize the output gap, the nature of the cost of restoring low inflation, and the inflation scare problem.

2.2.1 The Breakdown of Mutual Understanding Between the Fed and the Public

By the time that Volcker became Fed chairman in 1979, the sharp increase in the level and volatility of inflation and inflation expectations born of the previous decade's go/stop monetary policy made it exceptionally difficult for the Fed to contribute constructively to macroeconomic stabilization. The Fed continued to make monetary policy by managing short-term nominal interest rates. But the effect of interest rate policy on the economy is determined by its effect on *real* interest rates–nominal rates minus inflation expectations. Stabilization policy became more difficult, in part, because relatively

large adjustments in the real rate were necessary to stabilize the economy. Moreover, the Fed found it increasingly difficult to judge the public's inflation expectations and how its own policy actions might influence those expectations. Hence, the Fed could not judge how a given nominal interest rate policy action would translate into an adjustment in real interest rates. In short, there was a breakdown of mutual understanding between the Fed and the public: the public could no longer discern the Fed's policy intentions and the Fed could not predict how the economy would respond to its policy actions. Consequently, the opportunity for policy mistakes was greatly enlarged and macroeconomic stabilization policy became increasingly difficult.

As a result, the Volcker Fed came to appreciate what the Fed had taken for granted previously–that monetary policy must be conducted so as to preserve a mutual understanding between the public and the Fed. In particular, the Volcker Fed realized that price stability must be the cornerstone of that mutual understanding. In large part the subsequent disinflation can be seen as an effort to rebuild that mutual understanding in order to rehabilitate countercyclical stabilization policy.

2.2.2 Loss of Flexibility to Use Interest Rate Policy to Stabilize Output Relative to Potential

When the Fed's credibility for low inflation is in question, the Fed loses the *flexibility* to use interest rate policy to stabilize output relative to its potential. Obviously, when the Fed *needs an output gap* to restrain inflation and stabilize inflation expectations, it cannot also use interest rate policy to narrow that output gap. The behavior of interest rate policy in the brief recession of 1980 makes this point well.

The Volcker Fed raised the nominal federal funds rate target sharply from around 11 percent in September of 1979 to around 17 percent in April 1980 in its initial effort to bring down inflation. About half of that 6 percentage point increase occurred in the fall of 1979. January 1980 later turned out to be an NBER busines cycle peak, and evidence of a weakening economy caused the Fed to pause in its aggressive tightening between late 1979 and March 1980. But with the federal funds rate held steady, the 30 year (long) bond rate jumped by around 2 percentage points between December and February despite the weakening in the economy. A number of factors contributed to the unprecedented increase in inflation expectations evident in the sharp rise in the bond rate: the ongoing increase in oil prices, the unprecedented rise in the price of gold, and the Soviet invasion of Afghanistan. In addition, the Fed's hesitation to tighten further probably created doubts about its willingness to bear the output costs necessary to reduce inflation. In any case, faced with this evidence of a further increase in inflation expectations, the Fed was forced to react with an enormous 3 percentage point increase in the nominal funds rate in March. The short recession that occurred in the first half of 1980 probably resulted from this aggressive policy tightening in conjuntion with the

imposition of credit controls in March.[9]

Thus, interest rate policy helped to precipitate the 1980 recession as it would precipitate the 1981-2 recession, and for the same reasons. The difference is that in 1980 the Fed cut the federal funds rate sharply by around 8 percentage points between April and July to act against the downturn, and the recession ended quickly with around 8 percent real GDP growth in the 4Q 1980. However, inflation remained high in 1980. The lesson of 1980 was that the Fed could not restore credibility for low inflation if it continued to utilize interest rate policy to stabilize the output gap.

2.2.3 The Cost of Restoring Credibility for Low Inflation

The Volcker disinflation made particularly clear why it is so costly to restore credibility for low inflation once it has been compromised. Consider the striking disinflation that occurred in 1981. In early 1981 the Fed maintained the nominal federal funds rate at 19 percent. As measured by PCE inflation, which was around 10 percent in Q1 1981, real short-term interest rates were then a very high 9 percent. Not surprisingly, the aggressive policy tightening began to take hold by midyear. The NBER business cycle peak was reached in July, and real GDP growth fell at a 6 percent annual rate in Q4 1981 and at a 5 percent annual rate in Q1 1982. The Fed brought the nominal federal funds rate down from 19 percent in the summer to the 14 percent range at the end of the year, where it remained until the summer of 1982 when it was reduced further to around 10 percent.

The 5 percentage point funds rate reduction through the end of 1981 was large in nominal terms. But PCE inflation also fell by about 5 percentage points by early 1982 to the 5 percent range. To the extent that short-term inflation expectations followed the decline in actual inflation during 1981, the Fed maintained an extraordinarily high 9 percent real funds rate *during* the recession! Amazingly, the Volcker Fed maintained a 9 percent real short rate even as the recession worsened and the unemployment rate rose from around 7 percent in July 1981 toward a peak of nearly 10 percent at the recesion trough in November 1982.

Why did interest rate policy remain so extraordinarily tight even after the sharp break in inflation in 1981? One reason is that the behavior of long bond rates suggested that the Fed's credibility for low inflation continued to deteriorate. In fact, the long bond rate actually *rose* by about 3 percentage points from January 1981 to more than 14 percent in October, even as the economy weakened. And although the rate showed some tendency to decline thereafter, it remained in the 13 to 14 percent range until it began to come down more persistently in the summer of 1982. Only after this evidence emerged in the bond market, that the Fed was finally beginning to acquire credibility

[9] See Schreft (1990).

for low inflation, did the Fed ease policy decisively in August 1982. This policy easing paved the way for an end to the recession. Inflation stabilized at around 4 percent. And real GDP grew by a spectacular 6.7 percent in 1983 and 4.5 percent in 1984.

The Volcker Fed disinflation of 1981 is an extreme illustration of the point mentioned in Section 2.2 that, in practice, the Fed *needs a recession* to restore credibility for low inflation after it has been compromised. The reason is this: if a disinflation is fully credible, then wage and price inflation can slow immediately without much effect on real interest rates or output.[10] If, however, as in 1981, a disinflation is not immediately credible, then wage and price inflation continue as before. If the Fed persists in tightening monetary policy anyway, real interest rates rise, aggregate demand moves below potential output, employment falls, and the output gap thus created causes wage and price inflation to slow gradually. Postwar US monetary history makes it abundantly clear that disinflation is costly in practice because credibility for low inflation is hard to acquire after it has been lost. Moreover, the Fed's commitment to low inflation is only as credible as the public's support for it. And that support usually remains in question until a disinflation is nearly complete.

2.2.4 The Inflation Scare Problem

The Fed's credibility problems during the Volcker era showed up as "inflation scares," sharply rising long term bond rates reflecting rising long-term inflation expectations.[11] Inflation scares presented the Fed with a costly dilemma because ignoring them would encourage even more doubt about the central bank's commitment to low inflation. Yet raising real short rates to restore credibility for low inflation risked precipitating a recession. There were four striking examples of inflation scares in the bond rate during the Volcker era. As discussed above, the Fed's response to the first two "scares" in 1980 and 1981 precipitated recessions in those years.

The third inflation scare occurred in 1983-84. By then, inflation was running at around 4 percent and, for the most part, it held in that range during this episode. Nonetheless, an inflation scare in the bond market raised the long rate from the 10 percent range in the summer of 1983 to its peak the following summer in the 13 percent range–only about 1 percentage point short of its 1981 peak even though inflation was over 6 percentage points lower in 1983 than in early 1981! The Fed reacted by moving the nominal funds rate up from the 8 percent range to the 11 percent range. Inflation remained low, so the tightening took the real short-term interest rate up by about 3

[10] See Ball (1994).

[11] See Goodfriend (1993). Ireland (1996) uses the modern theory of interest to show that movements in long bond rates reliably signal changes in expected inflation. Gurkaynak, Sack, and Swanson (2003) present evidence that the apparent "excess sensitivity" of long bond rates to macro data largely reflects fluctuations in inflation expectations.

percentage points to around 7 percent briefly in mid-1984 before the inflation scare subsided and the bond rate began to come down. In this case, the high real short rate needed to contain the scare succeeded in bringing real GDP growth down to a sustainable 2 to 3 percent range in the second half of 1984. This episode was important because it demonstrated that a well-timed and well-calibrated series of preemptive interest rate policy actions could defuse an inflation scare without creating a recession. The 6 percentage point drop in the bond rate from its June 1984 peak to the 7 percent range in early 1986 indicates that the Fed acquired enormous additional credibility for low inflation during this period, in large part no doubt due to the aggressive inflation-fighting actions taken in 1983-84.

Remarkably, even after the Volcker Fed had demonstrated its determination to act against inflation for almost a decade, there was yet another inflation scare when the bond rate rose by 2 percentage points from March to October 1987. Surprisingly, the Fed reacted little to this scare. In part, this may have reflected real growth weaker than in 1983-84. The scare may have occurred in part because Volcker was near the end of his term as chairman and there was doubt about whether the Fed under Volcker's successor would continue to place a high priority on low inflation. In any case, the 1987 scare is particularly striking evidence of the fragility of the credibility of the Fed's commitment to low inflation, possibly connected to the transition from one Fed chairman to another.

2.3 The Greenspan Era: 1987-Present

When Alan Greenspan succeeded Paul Volcker as Fed chairman in the summer of 1987 the inflation scare needed immediate attention. However, the October 1987 stock market crash forced the Fed to *ease* monetary policy and put off raising interest rates until the spring of 1988. Judging by the behavior of the long bond rate, which did not return to its early 1987 levels until 1992, it took the Greenspan Fed about five years to overcome the 1987 inflation scare.

The discussion of the Greenspan era below is in four parts. It begins by emphasizing the difficulty of reversing even a relatively minor loss of credibility for low inflation. It then describes the preemptive interest rate policy actions in 1994 that achieved virtual price stability and the benefits, thereafter, of having achieved full credibility for low inflation. One can see in the behavior of the Greenspan Fed the emergence of an implicit inflation targeting policy regime. The section concludes by pointing out five aspects of inflation targeting practiced implicitly by the Greenspan Fed.

2.3.1 Reversing a Minor Loss of Credibility for Low Inflation

As a result of the 1987 inflation scare and the policy easing that followed the October 1987 crash, PCE inflation *rose* by over 2 percentage points from around 3 percent in

1986 to around 5.5 percent in 1990. In response, the Fed raised the funds rate by over 3 percentage points to a peak of nearly 10 percent from the spring of 1988 to the spring of 1989 in an effort to reverse the rise in inflation and inflation expectations. As a result of those policy actions and the Gulf War recession, inflation began to recede in 1991. However, the unemployment rate rose by about 1 percentage point during the 1990-91 recession and rose further to nearly 8 percent in June 1992 during the "jobless recovery" that followed. Here is another instance where, having been insufficiently preemptive in containing inflation (in 1987 and 1988), monetary policy was obliged to be more restrictive than otherwise. With its credibility for low inflation compromised earlier, the Greenspan Fed lowered the federal funds rate tentatively and haltingly from a peak around 8 percent at the start of the recession in mid-1990 to 3 percent in the fall of 1992. By September 1992, the bond rate had returned to the 7 percent range, inflation had come down to around 3 percent, and the real federal funds rate was therefore near zero.

The zero real short rate was in place for eighteen months from September 1992 to February 1994. During that time the unemployment rate came down to 6.6 percent, the bond rate fell to the 6 percent range, and the inflation rate fell slightly. It appeared that the Fed had acquired an additional degree of credibility for low inflation. To secure that credibility, however, the Fed would need to preempt rising inflation by raising real short rates as the economy strengthened further in 1994. At a minimum, the Fed would have to move real short rates up from zero to a range historically consistent with sustainable growth without inflation. In part, preemptive policy was motivated by yet another inflation scare in the bond market. The more than 2 percentage point increase in the bond rate from late 1993 to November 1994 indicated that the Fed's credibility for low inflation still was not secure.

2.3.2 Preemptive Interest Rate Policy in 1994

The series of policy actions that lifted the real funds rate by 3 percentage points from February 1994 to February 1995 marked the Greenspan Fed's first preemptive actions against inflation. Like the Volcker Fed's 1983-84 actions, the Greenspan Fed's 1994 preemptive policy held the line on inflation without creating unemployment. After falling to the mid-5 percent range during 1994, the unemployment rate moved up only slightly in April 1995 and then began to fall again. The 1994 tightening proved once more that well-timed preemptive interest rate policy actions are nothing to be feared. By January 1996 the bond rate was down to around 6 percent and there was widespread talk of the "death of inflation."[12]

The successful preemptive policy in 1994 brought the economy to virtual price stability. Inflation and inflation expectations were anchored more firmly than ever before.

[12] See Bootle (1996).

Inflation has remained low ever since, and long bond rates have remained in the 5 to 6 percent range with little evidence of inflation scares. Remarkably, price stability was maintained even though the economy grew in the 4 percent range annually from 1996 through 1999, and the unemployment rate briefly fell below 4 percent for a while. Unquestionably, rising productivity growth during the period helped to hold down inflation, but the fact that the economy achieved this growth without much of an increase in inflation or an inflation scare further reinforced the Greenspan Fed's credibility for low inflation.[13]

2.3.3 Benefits of Full Credibility for Low Inflation

Three closely related benefits of full credibility for low inflation have been apparent in the second half of the Greenspan era. First, credibility helped the economy to operate well beyond the levels that might have created inflation and inflation scares in the past. Second, when in 1999 and 2000 the Fed set out to slow the growth of real aggregate demand to a more sustainable rate, it raised real short rates to the 5 percent range, somewhat below the range of real short rates it had targeted in previous periods of policy restraint. As in 1994, less real rate restraint was necessary in 2000 because the Fed did not have to restore low inflation or its credibility for low inflation after they had been compromised. Having attained price stability, the Fed did not *need a recession* to bring inflation and inflation expectations down. The Fed's objective in 2000 was *only* to bring aggregate demand back into line with potential output so that the expansion would not end with an outbreak of inflation, an inflation scare, or an unsustainable real boom and bust.

Third, when the expansion *did* end in an unsustainable boom and bust, the fact that inflation and inflation expectations were well anchored enabled the Greenspan Fed to cut the nominal federal funds rate aggressively from 6.5 percent to 1.75 percent in 2001 to cushion the fall in aggregate demand and employment.[14] Amazingly, the Fed was able to cut the real federal funds rate by 4 or 5 percentage points to around zero without a hint of an inflation scare. Since the Fed did not *need* a recession in 2001, it had the *flexibility* to cut the real funds rate aggressively to prevent one.

2.4 Implicit Inflation Targeting Practiced by the Greenspan Fed

When one considers the Greenspan era as a whole, it would appear that the Greenspan Fed adopted, gradually and implicitly, an approach to monetary policy that can be

[13] Goodfriend (2002) discusses the consequences of rising productivity growth and credible price stability in the second half of the 1990s for inflation and monetary policy.

[14] Some economists argue that monetary policy should have acted more aggressively against the extreme asset price increases in the late 1990s. See Bernanke and Gertler (1999) and Goodfriend (2003) for reasons why interest rate policy should not react directly to asset prices.

characterized as inflation targeting. To begin, the Greenspan Fed must have appreciated something like the case for price stability described above as it developed in the years of go/stop policy and during the Volcker disinflation. Moreover, Chairman Greenspan testified in 1989 in favor of a qualitative zero inflation objective for the Fed defined as a situation in which "the expected rate of change of the general level of prices ceases to be a factor in individual and business decisionmaking."[15] Thus, it is reasonable to think that the Greenspan Fed set out to achieve low enough inflation to make that definition of price stability a reality. This is the *first* sense in which it is plausible to think that the Greenspan Fed has adopted an implicit form of inflation targeting.

However, the Greenspan Fed clearly has not focused singlemindedly on achieving low inflation. Had it done so, it surely could have restored low inflation and the credibility for low inflation lost in 1987-1988 sooner than it did. However, given the initial credibility problems, attempting to act against inflation too aggressively could have come at too great a cost in lost employment and output. It was plausible to think that the relatively small slipage in inflation and credibility for low inflation that occurred in the late 1980s could be contained eventually without an aggressive monetary tightening. Such reasoning probably contributed to the decision to pursue a mildly restrictive interest rate policy to build back credibility for low inflation gradually. In other words, the Greenspan Fed displayed great patience in overcoming the effects on inflation and Fed credibility of the unfortunate initial conditions (the 1987 inflation scare and stock market crash) that it started with.

Moreover, the Greenspan Fed did not proceed to push the inflation rate down deliberately to price stability after 1992 in a way that might have been costly in terms of employment and output. Instead, preemptive policy was utilized in 1994 to reinforce the transition to price stability. The Fed held real short rates near zero for a year and a half until the economy showed strength in 1994 and then acted to preempt what might have been a cyclical increase in inflation. Holding the line on inflation proved to be a virtually costless way of moving the economy to price stability and fully securing the Fed's credibilty for low inflation.

The manner in which the Greenspan Fed moved to restore credibility for low inflation before 1992 and pushed to price stability after 1992 demonstrates a *second* sense in which it may be said to have targeted inflation implicitly. It is clear that the Greenspan Fed practiced a form of *flexible* inflation targeting in its pursuit of price stability.

Arguably, it is plausible to think that the Fed has finally achieved price stability in the sense that a measure of inflation favored by the Fed, core PCE inflation, has remained in the 1 to 2 percent range since the mid-1990s.[16] It is difficult to imagine circumstances that would cause the Greenspan Fed to *deliberately* target core PCE

[15] See Greenspan (1990), p. 6.

[16] See Federal Open Market Committee (1996), p. 11.

inflation *above* 2 percent in either the long run or the short run. This is the *third* sense in which it may be said that the Greenspan Fed has adopted an implicit form of inflation targeting. Likewise, it is hard to imagine any circumstances in which the Greenspan Fed would *deliberately* target core PCE inflation *below* 1 percent. There is no reason to take the inflation rate lower than that given the risk of deflation and the problems associated with the zero bound on nominal interest rates. This is the *fourth* sense in which it may be said that the Greenspan Fed has adopted an implicit form of inflation targeting.

Finally, it is clear that the Greenspan Fed practices inflation targeting in large part to enhance the flexibility of interest rate policy to stabilize the output gap over the business cycle. For instance, the discussion above explained how the Greenspan Fed exploited its full credibility for low inflation to lower short term interest rates flexibly to cushion the 2001 recession. In this sense, inflation targeting as practiced by the Greenspan Fed involves a *fifth* characteristic: constrained countercyclical stabilization policy. In other words, the Greenspan Fed appears willing to pursue aggressive countercyclical interest rate policy as long as inflation and inflation expectations remain anchored in or near the long run target range.

3 Should Low Long Run Inflation be a Priority?

Since the record shows that the Greenspan Fed has pursued inflation targeting implicitly, we now ask what features of those implicit inflation targeting procedures should be made explicit. We use the case for inflation targeting developed in Section 2 to help answer that question. In this section we consider only whether the Fed should make low *long run* inflation a priority. We begin with arguments supporting a priority for price stability. Then we consider opposing arguments and counterarguments. Finally we consider the case for a quantitative long run inflation target.

3.1 Arguments Supporting a Long Run Priority for Price Stability

A priority for low long run inflation derives not so much from a belief in its intrinsic value relative to other goals such as full employment and economic growth, but from theory and evidence suggesting that monetary policy encourages employment and growth in the long run mostly by controlling inflation.[17] Moreover, the US monetary policy record outlined in Section 2 suggests that the *flexibility* to pursue short run stabilization policy has been enhanced by a credible commitment to low inflation. Arguably, that credibility would be strengthened if the Fed announced publicly a priority for low long

[17] See, for instance, Feldstein (1997) and Federal Reserve Bank of Kansas City (1996).

run inflation.[18]

Further, in 1994 the Fed began to announce its current federal funds rate target publicly for the first time. The Fed became more forthcoming about its policy instrument in part because Congress and the public expressed an interest in greater transparency in monetary policy. For instance, all twelve reserve bank presidents were invited to explain their views on monetary policy before the senate banking committee in March 1993, and again before the house banking committee in October of that year. This increased transparency of the Fed's policy instrument, the federal funds rate, has enhanced the understanding of monetary policy and facilitated a public debate about Fed policy. A healthy debate about whether the Fed's policy actions are appropriate to achieve its objectives is to be expected. But the current situation is one in which the Fed has not clarified its priority for low inflation as well as it might. Thus, a debate about Fed policy actions in the current institutional environment can become a debate about the Fed's policy objectives.

The combination of instrument transparency with ambiguity about the priority for low inflation creates problems for monetary policy. For instance, the visibility of the Fed's aggressive preemptive tightening against inflation in 1994 attracted much criticism in part because the priority the Fed placed on low inflation had not been clarified, understood, and accepted by Congress and the public. The criticism from Congress and elsewhere at the time was seen by many as a threat to price stability and probably contributed to the severity of the inflation scare that raised the long bond rate by over 2 percentage points in 1994. Especially now that price stability has been achieved, and the transition costs are behind us, the Fed's commitment to long run price stability could be clarified to minimize the risk that a debate about Fed policy actions could create inflation scares in the future.[19]

3.2 Opposing Arguments and Counterarguments

The most fundamental argument against making low *long run* inflation a priority is that it might unduly constrain interest rate policy from stabilizing output relative to its potential in the *short run*. The concern is that, in practice, the Fed might become more timid in using interest rate policy flexibly to stabilize real economic activity over the business cycle for fear of the inflationary consequences. That said, the policy record outlined above shows that the Fed's power to stabilize the output gap over the business cycle was considerably *enhanced* as inflation and inflation expectations became more

[18] Fed officials have spoken repeatedly over the years about the benefits of low inflation and the Fed's commitment to price stability. However, the Fed has not asserted a priority for low long run inflation.

[19] Gurkaynak, Sack, and Swanson (2003) present evidence indicating that the Bank of England's credible commitment to an inflation target helped to anchor long term inflation expectations and bond rates in the UK.

firmly anchored. Nevertheless, the above argument must be taken seriously.

The second argument against formally adopting a priority for low long run inflation is that there is little to be gained, since the Fed has achieved and maintained low inflation by "just doing it." The Greenspan Fed appears to have acquired near full credibility for low inflation without a formal priority for low inflation. And there is every reason to think that the Greenspan Fed can continue to pursue inflation targeting implicitly and successfully. This argument seems to take it for granted that the Fed needs no institutional help in carrying on after Chairman Greenspan retires.

The third argument admits that a legislative mandate for low long run inflation would be helpful but stresses that it would be awkward, inappropriate, and potentially counterproductive for the Fed to announce a priority for low long run inflation unilaterally. To be sure, the Fed is an independent central bank in the sense that its interest rate policy actions are not subject to further evaluation by other authorities. And Congress did not object to the Volcker disinflation and the Greenspan Fed transition to price stability. Yet, the Fed is supposed to take direction on its goals from Congress. The current understanding between the Fed and the Congress would appear to amount to a "don't ask, don't tell" equilibrium: Congress doesn't ask the Fed whether it places a priority on low long run inflation, and the Fed does not say whether it has such a priority.[20] Both the Fed and the Congress appear to be satisfied with don't ask, don't tell, so apparently the status quo is satisfactory.

The problem with this argument is that waiting for Congress to endorse formally a priority for low long run inflation poses some risks. Currently, a large fraction of the public has had first-hand experience with inflation and naturally supports the view that it must be contained. But as the Fed succeeds over time in maintaining low inflation, that collective memory will fade. And Congress will be less likely to mandate a priority for price stability than it may be today. If the Greenspan Fed, in its capacity as the repository of central banking expertise in the US, believes that monetary policy would benefit from a legislatively mandated priority for low long run inflation, then it could *ask* Congress for one. The time is right to do so. Because price stability has been achieved, transition costs are no longer an obstacle. More importantly, the public has great confidence in the Greenspan Fed, and future Fed's will have less personal experience with and appreciation of the reasons why monetary policy would benefit from such a mandate. Institutionalizing that knowledge and experience in a mandate will go a long way toward insuring that future generations don't repeat the inflationary mistakes of the past.

[20] Federal Open Market Committee (1996) pages 64, 67, and 72 indicates the consensus within the FOMC on the desirability of a 2 percent long run objective for a CPI measure of inflation.

3.3 The Case for a Quantitative Long Run Inflation Target

The above discussion made the case that low long run inflation should be a priority for monetary policy. In principle, that priority could be specified in either a qualitative or a quantitative way. If a priority for low inflation is largely about anchoring inflation expectations, then arguably much of the benefit could be derived by specifying the priority in qualitative language using Chairman Greenspan's definition of price stability. For instance, such a commitment could be stated as a priority for maintaining monetary conditions in which "the expected rate of change of the general level of prices ceases to be a factor in individual and business decisionmaking." The discussion above suggests that explicitly adopting even a qualitative priority for low long run inflation would be a major step forward for monetary policy.

There are a number of reasons, however, why a priority for low long run inflation could be stated usefully in quantitative terms. The Fed could choose the measure of inflation to target from any number of candidate measures that have been exceptionally stable since the mid-1990s. Moreover, Fed staff routinely uses for internal policy simulations a quantitative working definition of low inflation that constitutes price stability. Arguably, that working definition is the FOMC's de facto quantitative long run inflation target, and it would serve naturally as a quantitative long run inflation target for external purposes as well. It makes sense to put a quantitative lower bound on inflation to protect against deflation and the problem of the zero bound on nominal interest rates. Announcing an explicit lower bound on inflation would make the public more confident that the Fed will not allow the US to fall into a Japanese style deflation, zero bound trap. That, in turn, would protect against potentially destabilizing *deflation* scares, to which the Fed would have to respond by pushing the nominal funds rate closer to zero. If it makes sense for the Fed to announce an explicit lower bound on its long run inflation target to protect against deflation, then it also makes sense to announce an explicit *upper* bound to emphasize that the Fed intends to hold the line on inflation as well. Finally, a quantitative long run inflation target would serve as a better benchmark against which to judge departures from price stability in the short run.

A target *range* would have advantages over a *point* inflation target. A target range would give the Fed a "safe harbor" within which it would not have to explain or respond to movements in inflation very much. Only when inflation moved outside the range would the Fed be expected to explain how policy would return inflation to the range. Without a range, the Fed might find it difficult to switch rhetorically from relatively little concern about inflation to greater concern when inflation moved up or down on a sustained basis. Specifying a quantitative range would not tie the Fed's hands in practice. What it would do is put the burden of proof on the Fed to explain how it intends to return inflation to its target. And that would be a valuable disciplining device.

A range of 1 to 2 percent for core PCE inflation monthly over 12 or 24 months earlier would be a reasonable quantitative long run target. The Fed is apparently comfortable using the core PCE price index to measure inflation.[21] Core PCE inflation has ranged between 1 and 2 percent since 1997. Given this observed stability, a 1 percentage point range should provide enough leeway for routine short run fluctuations of inflation. Finally, core PCE inflation would provide a more stable measure than overall PCE inflation against which to judge departures from price stability in the short run.

The main reasons for the Fed not to adopt a quantitative inflation target are fourfold. First, the Fed may not be quite sure yet what measure of inflation and target range to adopt. Second, as discussed above there is no pressing need to adopt a quantitative inflation target. Finally, the Fed's credibility for low inflation may actually be jeopardized if, for whatever reason, it cannot keep inflation within its long run quantitative target range. Fourth, adopting a quantitative inflation target may generate pressure to adopt a quantitative target for the unemployment rate, which would create problems for monetary policy of the sort encountered during the go/stop period reviewed in Section 2.1.

4 Inflation Targeting in the Short Run

This section considers inflation targeting in the short run. It begins by outlining complications that the Fed must confront in managing departures of inflation from the long run target range. It then suggests strongly that it is both feasible and desirable for the Fed to keep inflation within its long run inflation target even in the short run. The section closes by pointing out that strict inflation targeting is compatible with stabilizing output at its potential over the business cycle in a reasonable benchmark macromodel.

This discussion does not deny that inflation could be pushed outside of the target range in the short run. The analysis asserts only that it is likely to take an exceptional event to destabilize inflation when the Fed purposefully pursues price stability. Undoubtedly, bad luck or bad judgement could create excessively inflationary or deflationary conditions. If that were to happen, then presumably the Fed would return inflation to the target range flexibly, much as the Greenspan Fed restored credibility for low inflation in the late 1980s and early 1990s.

[21] Again, see Federal Open Market Committee (1996), p. 11.

4.1 Managing Departures of Inflation from the Long Run Target

If inflation moves outside its long run target range, for whatever reason, the Fed must choose a path for its interest rate policy instrument that balances the speed with which inflation is returned to target against the cost in lost output relative to potential. The Fed must decide how *fast* to rebuild credibility for its long run inflation objective. As a formal matter, the decision would depend on the following factors: 1) the mechanism by which interest rate policy is assumed to be transmitted to aggregate demand in the macromodel used by the Fed, 2) the specification of the relationships among aggregate demand, the output gap, and the inflation generating process in that macromodel, 3) the relative weights placed on the output gap and inflation stabilization in the Fed's (implicit) loss function, *or* 4) the length of time that the Fed arbitrarily allows for returning its conditional inflation forecast to the long run target, and 5) any conditional information on current shocks and adjustments to the model or the loss function weights due to special circumstances or evolving economic conditions. In sum, the policy response would depend on all information available to the Fed affecting the conditional inflation forecast and the output gap forecast.[22]

The complexity of the elements listed above shows how difficult it is for the Fed to manage inflation once it moves outside its long run target range. Arguably, the inflation generating process is the weakest part of the macromodel. Among other things the cost, in terms of lost output relative to potential, of returning inflation to its long run range depends on the credibility of the Fed's commitment to do so. The historical record discussed in Section 2 suggests that such credibility is sensitive to the Fed's actions *themselves* in the context of other aspects of the political economy in a way that is difficult to model. In any particular case the Fed must *judge* the extent to which drawing out the return of inflation to its long run target might be counterproductive by reducing the credibility of its intention to bring inflation all the way back down. That consideration must be balanced against attempting to bring inflation down before the credibility for doing so has been built up. An error in either direction would increase the output cost of restoring price stability.

Another problem arises because the Fed may tend to overstate the extent to which inflation has an inherent tendency to persist after it has been shocked. US inflation has exhibited a high degree of persistence in the past.[23] The Fed tolerated outbursts of inflation in the go phase of the policy cycle and showed only a limited inclination to risk recession to reverse those outbursts, but a willingness to allow "opportunistic" shocks to reduce inflation. Thus, both positive and negative inflation shocks tended to be propagated through time.[24] Firms would quickly build a shock to inflation into

[22] See Svensson (1999) and Gali (2001).

[23] See Fuhrer and Moore (1995) and Goodfriend and King (2001), pp. 75-81.

[24] The empirical findings reported in Atkeson and Ohanian (2001) reflect this behavior.

inflation expectations and incorporate those expectations into their own price setting behavior. By underestimating its own role in creating inflation persistence in the past, the Fed may be too quick to accommodate and propagate deviations of inflation from its long run target in the present.[25]

It is optimal for the monetary authority to vary its short run inflation target deliberately in response to some shocks in some macromodels. However, that optimal variation depends sensitively on the details of the macromodel and on the size and type of shocks hitting the economy. Given our uncertainty about the structure of the economy, the difficulty in promptly and accurately identifying the shocks hitting the economy, and the complications discussed above, attempting to *fine tune* the inflation target in the short run is more likely to be counterproductive than not.[26] In any case, the historical record suggests that the Fed's ability to deliberately and systematically manipulate inflation in response to shocks is very limited. Moreover, such attempted manipulation would open the door to inflation scares. For all these reasons the presumption must be that it is inadvisable for the Fed to attempt to vary the short-run inflation target deliberately over time.

4.2 Precluding Inflation from Moving Outside the Long Run Range

As a practical matter, the Fed can adhere closely to its long run inflation target only if interest rate policy can *preclude* shocks from moving inflation outside the long run target range. Is it plausible that the Fed can do so? The answer would appear to be yes, especially for a core inflation index that excludes highly flexible commodity and food prices. As mentioned above, evidence from the mid-1990s to the present suggests that inflation will remain stable over the business cycle when the Fed makes price stability a priority.

Theory suggests why the Fed has been able to stabilize inflation so well and is likely to continue to do so in the future. Credibility for stable prices is self-enforcing to a great extent. Forward-looking, sticky-price firms are less likely to pass cost shocks through to prices if firms expect the Fed to take policy actions promptly to conform aggregate demand to potential output in order to relieve the cost pressures.[27] Moreover, credible price stability gives the Fed greater leeway to cut short term interest rates in response to a financial market crisis or to stabilize the output gap without creating inflation or an inflation scare in bond markets. Thus, the Fed was able to cut the federal funds rate target by 75 basis points for about a year in 1998-99 in aftermath of the Russian debt default, and then by 475 basis points when the economy turned down in 2001, without much effect on inflation or inflation expectations in either case. Because the Fed is

[25] See Cecchetti (1995) and Cogley and Sargent (2001).
[26] See Orphanides and Williams (2002) and Schmitt-Grohe and Uribe (2002).
[27] See Taylor (2000).

known to have such leeway to act aggressively and preemptively against recessions, firms are less likely to pass *deflationary* cost shocks through to prices as well.

4.3 Strict Inflation Targeting and Countercyclical Stabilization Policy

According to the argument above, strictly targeting core inflation within its long run range has much to recommend it. The strength of that argument derived in part from the fact that doing otherwise would require the Fed to take a stand on theoretical and empirical inflation dynamics about which there is much uncertainty. This section supplements the case by pointing out that strict inflation targeting is entirely consistent with stabilizing output at its potential over the business cycle in a reasonable benchmark macromodel. In other words, strict inflation targeting can be regaded as the anchor for *constrained countercyclical stabilization policy* along the lines of the description in Section 2.4 of inflation targeting as practiced by the Greenspan Fed. From this perspective, even those who care mainly about output and employment can support strict inflation targeting.

This point is clear with respect to a shock to aggregate demand. For instance, a positive shock that moves aggregate demand above potential output would increase labor demand and put upward pressure on wages. That cost pressure would be passed to sticky (core) prices in the absence of a tightening of monetary policy. However, by raising short term interest rates, the Fed could bring aggregate demand back into line with potential output, move employment back down, eliminate the upward pressure on wages, and hold the line on inflation. In other words, interest rate policy can stabilize simultaneously both inflation and the output gap in the face of a shock to aggregate demand.

What about a shock to aggregate supply, such as a temporary increase in the price of oil? The question is: can the interest rate policy actions that stabilize core inflation against an oil price shock also be construed as stabilizing output relative to its potential? The higher price of oil would raise the cost of production for sticky-price firms; and again that cost pressure could be passed to sticky (core) prices in the absence of a tightening of monetary policy. To stabilize sticky (core) price inflation the Fed would have to raise real short rates and depress aggregate demand enough to *reduce* employment and wages in order to *offset* the effect of higher oil prices on production costs. In effect, price stability could be maintained by making aggregate demand conform to the temporary reduction in potential output. From this perspective, the answer to the question above could be yes.

In fact, in a benchmark macromodel with sticky prices and effectively flexible wages, interest rate policy that stabilizes sticky (core) prices automatically makes output conform to its time-varying potential.[28] The reason is two-fold: 1) strict inflation targeting

[28] See Goodfriend and King (1997, 2001) and Goodfriend (2002) for a discussion of the benchmark new

neutralizes fluctuations in employment and output that would otherwise occur due to sticky prices, and 2) effective wage flexibility assures that output fluctuates with its potential defined as the outcome of an imperfectly competitive RBC model with a constant markup and perfectly flexible wages and prices.

Of course, there is some question about the extent to which actual wages are effectively flexible. Nominal wages exhibit about the same temporary rigidity as nominal prices.[29] To the extent that nominal wages are temporarily rigid, the Fed might have to push employment and output below potential as defined above in order to relieve cost pressures and stabilize core inflation against an oil price shock. Pushing employment down further would reduce labor costs by raising the marginal physical product of labor. In this case, however, the Fed would face a short run tradeoff between inflation, and output relative to its potential.

That said, there are two reasons why such a tradeoff may be of relatively little concern in practice. First, an inflation target of 1 to 2 percent with trend productivity growth of around 2 percent would yield average nominal wage growth in the 3 to 4 percent range. Such high nominal wage growth should keep the economy safely away from situations in which significant downward nominal wage rigidity, as opposed to slower nominal wage growth, is required to stabilize inflation and the output gap. Second, wages may be effectively flexible in the context of the long-term implicit and explicit contracts that characterize most employment relationships. It would be inefficient for either firms or workers to allow temporary nominal wage rigidity to upset the terms of otherwise efficient long term employment relationships. In particular, one might expect future wage adjustments to undo any effects of temporary nominal wage stickiness, so that wages would be effectively flexible. Such behavior would neutralize the allocative consequences of sticky nominal wages.[30]

5 How to Make Inflation Targeting Explicit in the US

At the core of the case for inflation targeting is the idea that monetary policy encourages economic growth and stabilizes output at its potential over the business cycle in large part by anchoring inflation and inflation expectations. The need to influence expectations puts a premium on a central bank's credibility, commitment to goals, and perceived independence and competence to achieve its objectives. Currently, these foundations are secure in the US because the public has confidence in the Greenspan Fed. If price stability is to be sustained, however, the operating procedures of the

neoclassical synthesis model in which strict inflation targeting also stabilizes the output gap. Goodfriend (2002), Ireland (1996), and Woodford (2001) show why strict inflation targeting maximizes welfare in related models.

[29] See Taylor (1999).

[30] See Barro (1977) and Hall (1999).

Greenspan Fed must be credibly transferred to its successor. Over the long run, the Fed's credibility must be based on an understanding of how inflation targeting works rather than in the leadership of the Fed. Making the Fed's inflation targeting procedures explicit would help to achieve these ends by securing the Fed's commitment to low inflation and improving the transparency and accountability of the Fed for attaining its monetary policy objectives.[31]

Based on the discussion above, it seems fair to say that consistent with theory and US experience, and in line with practices that have been adopted abroad, low inflation *is* a priority for Fed monetary policy in the following sense: in the *long run* there are no circumstances in which sustained inflation should ever be much higher or lower than it is today. A public *acknowledgement* by the Fed of this would be a useful starting point for making the Fed's inflation targeting procedures explicit. The priority for long run price stability would simply reflect *best practice* monetary policy as the Fed, other central banks, and the economics profession have come to understand it. Hence, the Fed could assert that priority on its own initiative without direction from Congress. In fact, the Fed has an *obligation* to inform Congress to that effect without any expectation of a response in order to help the oversight committees understand better how to evaluate monetary policy. The Fed Chairman could add that as a practical matter there is little reason for the Fed *deliberately* to allow inflation to deviate from price stability in the *short run* either, since price stability best facilitates maximum sustainable employment, growth, and output stabilization relative to potential.

A unilateral acknowledgement of this sort would be worthwhile in its own right. Openly clarifying the priority for price stability would reinforce the Fed's commitment to low inflation and enhance the credibility of that commitment. It would balance the recently increased transparency of the Fed's interest rate instrument with greater transparency of its low inflation goal. And it would act to defuse further the idea that secrecy has any role to play in monetary policy.[32] In this regard, the Fed could go further and publicly acknowledge its quantitative working definition of long run price stability. If a 1 to 2 percent range for core PCE inflation is it, then the Fed could acknowledge that it intends to keep core PCE inflation *in or near* that range indefinitely.

An acknowledgement of either a quantitative or a qualitative priority for low long run inflation would open the door for the oversight committees in Congress to *recognize* a priority for low long run inflation. By *accepting* that priority, the oversight committees could then *hold the Fed accountable* for maintaining low inflation. Presumably, the Fed would welcome being held accountable by Congress because that would secure further its commitment to low inflation. Congress, of course, might be concerned that holding the Fed accountable for low *long run* inflation would skew Fed policy in the *short run*

[31] See Broaddus (2001) and Ferguson (2002).
[32] See Goodfriend (1986).

toward price stability at the expense of stabilizing output relative to its potential. The reality, though, is that it is *not feasible* to hold the Fed accountable for employment or output objectives because in the long run these are determined *independently* of monetary policy. This is the lesson of the inflationary go/stop period discussed in Section 2.1.

There is a chicken and egg problem here. Without a mechanism by which the Fed's reasoning about short run policy can be assessed more fully, Congress may be reluctant to recognize a priority for low long run inflation. And without some assurance that Congress accepts a priority for low long run inflation, the Fed may be reluctant to be more transparent about how it strikes a balance between inflation and output in the short run.

This conundrum suggests the following possibility: in exchange for a congressional acceptance of a priority for low long run inflation, the Fed could consider participating in a public *monetary policy forum* where the FOMC (through its Chairman and other representatives) would subject its current assessment of the economy and thinking about recent policy actions to questions from invited academic and business economists expert in monetary policy. The discussion would be disciplined by a congressional directive to utilize monetary policy flexibly to stabilize output at its potential over the business cycle *subject to* inflation remaining in or near its long run target range.

The policy forum could be held publicly for one full day, twice a year, a month before the Fed's regular monetary policy reports to Congress in order to unearth key policy issues and better inform the congressional oversight hearings. Invited participants would be drawn from the community of professional Fed watchers, economic forecasters, and academic monetary economists. The forum could be arranged and participants invited by the Fed itself or by a private non-profit sponsor, and held independently of Congress, although representatives from Congress would be welcome to attend. By enabling Congress to observe a professional exchange of views on monetary policy, the forum would give Congress more insight into the thinking of the FOMC.

To achieve balance in the questions and comments, the invited participants should be grouped according to whether they think that policy is too easy, about right, or too tight, and equal time should be given to all points of view. The opportunity for the FOMC to address comments and questions from all perspectives would enable the Fed to build public understanding as well as confidence in its own policy position. The Fed's thinking on the economy and current policy could be summarized in an "Inflation Report" prepared and distributed in advance of the forum. The forum would provide the Fed with regular opportunities to comment on its assessments of the economy without appearing defensive or self-congratulatory. The forum would also provide the Fed with a convenient and efficient means of acquiring regular professional advice and council on monetary policy. Finally, the forum would help to educate economists, the press, and the financial markets so that eventually the public's confidence in monetary policy

could be based on a deeper understanding of how inflation targeting works to optimize the economy's performance.

6 Conclusion

The paper began by tracing the origins of the case for inflation targeting in postwar US monetary history from the inflationary go/stop period, through the Volcker disinflation, to the period of price stability in the Greenspan era. This historical review made clear why the Fed has made price stability a priority as never before in its history and why low inflation will remain a priority indefinitely. In particular, the historical review served three purposes. First, it showed why price stability improves monetary policy. Second, it showed how the Greenspan Fed practices inflation targeting implicitly. Third, it showed why the Fed should continue to utilize the inflation targeting procedures developed and employed implicitly by the Greenspan Fed after Chairman Greenspan retires.

In the second half of the paper consideration was given to whether the Fed's implicit inflation targeting procedures should be made *explicit*, how tightly inflation should be targeted in the short run, and how the Fed's inflation targeting procedures *could* be made explicit. The main findings were these: 1) low long run inflation should be an explicit priority for monetary policy, 2) as a practical matter it is not desirable for the Fed to vary its inflation target in the short run, and 3) strict inflation targeting can be efficient constrained countercyclical stabilization policy. The Fed should publicly acknowledge its implicit priority for low long run inflation so that Congress could publicly accept that priority and agree to hold the Fed accountable for attaining it. In return, representatives of the FOMC should consider participating in a monetary policy forum to better inform the congressional oversight committees and the public about current monetary policy.

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