

## Ben S Bernanke: A perspective on inflation targeting

Speech by Mr Ben S Bernanke, Member of the Board of Governors of the US Federal Reserve System, at the Annual Washington Policy Conference of the National Association of Business Economists, Washington, DC, 25 March 2003. *The references for the speech can be found on the website of the Board of Governors of the US Federal Reserve System.*

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One of the more interesting developments in central banking in the past dozen years or so has been the increasingly widespread adoption of the monetary policy framework known as *inflation targeting*. The approach evolved gradually from earlier monetary policy strategies that followed the demise of the Bretton Woods fixed-exchange-rate system--most directly, I believe, from the practices of Germany's Bundesbank and the Swiss National Bank during the latter part of the 1970s and the 1980s. For example, the Bundesbank, though it conducted short-term policy with reference to targets for money supply growth, derived those targets each year by calculating the rate of money growth estimated to be consistent with the bank's long-run desired rate of inflation, normally 2 percent per year. Hence, the Bundesbank indirectly targeted inflation, using money growth as a quantitative indicator to aid in the calibration of its policy. Notably, the evidence suggests that, when conflicts arose between its money growth targets and inflation targets, the Bundesbank generally chose to give greater weight to its inflation targets (Bernanke and Mihov, 1997).<sup>1</sup>

The inflation-targeting approach became more explicit with the strategies adopted in the early 1990s by a number of pioneering central banks, among them the Reserve Bank of New Zealand, the Bank of Canada, the Bank of England, Sweden's Riksbank, and the Reserve Bank of Australia. Over the past decade, variants of inflation targeting have proliferated, with newly industrialized and emerging-market economies (Brazil, Chile, Israel, Korea, Mexico, South Africa, the Philippines, and Thailand, among others) being among the most enthusiastic initiates. Most recently, this policy framework has also been adopted by several transition economies, notably the Czech Republic, Hungary, and Poland.<sup>2</sup> Central banks that have switched to inflation targeting have generally been pleased with the results they have obtained. The strongest evidence on that score is that, thus far at least, none of the several dozen adopters of inflation targeting has abandoned the approach.<sup>3</sup>

As an academic interested in monetary policy, several years ago I became intrigued by inflation targeting and went on to co-author a book and several other pieces about this approach.<sup>4</sup> As I continue to follow developments in the area, I must say, however, that discussions of inflation targeting in the American media remind me of the way some Americans deal with the metric system--they don't really know what it is, but they think of it as foreign, impenetrable, and possibly slightly subversive. So, in the hope of cutting through some of the fog, today I will offer my own, perhaps somewhat idiosyncratic, view of inflation targeting and its potential benefits, at least in what I consider to be its best-practice form.<sup>5</sup> I will also try to dispel what I feel are a few misconceptions about inflation targeting that have gained some currency. Finally, I will end with a few words, and one modest suggestion, about the implications of the experience with inflation targeting for the practice of monetary policymaking at the Federal Reserve.<sup>6</sup> My main objective today, however, is to clarify, not to

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<sup>1</sup> The interpretation of the Bundesbank as a proto-inflation targeter is not universally accepted. Certainly, the Bundesbank did not put the same emphasis on communication and transparency that modern inflation-targeting central banks do.

<sup>2</sup> Mishkin and Jonas (forthcoming) describe the experiences of the three transition economies with inflation targets.

<sup>3</sup> A few countries that used inflation targeting in the transition to European monetary union are a partial exception. The European Central Bank itself has an inflation objective (a ceiling of 2 percent) but does not refer to itself as an inflation-targeting central bank, largely on the grounds that (officially, at least) it also puts some weight on money growth in its policy decisions. As a newly created central bank presiding over a monetary union, the ECB is unique in more fundamental ways as well; hence, the lessons from the ECB experience for the Federal Reserve and other established central banks may be somewhat limited.

<sup>4</sup> See in particular Bernanke and Mishkin (1997) and Bernanke, Laubach, Mishkin, and Posen (1999).

<sup>5</sup> By focusing on what I call "best practice" inflation targeting, I must necessarily be somewhat subjective; but then my goal today is largely normative, not descriptive.

<sup>6</sup> For a more detailed exposition of the case for inflation targeting in the United States, see Goodfriend (forthcoming).

advocate. Of course, my comments today reflect my own views and do not necessarily reflect those of my colleagues at the Federal Reserve Board or on the Federal Open Market Committee.

### **Best-Practice Inflation Targeting: One View**

Although inflation targeting has a number of distinguishing features--the announcement of a quantitative target for inflation being the most obvious--capturing the essence of the approach is not entirely straightforward. The central banks that call themselves inflation targeters, as well as the economies they represent, are a diverse group indeed, and (not surprisingly) institutional and operational features differ. Moreover, many central banks that have not formally adopted the framework of inflation targeting have clearly been influenced by the approach (or, if you prefer, the same ideas and trends have influenced both inflation-targeters and non-inflation-targeters). For example, over the past twenty years, the Federal Reserve, though rejecting the inflation-targeting label, has greatly increased its credibility for maintaining low and stable inflation, has become more proactive in heading off inflationary pressures, and has worked hard to improve the transparency of its policymaking process--all hallmarks of the inflation-targeting approach. In short, to draw a bright line between central banks practicing full-fledged inflation targeting and those firmly outside the inflation-targeting camp is more difficult than one might first guess--a fact, by the way, that substantially complicates economists' attempts to assess empirically the effects of this approach.

Nevertheless, for expository purposes, I find it useful to break down the inflation targeting approach into two components: (1) a particular framework for making policy choices, and (2) a strategy for communicating the context and rationale of these policy choices to the broader public. Let's call these two components of inflation targeting the policy framework and the communications strategy, for short.

### **The policy framework of inflation targeting**

By the *policy framework* I mean the principles by which the policy committee decides how to set its policy instrument, typically a short-term interest rate. In an earlier speech, I referred to the policy framework that describes what I consider to be best-practice inflation targeting as *constrained discretion*.<sup>7</sup> Constrained discretion attempts to strike a balance between the inflexibility of strict policy rules and the potential lack of discipline and structure inherent in unfettered policymaker discretion. Under constrained discretion, the central bank is free to do its best to stabilize output and employment in the face of short-run disturbances, with the appropriate caution born of our imperfect knowledge of the economy and of the effects of policy (this is the "discretion" part of constrained discretion). However, a crucial proviso is that, in conducting stabilization policy, the central bank must also maintain a strong commitment to keeping inflation--and, hence, public expectations of inflation--firmly under control (the "constrained" part of constrained discretion). Because monetary policy influences inflation with a lag, keeping inflation under control may require the central bank to anticipate future movements in inflation and move preemptively. Hence constrained discretion is an inherently forward-looking policy approach.

Although constrained discretion acknowledges the crucial role that monetary policy plays in stabilizing the real economy, this policy framework does place heavy weight on the proposition that maintenance of low and stable inflation is a key element--perhaps I should say *the* key element--of successful monetary policy. The rationale for this emphasis goes well beyond the direct benefits of price stability for economic efficiency and growth, important as these are. The maintenance of price stability--and equally important, the development by the central bank of a strong reputation for and commitment to it--also serves to anchor the private sector's expectations of future inflation. Well-anchored inflation expectations (by which I mean that the public continues to expect low and stable inflation even if actual inflation temporarily deviates from its expected level) not only make price stability much easier to achieve in the long term but also increase the central bank's ability to stabilize output and employment in the short run. Short-run stabilization of output and employment is more effective when inflation expectations are well anchored because the central bank need not worry that, for example, a policy easing will lead counterproductively to rising inflation and inflation expectations rather than to stronger real activity.

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<sup>7</sup> Bernanke (2003).

In my earlier speech, I gave the Great Inflation of the 1970s in the United States as an example of what can happen when inflation expectations are *not* well anchored. Contrary to the belief in a long-run tradeoff between inflation and unemployment held by many economists in the 1960s, unemployment and inflation in the 1970s were *both* high and unstable. Even today conventional wisdom ascribes this unexpected outcome to the oil price shocks of the 1970s. Though increases in oil prices were certainly adverse factors, poor monetary policies in the second half of the 1960s and in the 1970s both facilitated the rise in oil prices themselves and substantially exacerbated their effects on the economy.

Monetary policy contributed to the oil price increases in the first place by creating an inflationary environment in which excess nominal demand existed for a wide range of goods and services. For example, in an important paper, Barsky and Kilian (2001) noted that the prices of many industrial commodities and raw materials rose in the 1970s about the same time as oil prices, reflecting broad-based inflationary pressures. Without these general inflationary pressures, it is unlikely that the oil producers would have been able to make the large increases in oil prices "stick" for any length of time.

Besides helping to make the oil price increases possible, the legacy of poor monetary policies also exacerbated the effects of the oil price increases on output and employment. When the oil price shocks hit, beginning in 1973, inflation expectations had already become very unstable, after several years of increased inflationary pressures and a failed program of price controls under President Nixon. Because inflation expectations were no longer anchored, the widely publicized oil price increases were rapidly transmitted into expectations of higher general inflation and, hence, into higher wage demands and other cost pressures. Faced with an unprecedented inflationary surge, the Fed was forced to tighten policy. As it turned out, the Fed's tightening was not enough to contain the inflationary surge but was sufficient to generate a severe recession.

The upshot is that the deep 1973-75 recession was caused only in part by increases in oil prices *per se*. An equally important source of the recession was several years of overexpansionary monetary policy that squandered the Fed's credibility regarding inflation, with the ultimate result that the economic impact of the oil producers' actions was significantly larger than it had to be. Instability in both prices and the real economy continued for the rest of the decade, until the Fed under Chairman Paul Volcker re-established the Fed's credibility with the painful disinflationary episode of 1980-82. This latter episode and its enormous costs should also be chalked up to the failure to keep inflation and inflation expectations low and stable.

In contrast to the 1970s, fluctuations in oil prices have had far smaller effects on both inflation and output in the United States and other industrialized countries since the early 1980s. In part this more moderate effect reflects increased energy efficiency and other structural changes, but I believe the dominant reason is that the use of constrained discretion in the making of monetary policy has led to better anchoring of inflation expectations in the great majority of industrial countries. Because inflation expectations are now more firmly tied down, surges and declines in energy prices do not significantly affect core inflation and thus do not force a policy response to inflation to the extent they did three decades ago. Indeed, rather than leading to a tightening of monetary policy, increases in oil prices today are more likely to promote consideration of increased policy ease--a direct and important benefit of the improved control of inflation.

### **The communications strategy of inflation targeting**

The second major element of best-practice inflation targeting (in my view) is the *communications strategy*, the central bank's regular procedures for communicating with the political authorities, the financial markets, and the general public. In general, a central bank's communications strategy, closely linked to the idea of *transparency*, has many aspects and many motivations.<sup>8</sup> Aspects of communication that have been particularly emphasized by inflation-targeting central banks are the public announcement of policy objectives (notably, the objective for inflation), open discussion of the bank's policy framework (including in some cases, but not all, a timeframe for achieving the inflation

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<sup>8</sup> In some countries, improved transparency has accompanied greater central bank independence, on the argument that more independent central banks must also provide enhanced accountability.

objective), and public release of the central bank's forecast or evaluation of the economy (as reported, for example, in the *Inflation Reports* issued by a number of inflation-targeting central banks).<sup>9</sup>

Why have inflation-targeting central banks emphasized communication, particularly the communication of policy objectives, policy framework, and economic forecasts? In the 1960s, many economists were greatly interested in adapting sophisticated mathematical techniques developed by engineers for controlling missiles and rockets to the problem of controlling the economy. At the time, this adaptation of so-called stochastic optimal control methods to economic policymaking seemed natural; for like a ballistic missile, an economy may be viewed as a complicated dynamic system that must be kept on course, despite continuous buffeting by unpredictable forces.

Unfortunately, macroeconomic policy turned out not to be rocket science! The problem lay in a crucial difference between a missile and an economy--which is that, unlike the people who make up an economy, the components of a missile do not try to understand and anticipate the forces being applied to them. Hence, although a given propulsive force always has the same, predictable effect on a ballistic missile, a given policy action--say, a 25-basis-point cut in the federal funds rate--can have very different effects on the economy, depending (for example) on what the private sector infers from that action about likely future policy actions, about the information that may have induced the policymaker to act, about the policymaker's objectives in taking the action, and so on. Thus, taking the "right" policy action--in this case, changing the federal funds rate by the right amount at the right time--is a necessary but not sufficient condition for getting the desired economic response. Most inflation-targeting central banks have found that effective communication policies are a useful way, in effect, to make the private sector a partner in the policymaking process. To the extent that it can explain its general approach, clarify its plans and objectives, and provide its assessment of the likely evolution of the economy, the central bank should be able to reduce uncertainty, focus and stabilize private-sector expectations, and--with intelligence, luck, and persistence--develop public support for its approach to policymaking.

Of course, as has often been pointed out, actions speak louder than words; and declarations by the central bank will have modest and diminishing value if they are not clear, coherent, and--most important--credible, in the sense of being consistently backed up by action. But agreeing that words must be consistently backed by actions is not the same as saying that words have no value. In the extreme, I suppose a central bank could run a "Marcel Marceau" monetary policy, allowing its actions to convey all its intended meaning. But common sense suggests that the best option is to combine actions with words--to take clear, purposeful, and appropriately timed policy actions that are supported by coherent explanation and helpful guidance about the future.

One objection that has been raised to the public announcement of policy objectives, economic forecasts, and (implicit or explicit) policy plans by central banks is that even relatively modest commitments along these lines may limit their flexibility to choose the best policies in the future. Isn't it always better to be more rather than less flexible? Shouldn't the considered judgment of experienced policymakers always trump rules, even relatively flexible ones, for setting policy?

I agree that human judgment should always be the ultimate source of policy decisions and that no central bank should--or is even able to--commit irrevocably in advance to actions that may turn out to be highly undesirable. However, the intuition that more flexibility is always better than less flexibility is quite fallacious, a point understood long ago by Homer, who told of how Ulysses had himself tied to the mast so as not to fall victim to the songs of the Sirens. More recently, the notion that more flexibility is always preferable has been pretty well gutted by modern game theory (not to mention modern monetary economics), which has shown in many contexts that the ability to commit in advance often yields better outcomes.

For illustration of the potential benefits to policymakers of even modest self-imposed restrictions on flexibility, consider fiscal policy, which shares with monetary policy some of the same issues that arise when a group of shifting membership makes a series of policy decisions that have both short-run and long-run implications. In the short run, fiscal policymakers may have important and legitimate reasons

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<sup>9</sup> I refer to these features as communication rather than as rules because they simply make public the elements of the policy framework, that is, constrained discretion. Even when the inflation target itself is set outside the central bank or by an outside agency with the cooperation of the central bank, for the most part inflation-targeting central banks themselves rather than outsiders (such as the legislature) are the principal enforcers of their own targets and procedures. "Self-enforced" inflation targets are the only case I will consider here.

to depart from budget balance, sometimes even substantially--for example, to appropriate funds to deal with a national emergency or to provide a stimulus package to assist economic recovery. In the long run, however, maintaining public confidence requires that fiscal policy be conducted in such a way that the ratio of national debt to GDP remains stable at a moderate level. Arguably, public confidence, and hence the ability of policymakers to use fiscal instruments aggressively to address short-term concerns, is enhanced by whatever legislative rules, guidelines, or procedures exist that--however gently or firmly--tend to compel the policymakers to bring the budget back toward balance, and the debt-GDP ratio back toward stability, after the crisis has passed. True, spending caps, comprehensive budget resolutions, mandatory long-term deficit projections, and similar provisions, to the extent that they are effective, may reduce at least a bit the flexibility of fiscal policymakers. But if intentionally yielding a bit of flexibility increases public confidence in the long-run sustainability of the government's spending and tax plans, fiscal policymakers may find that adopting these rules actually enhances their ability to act effectively in the short run.

As with fiscal policy, public beliefs about how monetary policy will perform in the long run affect the effectiveness of monetary policy in the short run. Suppose, for example, that the central bank wants to stimulate a weak economy by cutting its policy interest rate. The effect on real activity will be strongest if the public is confident in the central bank's unshakable commitment to price stability, as that confidence will moderate any tendency of wages, prices, or long-term interest rates to rise today in anticipation of possible future inflationary pressures generated by the current easing of policy. Now the central bank's reputation and credibility may be entirely sufficient that no additional framework or guidelines are needed. Certainly, in general, the greater the inherited credibility of the central bank, the less restrictive need be the guidelines, targets, or the like that form the central bank's communication strategy. But credibility is not a permanent characteristic of a central bank; it must be continuously earned. Moreover, an explicit policy framework has broader advantages, including among others increased buy-in by politicians and the public, increased accountability, reduced uncertainty, and greater intellectual clarity. Hence, though a central bank with strong credibility may wish to adopt a relatively loose and indicative set of guidelines for communication with the public, even such a bank may benefit from increasing its communication with the public and adding a bit of structure to its approach to making policy. From the public's perspective, the central bank's commitment to a policy framework, including a long-run inflation target, imposes the same kind of discipline and accountability on the central bank that a long-term commitment to fiscal stability places on the fiscal authorities.

### **Misconceptions about inflation targeting**

I would like to turn now, briefly, to comment on a few key misconceptions about inflation targeting that have gained some currency in the public debate.

*Misconception #1: Inflation targeting involves mechanical, rule-like policymaking.* As Rick Mishkin and I emphasized in our early expository article (Bernanke and Mishkin, 1997), inflation targeting is a policy *framework*, not a rule. If it is to be coherent and purposeful, *all* policy is made within some sort of conceptual framework; the question is the degree to which the framework is explicit. Inflation targeting provides one particular coherent framework for thinking about monetary policy choices which, importantly, lets the public in on the conversation. If this framework succeeds in its goals of anchoring inflation expectations, it may also make the policymaker's ultimate task easier. But making monetary policy under inflation targeting requires as much insight and judgment as under any policy framework; indeed, inflation targeting can be particularly demanding in that it requires policymakers to give careful, fact-based, and analytical explanations of their actions to the public.

*Misconception #2: Inflation targeting focuses exclusively on control of inflation and ignores output and employment objectives.* Several authors have made the distinction between so-called "strict" inflation targeting, in which the only objective of the central bank is price stability, and "flexible" inflation targeting, which allows attention to output and employment as well. In the early days of inflation targeting, this distinction may have been a useful one, as a number of inflation-targeting central banks talked the language of strict inflation targeting and one or two came close to actually practicing it. For quite a few years now, however, strict inflation targeting has been without significant practical relevance. In particular, I am not aware of *any* real-world central bank (the language of its mandate notwithstanding) that does not treat the stabilization of employment and output as an important policy

objective. To use the wonderful phrase coined by Mervyn King, the Governor-designate of the inflation-targeting Bank of England, there are no "inflation nutters" heading major central banks.<sup>10</sup> Moreover, virtually all (I am tempted to say "all") recent research on inflation targeting takes for granted that stabilization of output and employment is an important policy objective of the central bank. In short, in both theory and practice, today all inflation targeting is of the flexible variety.<sup>11</sup>

A second, more serious, issue is the relative weight, or ranking, of inflation and unemployment (or, more precisely, the output gap) among the central bank's objectives. Countries differ in this regard, both in formal mandate and in actual practice.<sup>12</sup> As an extensive academic literature shows, however, the general approach of inflation targeting is fully consistent with any set of relative social weights on inflation and unemployment; the approach can be applied equally well by "inflation hawks," "growth hawks," and anyone in between. What I find particularly appealing about constrained discretion, which is the heart of the inflation-targeting approach, is the possibility of using it to get better results in terms of *both* inflation and employment. Personally, I subscribe unreservedly to the Humphrey-Hawkins dual mandate, and I would not be interested in the inflation-targeting approach if I didn't think it was the best available technology for achieving both sets of policy objectives.<sup>13</sup>

*Misconception #3: Inflation targeting is inconsistent with the central bank's obligation to maintain financial stability.* Let me address this point in the context of the United States. The most important single reason for the founding of the Federal Reserve was the desire of the Congress to increase the stability of American financial markets, and the Fed continues to regard ensuring financial stability as a critical responsibility. (By the way, this is a reason to be nervous about the recent trend of separating central banking and financial supervision; I hope we have the sense not to do that here.) I have always taken it to be a bedrock principle that when the stability or very functioning of financial markets is threatened, as during the October 1987 stock market crash or the September 11 terrorist attacks, that the Federal Reserve would take a leadership role in protecting the integrity of the system. I see no conflict between that role and inflation targeting (indeed, inflation targeting seems to require the preservation of financial stability as part of preserving macroeconomic stability), and I have never heard a proponent of inflation targeting argue otherwise.<sup>14</sup>

## **Inflation targeting and the Federal Reserve**

As I noted earlier, the Federal Reserve, though rejecting any explicit affiliation with inflation targeting, has been influenced by many of the same ideas that have influenced self-described inflation targeters. Increasingly greater transparency and more forward-looking, proactive policy are two examples of convergence in practice between the Fed and inflation-targeting central banks, and I think most would agree that both of these developments have been positive and have led to better outcomes. Most important, however, as I discussed in the earlier speech, under Chairman Volcker and Chairman Greenspan, the Fed has moved gradually toward a policy framework of constrained discretion.<sup>15</sup> In

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<sup>10</sup> King (1997) appears to be the source of the phrase.

<sup>11</sup> Svensson (1999), who I believe coined the phrase "strict inflation targeting", calls this point "uncontroversial." Svensson's paper and his related work also show in detail the consistency of inflation targeting with a dual mandate.

<sup>12</sup> A number of inflation-targeting central banks refer to inflation stabilization as the central bank's "primary long-run objective." At one level, this statement does not have much content because inflation is the only variable that central banks can control in the long run. Its real import is to say that the central bank is responsible for long-run price stability, a statement that should be unobjectionable in any framework.

<sup>13</sup> Meyer (2001) draws a distinction between a hierarchical mandate, which subordinates other objectives to the price stability objective, and a dual mandate, which places price stability and employment objectives on equal footing. Like Meyer, I prefer the dual mandate formulation and find it to be fully consistent with inflation targeting. Formally, the dual mandate can be represented by a central bank loss function that includes both inflation and unemployment (or the output gap) symmetrically.

<sup>14</sup> Here is part of a verbal reply that I made to a commenter on a paper about inflation targeting and asset prices that Mark Gertler and I presented at the Fed's Jackson Hole conference in August 1999, as published in the conference volume: "I want to correct the impression . . . that Mark and I are somehow against lender-of-last-resort activities, which is absolutely wrong. I have studied the Depression quite a bit in my career, and I think there are two distinguishing mistakes that the Federal Reserve made. The first was to allow a serious deflation, which an inflation targeting regime would not have permitted. And the second was to allow the financial system to collapse, and I absolutely agree with, for example, what happened in October 1987 and other interventions . . . One advantage of the inflation targeting approach as opposed, for example, to a currency board, is [that] it gives you considerably more scope for lender-of-last-resort activities." (Federal Reserve Bank of Kansas City, 1999, p. 145)

<sup>15</sup> Bernanke (2003). Gramlich (2000) made a similar observation and cited empirical evidence.

particular, through two decades of effort the Fed has restored its credibility for maintaining low and stable inflation, which--as theory suggests--has had the important benefit of increasing the institution's ability to respond to shocks to the real economy. The acid test occurred in 2001, when the FOMC cut interest rates by nearly 500 basis points without any apparent adverse effect on inflation expectations.

Given the Fed's strong performance in recent years, would there be any gains in moving further down the road toward inflation targeting? The most heated debates are said to occur on questions that are inherently impossible to prove either way, and I am afraid that this question gives rise to one of those debates, involving as it does counterfactual futures. Personally, though, I believe that U.S. monetary policy would be better in the long run if the Fed chose to make its policy framework somewhat more explicit. First, the Fed is currently in a good and historically rare situation, having built a consensus both inside and outside the Fed for good policies. We would be smart to try to lock in this consensus a bit more by making our current procedures more explicit and less mysterious to the public. Second, making the Fed's inflation goals and its medium-term projections for the economy more explicit would reduce uncertainty and assist planning in financial markets and in the economy more generally. Finally, any additional anchoring of inflation expectations that we can achieve now will only be helpful in the future.

To move substantially further in the direction of inflation targeting, should it choose to do so, the Fed would have to take two principal steps: first, to quantify (numerically, and in terms of a specific price index) what the Federal Open Market Committee means by "price stability", and second, to publish regular medium-term projections or forecasts of the economic outlook, analogous to the *Inflation Reports* published by both inflation-targeting central banks.

Particularly now that we are in the general range of price stability, I believe that quantifying what the FOMC means by price stability would provide useful information to the public and lend additional clarity to the policymaking process. Let me add a caveat however. Despite the potential long-run benefits of such a change, FOMC members may be concerned at this juncture that the Congress and the public would misperceive the quantification of price stability as an elevation of the Fed's price stability objective above its employment objective in violation of the dual mandate, even if that were in no way the intention. Although personally I have no doubt that quantification of the price stability objective is fully consistent with the current dual mandate, I also appreciate the delicate issues of communication raised by such a change. Realistically, this step is unlikely to occur without a good bit more public discussion. I hope that my talk today contributes to that discussion.<sup>16</sup>

The publication of medium-term forecasts does not raise nearly the same difficult political and communication issues that quantification of price stability may, in my view, and so I propose it here as a more feasible short-term step. The FOMC already releases (and has released since 1979) a range and a "central tendency" of its projections for nominal GDP growth, real GDP growth, PCE inflation, and the civilian unemployment rate twice each year, publishing them as part of the semiannual *Monetary Policy Report to the Congress*.<sup>17</sup> These projections are actually quite interesting, as they represent the views of Fed policymakers of the future evolution of the economy, conditional on what each policymaker views as the best path for future policy. Two drawbacks of these projections as they now stand are that (1) they are sometimes not released for a number of weeks (the time between the FOMC meeting at which they are assembled and the Chairman's testimony to the Congress), and (2) the January projections cover only the remainder of the current year (the July projections cover the remainder of the current year and all of the subsequent year).

I think it would be very useful to detach these projections from the Monetary Policy Report and instead release them shortly after the meetings (in January and July) at which they are compiled. I would also suggest adding a second year of forecast to the January projection, to make it more parallel to the July projection as well as to the forecasts in the staff-prepared Greenbook. By releasing the projections in a more timely manner, and by adding a year to the January projection, the FOMC could provide quite

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<sup>16</sup> In principle, the Federal Reserve could also publish its estimate of the long-run growth potential of the U.S. economy, for symmetry with its estimate of price stability. Unfortunately, potential output growth tends to be variable and difficult to measure with precision. A deeper asymmetry arises from the fact that, unlike the long-run rate of inflation, the Federal Reserve cannot control, and thus cannot be held responsible for, the long-run economic growth rate.

<sup>17</sup> The *Monetary Policy Report* is required by the Congress under Section 2B of the Federal Reserve Act. The report is required to contain "a discussion of the conduct of monetary policy and economic developments and prospects for the future . . ." The projections may be interpreted as satisfying part of the requirement to provide the Federal Reserve's view on prospects for the future.

useful information to the public. In particular, the FOMC projections would convey the policymakers' sense of the medium-term evolution of the economy, providing insight into both the Fed's diagnosis of economic conditions and its policy objectives.<sup>18</sup> Ideally, the release of these projections also would provide occasions for Governors and regional Bank Presidents, drawing on the expertise of their respective staffs, to convey their individual views on the prospects for the economy and the objectives of monetary policy.

## Conclusion

Inflation targeting, at least in its best-practice form, consists of two parts: a policy framework of constrained discretion and a communication strategy that attempts to focus expectations and explain the policy framework to the public. Together, these two elements promote both price stability and well-anchored inflation expectations; the latter in turn facilitates more effective stabilization of output and employment. Thus, a well-conceived and well-executed strategy of inflation targeting can deliver good results with respect to output and employment as well as inflation.

Although communication plays several important roles in inflation targeting, perhaps the most important is focusing and anchoring expectations. Clearly there are limits to what talk can achieve; ultimately, talk must be backed up by action, in the form of successful policies. Likewise, for a successful and credible central bank like the Federal Reserve, the immediate benefits of adopting a more explicit communication strategy may be modest. Nevertheless, making the investment now in greater transparency about the central bank's objectives, plans, and assessments of the economy could pay increasing dividends in the future.

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<sup>18</sup> An alternative, suggested by Blinder et al. (2001), is to release a summary of the staff-prepared forecasts (the "Greenbook" forecasts). I think that option is worth considering but prefer focusing on the FOMC projections for now. The projections of the FOMC members draw heavily on the expertise of the Board staff, as well as the staff of the regional Banks, but they also reflect the policymakers' personal views, which I think is important. Reporting policymakers' projections rather than staff projections is in keeping with the practices of most other central banks.