



In 2011 and in the coming years, the Federal Reserve will always strive to fulfill its **DUAL MANDATE** of price stability and maximum employment.

PRICE STABILITY

Why We Seek It and How Best to Achieve It



By Sandra Pianalto

*President and Chief Executive Officer
Federal Reserve Bank of Cleveland*

In 2010, the unemployment rate fell, the pace of foreclosures declined, and the stock market rallied.

Still, as a Federal Reserve policymaker, I am far from satisfied. Too many Americans are still hurting—many are out of work, many have seen the values of their homes plummet, and many see little hope of restoring their nest eggs for retirement.

If these conditions are not challenging enough, we now have another issue to contend with: Inflation concerns are mounting. On this developing front, I want to be crystal clear: In 2011 and in the coming years, the Federal Reserve will always strive to fulfill its dual mandate of price stability and maximum employment.

This annual report is dedicated to the topic of inflation in the context of our dual mandate. We offer a collection of frequently asked questions that we hear today about inflation and the inflation outlook, together with answers from our Research Department economists. These short articles review recent movements in inflation, explain how we develop our inflation forecast, and put the Federal Reserve's job in a global context, among other topics.

In the next several pages, however, I want to give you my own views on controlling inflation in the context of the Federal Reserve's dual mandate. In doing so, I want to make two key points.

First, it is important to understand that the Federal Reserve's commitment to price stability is entirely consistent with promoting maximum employment. In fact, it is a necessary part of creating the economic conditions that permit jobs to flourish over time.

Second, now may be an opportune time for the Federal Reserve to adopt an explicit numerical inflation objective. The events of the past year—including a new round of monetary stimulus and the recent spike in commodity prices—have underscored the potential benefits of a numerical inflation objective. Most Americans probably are not even aware that the Federal Open Market Committee (FOMC) has no such explicit objective—or what having one would entail.

As I will explain, putting a number on our inflation objective could enhance our communication capabilities with the public, make the monetary policy formulation process more transparent, and increase the Federal Reserve's accountability. As a result, monetary policy will be better able to achieve both price stability and maximum employment.



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The Dual Mandate: Why Price Stability Is Consistent with Maximum Employment

Conceptually, price stability can be thought of as an inflation rate low enough and predictable enough that inflation does not prominently enter into decisions by firms and consumers. For example, to maximize economic efficiency, firms must be confident enough about the general level of prices in the future to be willing to make long-term agreements with their suppliers and customers (although relative prices do, of course, need to change over time). Individuals need the same confidence to plan for retirement.

To many Americans, the costs of excessive inflation are familiar from the 1970s, a decade in which consumer price inflation averaged 8 percent per year. (By comparison, consumer price inflation since then has averaged close to 3 percent.)¹

Let's break down the negative impacts of high inflation into four areas:

- First, sustained high inflation erodes the purchasing power of people on fixed incomes. Over the years, retirement savings can decrease in value if inflation unexpectedly rises.
- Second, high inflation can lead consumers and firms to spend time and money managing its consequences. For example, consumers will devote more time tending to cash balances, and firms will change their posted prices more frequently.
- Third, high inflation muddies the information on supply and demand reflected in prices, leading to inefficient spending decisions. For instance, with substantial inflation, a business will find it more difficult to determine if an increase in the price of a new machine for its production line reflects inflation in the overall price level or an increase in the price of the machine relative to some other production input, such as steel. As a result, the firm could misjudge the price change and make a poor decision.
- Finally, because many components of federal and state tax codes are not indexed to the cost of living, high inflation creates adverse tax effects that can lead consumers and firms to take actions they would otherwise not take.

¹ Data cited in this annual report reflect updates through April 30, 2011.

Very low inflation creates different challenges. When inflation is very low, as it has been recently, the Federal Reserve's ability to ease monetary policy is constrained if the federal funds rate cannot be reduced further. That is why after cutting the target for the federal funds rate to essentially zero in December 2008, the FOMC had to take the unusual step of making large-scale asset purchases of longer-term Treasury securities, agency debt, and agency mortgage-backed securities. Although the strategy was unusual, its purpose was the same as more traditional policy easing: to activate the conventional channels of monetary stimulus to the economy. It would be preferable, though, to be able to employ more traditional policy tools, with which we have more experience and with which the public is more familiar.

In an environment of very low inflation and interest rates, monetary policy can become hamstrung in its ability to promote stronger economic activity. The experiences of Japan in the last two decades point to the real danger of low inflation—deflation, which occurs when the overall price level falls as inflation rates turn negative for extended periods. Deflation is more likely when an already-weak economy deteriorates further.

Declining price levels might sound like a good thing—allowing consumers to buy more of some goods. But sustained deflation can have profoundly negative effects on the real economy. When prices are expected to continue to fall, many consumers and firms will delay purchases while waiting for lower prices. Deflation also lowers wages as well as prices, and debts don't decrease in nominal terms, so actual debt burdens are higher. Deflation can also create or worsen problems in the financial system. It reduces the value of collateral, which makes borrowing more difficult. This dynamic is especially relevant in a period following a severe financial crisis, when asset values have fallen and credit channels have already been impaired. For these reasons, Japan's deflation is widely thought to have hampered that nation's monetary policy and economy since the early 1990s.

Inflation that is high or too low is bad enough—but uncertain and variable inflation introduces additional problems. One consequence of variability is that unexpected changes in inflation redistribute wealth between borrowers and lenders. For example, if inflation proves higher than expected, a borrower can pay a lender back with dollars that buy less than they would have otherwise. If inflation proves to be lower than expected, the lender benefits at the expense of the borrower. As a result of these uncertainties, lenders incorporate an inflation risk premium in

interest rates, essentially making borrowing more expensive on average than it normally would be. This risk premium reduces borrowing for productive purposes, such as capital spending by firms. Finally, uncertainty about future inflation can reduce the willingness of firms to enter into long-term contracts that contribute to an efficient economic system.

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Seen this way, the Federal Reserve's objective of price stability is fully complementary with its objective of maximum employment. The maintenance of price stability avoids problems that can arise with either very low or excessively high inflation. As a result, price stability helps to maximize economic efficiency through a multitude of channels, from interest rates to the provision of credit. Monetary policy promotes the fastest sustainable rate of economic growth by minimizing the many economic distortions that inevitably arise because of deviations from price stability.

How a Numerical Objective for Price Stability Could Help Monetary Policy

Over the course of the business cycle, monetary policy affects inflation, employment, and long-term interest rates. Over longer periods, monetary policy is the sole determinant of the average rate of inflation—but is only one of many factors affecting employment and long-term interest rates. Put another way, in the long run, inflation is a monetary phenomenon (to paraphrase the late Milton Friedman), while trends in employment and long-term interest rates depend on other forces, including demographics and the productivity of the nation's stock of factories and machinery. As a corollary, central banks such as the Federal Reserve can reasonably be expected to achieve a pre-specified numerical inflation objective over time, but not so for unemployment.

In fact, many other central banks around the world do have explicit numerical objectives for inflation to anchor their definitions of price stability. The Federal Reserve does not. At present, the closest the Federal Reserve comes to stating an explicit inflation objective is in the quarterly economic projections of the FOMC in which its participants indicate their current estimate of the rate to which inflation would converge under “appropriate monetary policy” and in the absence of additional shocks.

FOMC members have raised the idea of establishing a numerical objective several times over the years. Ben Bernanke, for example, spoke about the potential utility of an explicit inflation objective in improving economic outcomes back in 2003, when he was a member of the Board of Governors but not yet its chairman.

I think it is an opportune time for the FOMC to establish an explicit inflation objective. The potential benefits are large and, in my mind, likely to help foster the Federal Reserve’s objectives of price stability and maximum employment. Specifically, I favor establishing a 2 percent inflation objective. In the interest of economic stability, and to provide some flexibility to respond to shocks, our intention would be to move as close as possible to this target annually. In the event of shocks to the economy that push inflation away from this target, the goal would be to set policy so that inflation converges back to 2 percent over the medium term, a period of perhaps two to four years, depending on the size of the shocks.

The potential merits of a stated inflation objective seem particularly large at the moment, given the array of challenges bearing down on the economy so far in 2011. Consider, for example, that even though underlying inflation today is still at a low level, people disagree about where it is heading. Even professional forecasters differ more with one another about the longer-run inflation outlook now than they did before the recession.²

Why the uncertainty? On the one hand, with unemployment very high and wages increasing very slowly, underlying inflation could remain subdued. Working in the other direction, recent increases in energy and other commodity prices are putting upward pressure on inflation. Although these pressures have not spilled over into consumer prices more generally, it is possible that they could.

A Sampling of Central Banks with Inflation Targets

Country	Targeting adoption date	Target (%) ^a
New Zealand	March 1990	1.0–3.0
Canada	February 1991	2.0
United Kingdom	October 1992	2.0
Czech Republic	January 1998	2.0
Euro Area	January 1999	< 2.0
Brazil	June 1999	4.5
Mexico	January 2001	3.0
Norway	March 2001	2.5
Peru	January 2002	2.0
Romania	August 2005	3.0
Japan	March 2006	0–2.0
Ghana	May 2007	8.5

a. Some banks use different measures.

Sources: Federal Reserve Bank of Boston; Federal Reserve Bank of Cleveland.

² Underlying inflation was only 1.2 percent in the 12 months ended in March 2011, as measured by the Cleveland Federal Reserve’s median Consumer Price Index.

Although I trust that the FOMC will act as needed to preserve price stability, the perceived threat of inflation is very real in many people's minds. They see the expansion of the Federal Reserve's balance sheet, the federal government's immense borrowing needs, and rising global commodity prices as all potentially contributing to rapidly rising inflation. If those concerns intensified so strongly that broad measures of longer-term inflation expectations escalated, actual inflation could rise in the absence of an appropriate response from the Federal Reserve.

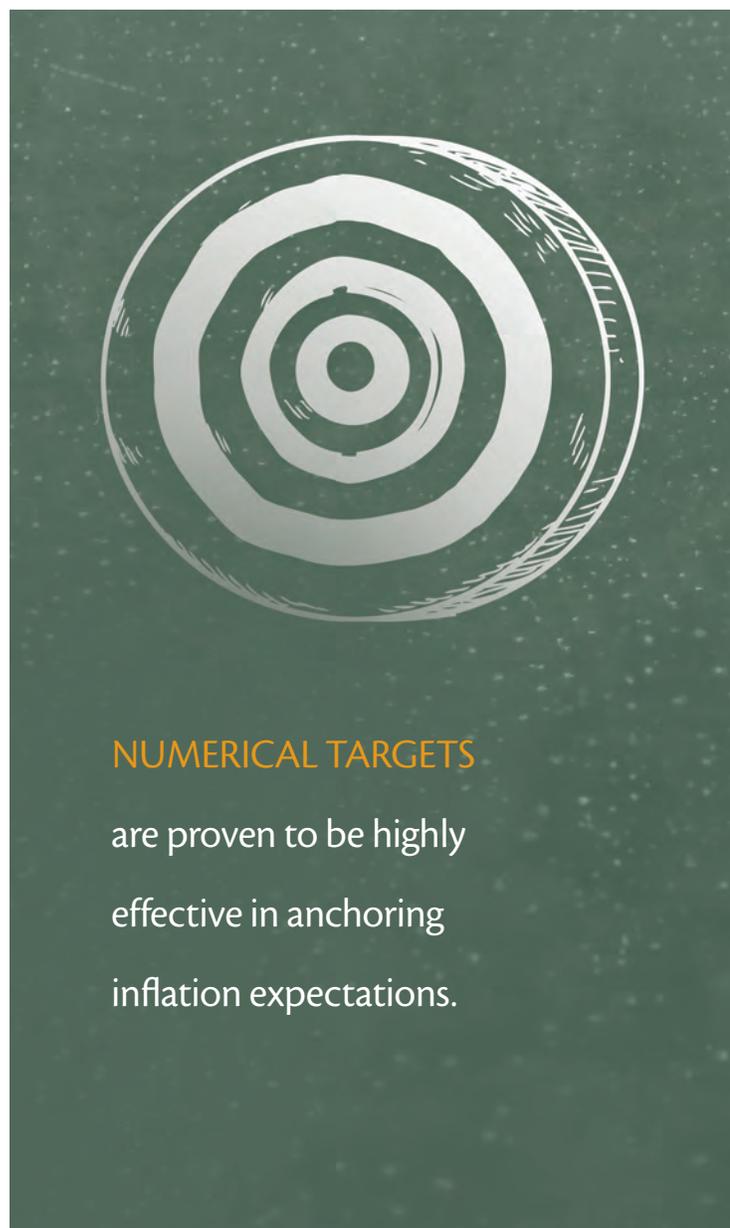
Economic theory tells us that rising long-term inflation expectations (one of the key determinants of the actual inflation trend) could push inflation higher. For example, expectations of a pickup in inflation could lead firms to boost their prices to reflect those expectations, contributing to a rise in inflation this year.

In these circumstances, the FOMC's adoption of a concrete, explicit numerical objective for inflation could be advantageous. Numerical targets are proven to be highly effective in anchoring inflation expectations. Studies comparing the United States to some other countries with formal inflation targets have found that these explicit objectives help to pin down long-term inflation expectations at the rate the central bank has established as its target.³ For example, in countries with explicit inflation targets, private-sector forecasters are in greater agreement about the inflation outlook.

I see three main gains from a numerical target, and they are intertwined. First, better-anchored inflation expectations could

INCREASE THE FEDERAL RESERVE'S ABILITY TO ADJUST MONETARY POLICY TO STABILIZE THE ECONOMY.

For example, when the economy is weak, the FOMC could have more scope to ease monetary policy without triggering an increase in longer-term inflation expectations that would put upward pressure on inflation. The explicit objective for price stability would help to assure the public that a more expansive monetary policy was a temporary move to stabilize the economy, without any implications for the longer-run inflation objective. Thus, an explicit numerical inflation objective could boost the stability of employment as well as inflation.



NUMERICAL TARGETS

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³ See Refet S. Gürkaynak, Andrew T. Levin, and Eric T. Swanson, 2010, "Does Inflation Targeting Anchor Long-Run Inflation Expectations? Evidence from Long-Term Bond Yields in the U.S., U.K., and Sweden," *Journal of the European Economic Association*, 8, 1208–42; Meredith J. Beechey, Benjamin K. Johannsen, and Andrew T. Levin, 2011, "Are Long-Run Inflation Expectations Anchored More Firmly in the Euro Area than in the United States?" *American Economic Journal: Macroeconomics*, 3, 104–29; and Eric T. Swanson, 2006, "Would an Inflation Target Help Anchor U.S. Inflation Expectations?" *FRBSF Economic Letter*, 20.

An explicit numerical objective for inflation could also **ENHANCE THE ACCOUNTABILITY AND TRANSPARENCY OF MONETARY POLICY**. With a numerical objective, the public would know exactly what inflation outcome the FOMC was trying to achieve. The public would then be better able to evaluate the FOMC's performance. The Federal Reserve chairman's semiannual reports to Congress would likely include a discussion of inflation outcomes relative to the objective. Less routinely, one can imagine Congress asking the chairman to testify regarding the reasons why inflation had drifted from the target for an unusual length of time.

Finally, putting a number on the FOMC's inflation objective would **HELP THE FOMC EXPLAIN ITS ACTIONS TO THE PUBLIC**. Suppose, for example, that the members agreed on an inflation objective of 2 percent. Last November, having had such an objective might have allowed the FOMC to better explain the expansion of its purchases of longer-term Treasury securities. I supported the action in part because I saw inflation as simply too low. The underlying rate of inflation was below 1 percent and falling, pulling inflation yet further from the FOMC's implicit objective of 2 percent or a bit less (as suggested by the FOMC's economic projections). I think the FOMC could have been clearer about its motivation to engage in large-scale asset purchases if it had been able to reference its 2 percent inflation objective.

Similarly, looking ahead, I believe that having an explicit numerical objective for inflation would help the FOMC explain its eventual decision to tighten monetary policy. For instance, once the economic recovery is sufficiently far along that the FOMC expects inflation to begin gathering some momentum, I think the timing and magnitude of our actions to tighten policy would be more clearly understood by the public if we could reference a numerical inflation objective. This would be especially useful in the context of the FOMC's already-established practice of publishing its economic projections. Likewise, an explicit objective might put to rest the media trope about inflation "hawks" and "doves," as it would be evident that all members shared the identical objective.

Finally, it is important to clarify that setting an explicit inflation objective is merely a means to an end. It will enhance the Federal Reserve's ability to achieve its dual mandate of price stability and maximum employment. Being explicit about the inflation objective does not change the dual mandate at all. The Federal

Reserve has had to put the dual mandate into practice ever since Congress set forth the broad goals in 1977. I do not see an explicit numerical inflation objective as anything other than another step in that direction—a step based on good economics, our own experience, and the experience of other central banks.



In 1979, Federal Reserve Chairman Paul Volcker led what became one of our signature monetary policy achievements—the “Great Disinflation.” By taming runaway inflation, the Federal Reserve regained the credibility it had lost in the 1970s as the nation’s steward of price stability.

It is time to build on that hard-won credibility. Setting an explicit inflation objective is in keeping with the times, enhancing the Federal Reserve’s openness and accountability at a time when the public is ever-more demanding of—and deserving of—such openness and accountability. It will be good for monetary policy. Most important, it will be good for the economy. ♦