# "Price Stability: An Attainable Goal for Monetary Policy"

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For some time now, I have been an advocate of price stability for the U.S. economy. Inflation this year, even if it remains a little under 3 percent, will be too high to allow maximum efficiency in the allocation of resources in our nation. Instead, families, businesses and governments at all levels will have to make persistent and uncertain inflation part of their planning process. I want to take this opportunity to talk about the gains to be had from moving the U.S. economy toward price stability. I also want to discuss how our nation might achieve such an outcome. Questions abound in this area, and I would like to see more economic research on the topic. And finally, I want to point out some concrete steps we should take now to help make price stability a reality.

Virtually no gains were made on inflation from 1994 to 1995, and further gains are not anticipated any time soon. In 1994, the fourth quarter over fourth quarter CPI inflation rate was 2.7 percent. In 1995, the same quarter-over-quarter figure was again 2.7 percent. Few professional forecasters envision dramatic gains on inflation this year or next. According to the February 10th Blue Chip newsletter, fourth quarter over fourth quarter inflation is projected to tick somewhat higher to 2.9 percent in both 1996 and 1997. What's worse, professional economists, consumers and financial markets alike predict persistent inflation well into the next century. In the recent budget debate, for instance, both the Office of Management and Budget and the Congressional Budget Office projected that inflation just under 3 percent will continue until fiscal year 2002.

Similar expectations can be found in a number of surveys that ask participants what they foresee for the inflation rate a decade from now. Let me list a few of these:

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- The October Blue Chip survey of economic forecasters: 3 percent inflation expected 10 years from now.
- The December Livingston survey of professional economists: about 3 percent inflation forecast for the next 10 years.
- The University of Michigan survey of consumer expectations: 3 percent inflation expected through 2005.

And, as for financial markets, my sense is that the expectation is for 3 percent inflation as far as the eye can see.

These expectations show that the Federal Open Market Committee has little credibility with respect to making further progress toward price stability. Looking back rather than forward, it is a fact that tremendous progress on inflation has been made in the last decade relative to the 1970s and early 1980s. On average, inflation is much lower and seemingly more predictable than it was at that time. But still, I think it's clear that almost no one believes that the longer-run goal of the FOMC is to achieve stable prices. What the Committee needs is a plan to move toward price stability, along with a recognition that the gains from doing so are substantial. Let me take a minute to tell you what gains might be possible.

**The gains from stabilizing prices.**

A typical approach among researchers trying to get a handle on the gains from stabilizing prices is to estimate inflation's output effects using data from many countries. Although the results in this area have been mixed overall, let me mention an example of research our Bank has helped promote.

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Robert Barro of Harvard University came to our fall conference to talk about inflation and growth. His empirical research, which was based on data from many countries, concluded that inflation has a small but statistically significant negative effect on the average growth rate of an economy. His results are controversial, as is almost all empirical work, but the consequences for how we think about monetary policy could be important. Even somewhat slower average growth because of higher inflation would, after a number years, have an enormous effect on living standards. Barro estimates that a 3-percentage-point increase in inflation would reduce the rate of economic growth by 0.06 to 0.09 percentage points per year.

That doesn't sound like much, but over 30 years, 3 percent inflation would erode living standards by about 1 percent to 2 percent, or between $70 billion and $140 billion in a $7 trillion dollar economy. Such a result seems plausible to me. After all, the major industrial economies and the fast-growing developing economies in Asia have had the best longer-term inflation experience. I think this topic deserves further investigation.

Another approach to the question of what we will gain from stable prices is to mix theory with empirics. I am thinking of the long and important line of economic research on the pure welfare costs of inflation. In this literature, the first step is to build a macroeconomic model consistent with fundamental principles such as market clearing and utility maximization. The second step is to quantify the extent of the inefficiency caused by long-run inflation.

Nobel Laureate Robert Lucas estimated this in a 1994 paper. According to his research, along with similar research by others, the pure welfare cost of fully-anticipated

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3 percent inflation may be the equivalent of about $30 billion each and every year. That's about $110 for every man, woman and child in the United States. This research also suggests that the gains from moving to zero from 3 percent inflation are much larger than the gains from, say, moving from 10 percent to 7 percent. If Lucas is correct, then in welfare terms, the biggest gains from moving toward price stability are yet to come.

Results like these can be sensitive to the specifics of the calculation. Some research in progress at our Bank suggests the pure welfare costs of 3 percent inflation could be even higher than Lucas estimated. Whether that result holds up or not, it is clear that even comparatively low inflation could cause a significant and unnecessary distortion in the economy. And whatever the economic waste associated with inflation, we have an obligation to try to eliminate it. The point is that over a long horizon, *absolutely any* gain in efficiency will yield net benefits, even if there are temporary transition costs of lowering inflation. The gain is permanent, while any transition costs are temporary.

But that's not all that can be said about the benefits of eliminating inflation. Research on the welfare costs of inflation attempts to isolate the pure effects of inflation that are known with certainty. As such, it does not count many other important costs of inflation that would be eliminated by a policy of price stability. Some of the heaviest costs of the current policy may well be in the uncertainty concerning future inflation. Bondholders, for example, clearly demand a risk premium for the possibility that future policy will allow more inflation. We can eliminate the inflation risk premium in interest rates with a credible policy of stable prices.

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Inflation also interacts with the tax system to create new and unwelcome distortions. Because the tax code is not fully indexed for inflation, even moderate inflation can substantially raise effective tax rates on capital. The effect of the interaction between taxes and inflation is so large that many people advocate indexing the tax rate on capital. We know that such indexing has been widespread in countries with high inflation. But the point is not to revise the tax code; rather, that a policy of price stability would eliminate the distortion.

Growth effects, pure welfare effects, risk-premia in bond yields, interaction with the tax code: These are some areas where our current policies are costly. Nonetheless, in my judgment, the number-one cost of inflation, even low inflation, is unnecessary confusion in the *relative* price system. It is important for the sake of efficient functioning of markets to let relative prices give the clearest possible signals in terms of credit markets, commodity markets, labor markets and in general any market where today's prices depend on perceptions of tomorrow's value of money.

All told, I suspect most everyone would agree that inflation is bad. The question is, "How can price stability be achieved?" In other words, "What are the mechanics of a policy to achieve price stability?"

**How can price stability be achieved?**

In some ways, the answer is simple: Keep money growth under control. The St. Louis Fed has long been an advocate of the idea that sustained inflation is first and foremost a monetary phenomenon. Countries with low average inflation over long periods also tend to have low average rates of monetary expansion, however the monetary assets are measured. It is no accident that the comparatively low inflation

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experience in the current expansion is associated with comparatively low and stable M2 growth and nominal GDP growth.

Monetary control is no doubt an important element of any low inflation policy. But it is also clear that changes in financial markets have made shorter-run interpretation of monetary growth rates more difficult. At times, broader aggregates, such as M2, and narrower aggregates, such as M1, have sent conflicting signals, and analysts have been left wondering what to infer about policy. Now is *not* one of those times, by the way, at least to the extent some might think. In 1995, M2 growth was robust, and M1 growth was negative. But narrower aggregate growth rates were significantly distorted by increased sweep account activity, which moved transactions balances out of M1 accounts into non-reservable M2 accounts. Still, it is probably not enough just to recommend keeping money growing apace as a target for monetary policy. Rather, the instruments of monetary policy should be focused directly on nominal GDP growth and inflation.

We should think of monetary policy not so much as a temporary setting for an interest rate or a monetary growth rate, but as an intended path for prices and a private-sector belief in that path. The strongest impact on moving inflation lower would come from a credible announcement that price stability is the goal and that the FOMC intends to achieve it within a reasonable time frame. Who today thinks the Fed wants price stability? OMB? CBO? The bond market? Foreign investors? Households? Professional forecasters? American business? The fact is, no one thinks the Fed is trying to achieve price stability.

The FOMC should announce that it intends to achieve stable prices and thus gain credibility from presenting a plan to do so. In my view, the technicalities are less

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important than changing entrenched perceptions. A tremendous window of opportunity exists. A credible announcement of a policy envisioning lower inflation could shake up existing expectations and cause households, businesses and financial markets to begin to plan for a stable price environment over the next few years. The resulting actions of these players would help reinforce the new policy.

Let me say as well that inside the Federal Open Market Committee, I think a great deal of good could come from an "inflation first" mentality. Each member could focus first on the Committee's primary responsibility--maintaining the purchasing power of the dollar--and how its actions might affect that goal. As it is now, multiple and inconsistent goals effectively mean that the time never seems right to move inflation permanently lower. This has the unfortunate effect of postponing the achievement of price stability, and the attendant gain, indefinitely.

Under the current arrangements, various Committee members emphasize different goals and objectives, and as a result the Committee sometimes works at cross purposes. In particular, the focus on fine-tuning is excessive in my view. Such a focus tends to prevent members from consistently supporting actions to achieve longer-term objectives. For all the daily chatter about fine-tuning, both inside and outside the Committee, I have seen precious little evidence that we are having any positive effect at all. In fact, it seems likely that the volatility in output growth is far worse than it would be in an environment of longer-term price stability.

Some argue that a good way to move toward price stability is to use a strategy of waiting for a recession. The idea is that during expansions the Fed should follow a consistent policy of maintaining the current rate of inflation. Then when a recession

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comes, inflation might fall a bit for cyclical reasons, and the new, lower inflation rate should be maintained through the next expansion. This is sometimes summed up in the phrase, "We are one recession away from price stability."

I think such a strategy is wrong. It emphasizes bureaucratic delay and avoids facing up to our responsibilities of protecting the value of the currency. Price stability is too important for the economy to wait until inflation just happens to move lower. Capitalizing on a favorable supply shock, such as a sharp and sustained decline in oil prices, is one thing, but waiting for a recession to put downward pressure on inflation is quite another.

As for the technicalities of a day-to-day policy of maintaining price stability, it seems to me that operating procedures, other than a change in focus, need not be radically different from what they are today. We can just as well react to shocks hitting the economy when the long-run average inflation rate is zero as we can when the average inflation rate is 3 percent or 10 percent. In fact, as I see it, our ability to react to shocks hitting the economy would be greatly enhanced by a credible policy of stable prices. Rather than worrying about central bank actions unwittingly feeding the next uptick in inflation, consumers, businesses and financial markets would work with the confidence that the Fed intended to keep inflation under control. What I want is to capture the gain of moving the average inflation rate lower and in the process improve the FOMC's ability to react as circumstances warrant.

It's been done elsewhere. Several countries have instituted policies of inflation targeting within the last several years, including New Zealand, the United Kingdom and Canada. Other countries, like France and Italy, have moved toward less formal

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"quantified inflation objectives." In each country, the central bank has announced a low target range for inflation--typically zero to 2 percent--as well as the pace by which inflation will be reduced. By announcing its target, the central bank commits itself to a course of action, while helping the public plan for the future by reducing uncertainty.

A central bank's commitment can be strengthened by permitting a temporary suspension of the inflation targets in the face of extreme events like severe oil price disturbances. In such circumstances, a temporary increase in inflation is tolerated only until the crisis has passed. By permitting flexibility, the policy of achieving price stability over the long run is made more credible. These experiments with inflation targeting have generally been quite successful, and our staff is working on improved ties with the Bank of England to learn more about how such policies could be implemented in the United States.

I want to take this opportunity to encourage further research on this and related topics. Our research department has a long tradition in this regard. One current project, headed by Richard Anderson on our staff, is a reassessment of the St. Louis monetary base, with a view toward a more accurate method of calculation. The monetary base really provides the raw material for monetary policy as it represents the central bank's monetary liabilities. Accurate measurement is a must. We cannot set monetary policy without paying close attention to what it is we actually influence in an open market operation.

Another interesting area of research focuses on rules for conducting monetary policy. Many in the economics profession, notably Bennett McCallum of Carnegie-Mellon and Michael Dueker on our staff, have analyzed policy feedback rules. Some of

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these rules adjust the growth rate of the monetary base in reaction to economic information in order to track a nominal GDP target path. Others make similar settings for an interest rate target. Still others call for setting instruments solely in response to the observed path of prices. It seems plausible to me that feedback rules like these might lead to superior monetary policy decision making in charting a smooth course to price stability.

**First things first.**

The long-term goal has to be to reach a consensus among policymakers and professional economists as to the benefits of price stability and the wisdom of such a policy. But a number of more concrete steps should be taken today to bring stable prices closer to reality. Senator Connie Mack of Florida, chairman of the Joint Economic Committee, has introduced legislation in the Congress to make price stability the sole goal of the FOMC. The bill would remove the confusing and contradictory, and I think dated, language of the Humphrey-Hawkins legislation, which holds the Fed to a pursuit of irreconcilable goals. This sort of legislation would be a big step in the right direction because it would provide monetary policy with a clear objective.

In addition, the FOMC could start to publish inflation forecasts over a longer horizon, say three to five years. Since we can control inflation rates over the longer term, this would go a long way toward gaining credibility that price stability is our goal, assuming the forecasts bear this out.

And finally, I think the Fed should go on the offensive to end the growth versus low-inflation debate. This debate has been heating up during the past 60 days, and the Fed is consistently and sometimes maliciously portrayed as the enemy of a rapidly

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growing economy. Nothing could be further from the truth. Let me state unequivocally that a low-inflation policy is ultimately a pro-growth policy. The fact is that countries with lower inflation tend to have *better* average growth rates, not worse. Inflation just confuses the signals being sent by prices in the economy and leads to inefficiency and misallocation of resources.

I see no purpose in reintroducing high inflation. The high inflation of the 1970s and early 1980s was crippling for the U.S. economy. We have made substantial gains in unwinding that experience, and we should be on guard against throwing these gains away in pursuit of a high-growth mirage. For those who want to encourage economic growth through policy, and I believe that's everyone's goal, the answers lie elsewhere: in education policy, in tax policy, in free and open markets, not to mention in hard work. Higher inflation buys us nothing but higher inflation.

In these remarks I have tried to emphasize my commitment to price stability as the sole goal of monetary policy. The gains from such a policy, relative to the current situation, are in my view substantial. To the question of how a policy of price stability might be accomplished, I have pointed out that we know a great deal about the longer-run relationship between money and inflation. I have also emphasized that a credible announcement of a policy aimed at price stability would go a long way toward moving inflation lower and changing entrenched perceptions concerning the future path of prices. I think more research needs to be done to sharpen and quantify many of the compelling arguments that have been put forward for price stability and policies that might achieve it. But much can be done in the shorter run as well. Legislation making price stability the sole goal of monetary policy is a step in the right direction. And the FOMC should

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announce multi-year inflation targets. It seems abundantly clear to me that price stability is not only an appropriate goal for monetary policy but also an attainable goal. It is the bottom line for evaluating monetary policy and the measure by which policymakers should be held accountable. By the measure of declining inflation, policymakers have improved their performance enormously during the past 15 years. But I firmly believe that we can do better yet, and the nation will benefit if we do.

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