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"GETTING INFLATION RISK OUT OF INTEREST RATES"

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It is a pleasure to meet with you today to discuss some issues that, I am sure, concern us all: inflation, and inflation risk in interest rates. In my remarks today, I want to talk about two methods of reducing inflation risk in interest rates. The first one is indexing securities for inflation. The second is more far-reaching—getting inflation to an effective level of zero and keeping it there. I will make a few comments concerning the Treasury's plan for introducing index-linked government debt instruments, and provide my views on how index-linked government debt might help in making monetary policy. Then I want to turn to the issue of the proper long-run goal for monetary policy. I want to argue that a credible monetary policy, delivering stable prices, is the best way to eliminate the inflation risk in interest rates—*and* the best monetary policy for promoting economic growth.

Inflation risk premiums

Let me begin with a simple decomposition of interest rates on government securities that is often used by economists and market participants. The return on a government debt instrument of a given maturity has at least three components. First, there is a real component, which compensates investors for the *use of their money* over a specific time period. Second, there is an expected inflation component, which compensates investors for the *loss of purchasing power* of their money over the same period. And, finally, there is an inflation-risk premium, which compensates investors for *taking the risk* that inflation will be higher than they expect at the time of purchase.

Estimating the size of these three components in historical data requires sophisticated econometric analysis, and—even in the best of circumstances—it involves

substantial imprecision. But to get a general overview of how these components are related, it is perhaps useful to consider two periods during the postwar era in the United States when inflation has been comparatively low and stable.

The first period extended from 1960 through 1965. During these years, inflation was between 1½ and 2 percent, and the ten-year Treasury note was trading to yield around 4 percent. Most analysts think monetary policy had considerable credibility at that time, so inflation risk was not a large factor in interest rates. To the extent investors expected inflation to continue at 1½ to 2 percent per year, the bonds were priced for a real yield of 2 to 2½ percent.

Now contrast that period with the years 1991 through the present, in which inflation has been near 3 percent and, according to surveys, investors expect it to stay at about that level. Unlike the yields of 1960 through 1965, ten-year Treasury securities since 1991 have traded in a range between 6 and 8 percent for most of the period. If these notes are priced to yield a real return of 2 to 2½ percent, the inflation-risk premium may be as high as ½ to 2½ percentage points. That is a substantial premium—one, I believe, that provides a real incentive for considering ways to eliminate it. One possibility is to use indexed debt instruments.

Index-linked government debt

The Treasury recently announced more details of their plan to issue index-linked debt beginning in January, but at this point no one can say with any certainty what percentage of United States government debt might eventually be held in indexed form. However, I think it is fair to say that the new program has every chance of achieving its principal aim—that is, reducing the federal government's borrowing costs relative to the

costs of a debt portfolio consisting entirely of conventional government bonds. Even if financial markets correctly anticipate future inflation developments and correctly price future inflation into current bond yields, *real-return bonds* are preferable from the Treasury's perspective. They allow the government to finance the same stream of expenditures without having to pay an *inflation-risk premium* on the debt. Eliminating the inflation-risk premium in government bonds is clearly an improvement in federal government finance.

The Treasury's new debt program has other interesting features. The government can, for instance, also save financing costs on a relative basis if the Federal Reserve is able to deliver a better inflation performance than the financial markets expect at the time the index-linked bonds are issued. Since I am an advocate of price stability, I hope that the Fed will actually deliver, over time, the lower-than-expected inflation necessary for this to occur—and for taxpayers to enjoy some additional savings from this source.

But perhaps the most important aspect of the Treasury's decision is that it changes some of the inflation control incentives for fiscal authorities, including Congress. In particular, index-linked debt reduces the incentive for fiscal authorities to pressure the central bank to monetize the government debt—that is, to purchase more government debt than otherwise would be the case. This would be a positive development, because excessive financing of government debt by the monetary authority can lead to excessive monetary growth and, eventually, higher inflation.

Pressures to monetize debt, of course, have not been the recent experience of the United States. Nevertheless, financial markets are well aware that such possibilities exist—possibilities that are confirmed not only by our own history, but also by the

experience of other countries, some in the not-too-distant past. The potentially insidious effects of the link between government finance and monetary policy are one reason why central bank independence is so crucial.

Indexed-linked debt, as it is being proposed by the Treasury, is not, however, a perfect solution to the elimination of the inflation-risk premium in interest rates. In the Treasury's proposal, the tax treatment is configured so that the inflation-adjustment portion of the bond is taxed. Such tax treatment means that not all distortion in interest rates caused by inflation is eliminated by these new instruments—in other words, on an after-tax basis, investors are not kept whole. Complications such as these suggest that, instead of trying to design securities to deal with inflation, we should consider doing more to try to eliminate inflation. Index-linked government debt could provide information that might help monetary policymakers do exactly that.

If sufficient index-linked debt is issued and traded, monetary policymakers will have a more direct way to observe market-based information on inflation expectations and real returns. Of course, we have some ways of estimating inflation expectations today—in part from interest rates themselves, but also from survey data and private and government economic forecasts. But with index-linked debt, we will have more timely and more accurate information on this key variable, because we can compare the index-linked yields with the yields on conventional government debt.

The United Kingdom is one country that has a significant portion of its debt in index-linked instruments. The central bank there, the Bank of England, uses market-based information provided by these bonds to calculate measures of inflation expectations over two-year horizons. This information then feeds into the monetary policymaking

process, which is directed toward meeting a stated inflation target. When market-based measures of inflation expectations exceed the inflation target, monetary policymakers receive a reasonably clear indication that their current policy is inconsistent with their stated goals.

Unlike the United Kingdom and many other industrialized countries around the world, the United States does not have an official inflation target. The main monetary policymaking arm of the Federal Reserve, the Federal Open Market Committee, or FOMC, has not specified its long-run inflation goals. So it is not clear how the information provided by a market in indexed debt will be used by policymakers here. My own view is that we should take a cue from the United Kingdom and elsewhere and use the new information on expected inflation as a guide to the amount of credibility implicit in monetary policy over time. Let me turn now to some of the reasoning behind this view.

What the Fed should be trying to achieve

There is so much debate about the zigs and zags of monetary policy that sometimes the big picture falls out of focus. In my view, the aim is to move inflation toward an effective rate of zero and keep it there. A policy of price stability does the most that monetary policy can do to meet the objectives laid out in the Humphrey-Hawkins legislation of 1978. While Fed officials sometimes discuss stable prices as a long-term goal in their speeches and comments, the FOMC has not identified a price index that provides a reliable measure of inflation, nor has it specified a target range that would be acceptable. In my view, failure to make a firm commitment to price stability puts upward pressure on the inflation-risk premium in interest rates.

What's more, the Federal Reserve could be lagging behind in world thinking on inflation. Countries with formal inflation targets include New Zealand, Canada, the United Kingdom, Sweden, Finland, Australia, and Spain. Other countries have less formal, medium-term inflation goals, including Germany, France, Italy, and Switzerland. These countries have typically chosen target ranges for inflation at least as low and often lower than the current U.S. inflation rate. And while we have long enjoyed lower actual inflation than many other countries, the inflation performance of the United States appears to be deteriorating relative to that of other major industrialized nations. For 1996 and 1997, private forecasters envision the United States as having the second-highest inflation among the Group of Seven countries. Only Italy's inflation rate is forecast to be higher.

These forecasters clearly have questions about how committed we are to stable prices, despite the Fed's professed intentions to move inflation lower over the long term. This lack of full credibility is also reflected in the views of households and firms in the United States. Surveys of inflation expectations continue to show that professional forecasters, market participants, and consumers—as well as the rest of the Federal government—all think and make plans based on the idea that 3 percent inflation will prevail well into the next millennium. Three percent might seem low, but I would remind you that it cuts the value of a dollar in half over a single generation.

There is wide agreement among professional economists that persistent and variable inflation is costly for society. It is not difficult to list some of the reasons for

this conclusion. Inflation distorts the important signaling role of relative prices in the economy, so that people have difficulty distinguishing price changes caused by inflation from those caused by changes in supply or demand. Consequently, people can get the wrong signals and make the wrong economic decisions. Inflation also interacts with the tax code to create large distortions in economic decision making. And many economists have estimated high costs from the "shoe leather" aspect of inflation—so-named because inflation creates a disincentive to hold money, requiring people to "walk around" a lot to get rid of money in exchange for goods and services. In other words, they waste real resources in managing money balances.

These and other arguments about the cost of inflation are well worn—like the proverbial shoe leather—and I am not going to go into them in any detail here. But I do want to emphasize that few economists have serious disagreements with the assessment I am presenting: taken together, the costs of inflation are substantial, enough so that the best policy is a policy of stable prices. And, a stable price environment does the most that monetary policy can do to foster the maximum sustainable rate of real output growth.

All told, I think the benefits of price stability are clear. And since inflation is the only outcome the Fed can control in the long run, price stability should be the sole long-run objective of monetary policy. Adopting this stance would put all policymakers—as well as the public, Congress and financial market participants—on the same page with respect to Fed objectives. The Fed could then react to changing

economic conditions without creating consternation in financial markets about its resolve to keep inflation low.

Permanent gains from low inflation

If the FOMC can move inflation to a lower level, a level effectively equal to zero, and keep it there, the United States economy will enjoy a long era of operation free from the distortions caused by inflation. That is a permanent gain: year in and year out, economic decisions will be made without confusion between relative price changes and price changes caused by inflation. Economic players will not have to work through a distorted decision process because of the complicated interaction of inflation with the tax code. And, people will be able to spend less time managing their assets in order to protect themselves from inflation. Instead, they can devote that time to better uses. It seems to me that if we care about the long-run efficiency of the economy, there is little question that we should develop a plan to move toward lower inflation.

That may sound like a tall order, but I think there is a simple way for the Fed to take a step in the right direction: The FOMC should announce its inflation forecasts a number of years into the future. A convenient forum for such an announcement is the semi-annual Humphrey-Hawkins report to Congress. An inflation forecast by the Fed gives a best guess of how the policy intentions of the Committee will interact with developments in the economy as a whole to produce inflation outcomes. That is exactly the sort of information the American public needs concerning the plans for monetary policy.

Many are undoubtedly concerned that a move to lower inflation would restrain the economy from its full growth potential in the short run. Admittedly, a surprise attack on inflation—a "slam-on-the-brakes" disinflation policy—might well have such an effect. But an organized, well-publicized, and fully expected policy move toward a stable price environment should pose no danger to the real economy. It is unanticipated, stop-and-go policies that make monetary policy and business cycles so closely connected in many people's minds. A fully anticipated, smooth policy change will allow markets, consumers, and businesses to plan for the new environment well in advance. Since participants in the economy will have the opportunity to plan ahead, the economy will not be forced to adjust to the "shock" from the kind of sudden, unexpected change in monetary policy that is often discussed by academic economists. In contrast, planning ahead and announcing intentions will allow markets to act in ways that *reinforce* announced plans. Most macroeconomists agree with this position: It is the unanticipated or surprise component of a change in policy that causes economic turmoil, not the deliberate, well-publicized effort I am suggesting.

Conclusion

Monetary policy has been a success story over the last 15 years. The Fed has fought and won a long battle to bring inflation down from the very high levels of the 1970s and early 1980s. In recent years, inflation rates have hovered at some of the lowest levels in 30 years, and the stability of inflation has been remarkable. Lowering inflation and keeping it reasonably stable have delivered substantial benefits to the U.S. economy, including an environment conducive to 51 quarters of growth in the last

55—the most cyclically stable period in our history. By continuing the fight against inflation, we can capture more economic gains for the U.S. economy in the years ahead.

One of those gains would be getting inflation risk out of interest rates. These risk premiums are costly for the U.S. economy. Indexed-linked government debt instruments are a step in the right direction, but they provide only a second-best solution to eliminating inflation risk in interest rates. The first-best solution is to follow a credible monetary policy that delivers stable prices. That should be the goal for monetary policy.

Thank you.