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Monetary Policy in a New Environment: The U.S. Experience

It’s a pleasure to have this opportunity to give you a U.S. perspective on the challenges of conducting monetary policy in an environment of structural change. In the U.S., there is, of course, no modern-day parallel to the historic events in the financial sector here in Europe. The formation of a monetary union and a multinational central bank poses precedent-setting challenges for policy. At the same time, the U.S. has seen massive and rapid changes in its financial sector. I’ll argue, however, that while these changes in the U.S. financial sector have posed challenges, they have not posed significant problems for the Fed’s conduct of monetary policy for quite some time.

Of course, financial change was a major issue in policy 20 years ago. At that time, financial deregulation and innovation undermined the stability of the monetary aggregates, which were a central part of Fed policymaking. Since that history is probably familiar territory to you, I plan to review it only briefly. The bottom line is that by the mid-1980s, we had relegated the monetary aggregates to a minor role. Since then, the Fed

has been able to accommodate ongoing deregulation and respond to shocks in the financial sector by focusing on adjustments in the federal funds rate.

More recently, the challenges for the Fed have been on the real side of the economy—and here I'm referring especially to a technology shock. While a technology shock that boosts productivity is a wonderful thing, it also has created uncertainty about the proper course for policy. As I understand it, productivity growth rates have not yet begun to accelerate in Europe. However, it would seem to be only a matter of time before the ECB will face the challenge of responding to a comparable technology shock. In any event, I'd say that our recent experience makes a good case study in conducting monetary policy in the face of great uncertainty—an issue of importance to any central bank.

Let me start with a brief look at the history of our experience with financial change. In the late 1970s, the buildup of U.S. inflation pushed nominal interest rates up against the legal interest rate ceilings on most bank deposits. As a result, the market began to circumvent the ceilings by creating new instruments, and pressure began to mount to remove them altogether. In 1980, the Monetary Control Act did just that by phasing out the ceilings. Importantly for monetary policy, the act also permitted banks to pay interest on some checking accounts.

Once deposit interest rates began to vary with market rates, the demands for M1 and M2—the primary guides to monetary policy—became unstable. So, by the early 1980s, the Fed had de-emphasized M1. And by the mid-80s, M2 had met the same fate. In the 1990s, we continued to establish annual ranges for these aggregates, as we were required to do by law, but they played almost no role in our deliberations. The legal

requirement to set ranges expired this year, and in late June we decided to stop setting ranges.

This step was taken with some reluctance, because using interest rates as the main policy tool does pose well-known dangers. But in the absence of reliable monetary aggregates, the Fed has operated reasonably well in an environment of significant ongoing financial deregulation and sizable financial shocks.

Let me give you some examples. In terms of deregulation, barriers to interstate banking were eliminated, and recently a new financial modernization law allowed depositories to expand into activities like insurance and investment banking. In terms of shocks, we dealt first with the so-called credit crunch in the late 1980s—which was due in part to the collapse of many savings and loans—then with the turmoil set off by the Asian currency crisis in 1997-98, and finally with the unexpected run-up in equity values in the second half of 1990s.

During this period, the Fed has looked at a large number of economic and financial indicators in an attempt to control inflation and smooth the business cycle. And, as I said, the Fed responded reasonably well to these events with fairly modest changes in its interest rate settings. Many among you are in a much better position than I am to know how much the U.S. experience applies to Europe. I do want to mention, however, that an economist at our Bank, Glenn Rudebusch, recently did some research with Lars Svensson that questions the usefulness of monetary targeting.

Now let me turn to the challenges for U.S. monetary policy over the past five years or so. As I mentioned, these have been primarily on the real side of the economy. And while the developments in the U.S. economy have been quite favorable, they've also

been unanticipated, which has added substantially to the uncertainty we face as policymakers. The current economic expansion is now in its tenth year. It has lasted longer than any other in U.S. history, and it has been remarkably strong. Real GDP growth averaged 4-1/2 percent over the past four years and 6 percent over the past four quarters! The unemployment rate continues to hover around 4 percent, near its lowest level in thirty years. And core consumer inflation has averaged between 1-3/4 and 2-1/2 percent over the past four quarters, depending on the measure used. Finally, U.S. productivity has been truly remarkable. After averaging about 1-1/2 percent from the 1970s to about the mid-1990s, productivity growth has increased sharply. Over the past year and a half, it averaged around 4 percent!

These developments have raised challenges for the Fed in conducting monetary policy because there's more than one plausible explanation for what's been driving economic events. One obvious explanation for the combination of strong output and low inflation is that there has been a surge in aggregate supply due to technological change. Supporting this view is the fact that firms have been investing heavily in information processing equipment and software. For example, annualized growth rates in real investment for this category have ranged from 15 to 30 percent over the past five years. And there's certainly no shortage of examples of technological developments that have improved efficiency.

At the same time, it's also likely that events have been driven by a strong demand shock—in part because of the incredible gains in the stock market over the last few years that may have generated a large wealth effect. In the U.S., consumer spending has advanced at a phenomenal pace, and, as a consequence, the personal saving rate is at a

record low. Add strong business investment to this, and we have total private domestic spending that has been large enough to produce a strong economy, even while fiscal surpluses and a growing trade deficit have put a drag on demand for domestic product. Normally, a demand shock risks igniting inflation. But some important developments besides the technology shock held prices in check. First, import prices were held down by a strong dollar and weakness in some of our trading partners. In addition, from late 1997 through early 1999, oil prices were falling.

Even though there's uncertainty about which of the two shocks has been dominating, we do know with more certainty that interest rates would have had to rise sooner or later in either case. If we were dealing mainly with excess demand, of course, the reason for tightening is obvious. But even if we were dealing mainly with a technology shock, the Fed still would have had to raise the federal funds rate eventually.

I would point to three reasons for eventually raising the policy rate in response to a technology shock. The first reason has to do with the effect of higher productivity growth on equilibrium real interest rates. Since higher productivity growth raises the rate of return on investment, it also raises the level of equilibrium real interest rates. Thus, just to maintain the stance of policy, interest rates would have to rise. In simple models, there is a one-to-one relationship between the increase in trend productivity growth and the increase in the equilibrium real interest rate. Of course, things are not usually this simple. For example, in the U.S. economy today, two developments have tended to mitigate the increase in equilibrium rates. The large federal budget surplus has increased the supply of national saving, while the rising trade deficit was matched by an increased supply of capital from abroad. But overall, it appears that we would have been

contributing to an inflationary monetary policy if we had tried to hold real rates at their old levels.

The other two reasons support an actual tightening of the stance of policy. Inflation tends to decline initially when productivity accelerates in response to a technology shock, because increases in labor compensation tend to lag behind increases in productivity growth. Eventually, though, the shock wears off, as the rate of productivity growth stops increasing and wages accelerate to catch up. So a technology shock is a “golden opportunity”—initially, it gives us lower inflation without a slowdown in growth or a rise in unemployment. However, to lock in the benefits and keep inflation at the new lower level, monetary policy would have to tighten. After all, in the end, inflation is determined by monetary policy, not by productivity growth.

The final reason has to do with the “permanent income hypothesis.” A technology shock raises the prospect that incomes will continue to be higher in the future: in other words, permanent income may increase. This could mean that we will see an increase in spending *before* the additional capacity comes on line. In addition, a technology shock also may give a boost to stock prices by raising expectations about future corporate profits. As a result, a wealth effect also may stimulate spending before the economy’s capacity to produce has expanded.

To sum up, we know that the funds rate had to increase to contain inflationary pressures, regardless of whether the economy was being dominated by demand effects or supply effects. But the uncertainty arises when we have to decide how much to tighten and when to start. This uncertainty boils down to the question of where FOMC actions should be along the spectrum of approaches ranging from strongly pre-emptive—based

mainly on forecasts of future developments—to more cautious—based mainly on emerging data.

Ideally, policy should tend more toward the pre-emptive end of the spectrum because of the long lags between policy actions and their effects on inflation. If a central bank reacts early and correctly to an inflationary threat, it can alter inflation expectations and cut off the rise in inflation before it gets started. It looks like that's what happened in the U.S. in 1994. At that time, we were dealing with forecasts of higher inflation that were based not only on increasingly tight labor markets but also on low short-term real interest rates. So the Fed responded by raising interest rates substantially. In that case, inflation didn't take off, and the economy moved smoothly into the favorable environment we've enjoyed in recent years.

But when there's a high degree of uncertainty about forecasts, it could be best to tend toward the more cautious end of the spectrum—because a somewhat delayed action could be preferable to running the risk of tightening when it's not warranted. Therefore, since most forecasts of output and inflation have been off the mark for several years, it has made sense to place less weight on the forecasts than we normally have in the past. It's true that we began tightening policy before we saw any upward inflationary trend, and in that sense we were pre-emptive, in part because we knew interest rates would have to go up to some extent regardless of whether a demand shock or a supply shock was dominating. But the tightening phase started only a little more than a year ago, even though many forecasts have predicted rising inflation for several years. Moreover, we've been fairly cautious in raising rates by a total of only 175 basis points.

I'd like to conclude by touching briefly on the issue of central bank credibility because I believe it's been an enabling factor in our taking a cautious approach. Over the last twenty years, the Fed has built a reasonably good reputation for containing inflation. This credibility has allowed us some flexibility to delay raising interest rates—despite many forecasts that inflation would soon rise. Without this leeway, we might have faced a jump in inflation expectations with adverse reactions in financial markets. Going forward, we intend to maintain our credibility by continuing to keep inflation under control.

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