

# Inflation, Recession, and Fed Policy

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**T**here is a conventional wisdom still abroad in both the academic and journalistic worlds that the economy faces an unpleasant tradeoff between inflation and unemployment. In the academic world, most economists qualify the proposition by noting that there is no long-run tradeoff, but they also often point to a short-run tradeoff.

I'll not discuss the tradeoff issue directly tonight, but instead want to concentrate on the related issue of how Fed monetary policy is affected by the existence, or lack thereof, of inflation. Consider the following observation, which I think is quite remarkable. Of the nine recessions since the Korean War, the only one in which the Federal Reserve cut the discount rate *before* the recession began, or even within several months of the business cycle peak, was the cycle peak in March 2001. I'm using the discount rate as a measure of Fed policy because before 1994 the discount rate was the prime method the Fed used to make a public announcement of a policy change. Since 1994, when the FOMC first began to release its policy decision at the conclusion of its meeting, changes in the federal funds rate provided the public announcement of policy changes. However, after 1994 the discount rate can still be used as an indicator of policy change because adjustments in the discount rate and federal funds rate have occurred together.

The theme I'll explore tonight is that historically the Fed's relatively slow policy response to a developing recession was a direct consequence, in most cases, of its concern that it not signal a policy change that might raise inflation expectations. Thus inflation, or its threat, has had an indirect short-run effect tending to increase unem-

ployment because inflation tended to hobble Fed response to economic weakness. In contrast, last year the Fed could respond aggressively to developing economic weakness without concern that doing so would increase inflation expectations. By maintaining continuously low and stable inflation the Fed puts itself in a strong position to counter many sorts of disturbances, such as the upset in financial markets in 1998, developing economic weakness over the course of last year and the terrorist attacks of September 11. Low inflation is not only consistent with high employment on average, but also helps to stabilize employment in the face of negative shocks that could have serious employment repercussions. Low inflation is stabilizing because it reduces expectational errors in the private sector and because it permits an aggressive Fed policy response to recession or threat of recession.

Before proceeding, I want to emphasize that the views I express here are mine and do not necessarily reflect official positions of the Federal Reserve System. I thank my colleagues at the Federal Reserve Bank of St. Louis, especially Charles Hokayem, for their assistance and comments, but I retain full responsibility for errors.

## THE PHILLIPS CURVE FRAMEWORK

The standard framework for relating inflation and unemployment is the inflation-expectations augmented Phillips equation. Some measure of inflation is on the left-hand side of the equation; the right-hand side contains the expected rate of inflation and a gap term. Some researchers spec-

## ECONOMIC FLUCTUATIONS

ify the gap as the difference between the equilibrium and actual rates of unemployment; others use the gap between actual and high-employment real GDP. When the unemployment rate is used, some like to call the equilibrium rate the “natural rate” and some like to call it the “non-accelerating inflation rate of unemployment” or “NAIRU.”

As an aside, I want to emphasize that the Phillips equation should not necessarily be viewed as a causal relationship. Inflation and the gap are jointly determined in a larger model; placing the inflation rate on the left-hand side of the equation does not settle the issue as to whether the gap causes inflation. I’m not going to enter that debate here, but raise the issue because I do not want to leave the impression inadvertently that I believe that the gap causes inflation.

It is interesting, I think, that most of the literature on the Phillips relation concentrates on measuring the equilibrium rate of unemployment, or the corresponding full-employment level of GDP, and the relationship of inflation to the gap term. Issues of lags, of the effects of demographic change on the NAIRU, of productivity growth, and on and on fill the pages of professional journals. Very few pages are devoted to the inflation expectations term.

The rational expectations macro literature emphasizes that all information relevant to the formation of expectations needs to be incorporated in a satisfactory macro model. That information certainly includes expectations concerning the future course of monetary policy. This idea is generally accepted today by macro economists and certainly by policymakers. Yet, incorporating the idea empirically in the determination of the inflation expectations term in the Phillips relation has not gone very far.

I’m going to try to convince you that Fed concerns about inflation expectations have been extremely important in the neighborhood of most business cycle peaks since the Korean War. I’ll not take a position on whether those concerns were or were not fully justified at particular times—I just want to argue that the concerns were there and affected Fed policy. I’ll document

my case by quoting passages from the minutes of FOMC meetings at the time of cycle peaks. For the earlier meetings, the minutes really are minutes in the traditional sense. The passages I’ll quote are from what is called the “Memorandum of Discussion.” For the later meetings, the passages are from the meeting transcript, which is a lightly edited version of the verbatim transcript from the tape recording of the FOMC meeting.

## FED POLICY AT THE ONSET OF RECESSIONS

Hindsight is always easy. At the time policy decisions are made, no one knows that a business cycle peak is at hand. At best, there may be some signs of a slowing economy, but such signs are often similar to what later turn out to be pauses in continuing expansions. Sometimes signs of a slowing economy are erased by data revisions. Following the data and economic policy as closely as I have for many years leaves me with a healthy respect for how easy it is to be wrong. Keep these comments in mind as I report very selectively a few facts around business cycle peaks—peaks that any one of us can pick out easily today from the record published by the National Bureau of Economic Research but which were unknown to the policymakers when they were reaching their policy decisions.

### *Cycle Peak of July 1953*

Over the 12 months ending with the cycle peak of July 1953, the CPI rose by 0.4 percent. Although inflation was not a problem, everyone remembered the Korean War inflation, which had run in excess of 9 percent on a 12-month basis in early 1951. The minutes of the FOMC meeting of June 23, 1953 report that, “Mr. [Allan] Sproul [President of the Federal Reserve Bank of New York and Vice Chairman of the FOMC] questioned whether [a large Treasury financing] was desirable, and said that such action would magnify, perhaps unnecessarily, the problem of providing reserves...at this time when the System was still

trying to walk the tightrope between inflationary and deflationary developments.”

### ***Cycle Peak of August 1957***

Over the 12 months ending with the cycle peak of August 1957, the CPI rose by 3.7 percent. Inflation was an active concern, given that the inflation rate had been slightly negative in 1955. The Fed actually increased the discount rate in the cycle peak month; the first reduction came November 1957, three months after the cycle peak.

FOMC meetings during the summer and fall of 1957 were full of concern about inflation. According to the minutes of the meeting of July 30, 1957, “[Governor Charles] Shephardson expressed concern about the apparently widespread extent of the feeling that further inflation was inevitable. He recalled that at the last two meetings of the Committee he was very much in favor of moving further in the direction of restraint. At present he did not think that the situation was substantially different.”

According to the minutes of the meeting of September 10, 1957, “Chairman [Martin] went on to say that he did not think the problem of inflation had been licked and he doubted that this would occur until there had been a modest correction of past excesses. He did not know when such a correction would come, but there had been many excesses in the course of the past 18 months and adjustments would have to be made at some point.”

### ***Cycle Peak of April 1960***

Over the 12 months ending with the cycle peak of April 1960, the CPI rose by 1.7 percent. Inflation was not of great concern, but here again the memory of the inflation of 1957, which continued well into 1958 even as the recession deepened, was fresh. The first cut in the discount rate came in June 1960. The minutes of the FOMC meeting of May 30, 1960, report that Malcolm Bryan, President of the Federal Reserve Bank of Atlanta, said this: “My own conclusion is thus that we [the FOMC] can justify a policy that keeps bank credit expansion under control, lest we

kindle again the inflationary expectations that have heretofore done the country so much injury; but we must supply the reserves necessary to permit a sustainable growth in the economy.”

### ***Cycle Peak of December 1969***

Over the 12 months ending with the cycle peak of December 1969, the CPI rose by 5.9 percent. This was the era of the Vietnam War inflation, and inflation concerns ran high. The Fed had increased the discount rate in April 1969; the first cut came in November 1970, eleven months after the cycle peak.

In the meeting of November 25, 1969, the minutes report that Alfred Hayes, president of the Federal Reserve Bank of New York and Vice Chairman of the FOMC, had these views: “With respect to policy, I feel that present circumstances clearly call for no change in the existing degree of restraint. There is still widespread skepticism that the System will persevere in the anti-inflationary battle, and I can see large risks in any general policy relaxation that could give a signal for new inflationary activities.” In the meeting of January 15, 1970, Governor Dewey Daane “remarked that he preferred to stay within the framework of alternative A because he was worried about the risk of reinforcing inflationary expectations. Such expectations were likely to be stimulated further if a dramatic move, involving both increases in interest rate ceilings and an easing of open market policy, were taken by the System now.” The tension between adding to inflationary pressures and resisting increases in unemployment continued meeting after meeting until wage-price controls were imposed in August 1971.

### ***Cycle Peak of November 1973***

Over the 12 months ending with the cycle peak of November 1973, the CPI rose by 8.3 percent. Wage-price controls, which had seemed to suppress inflation for a time in 1972, had broken down. In 1973, the Fed increased the discount rate in January, February, twice in May, June, July, and August. The Fed increased the rate again in

## ECONOMIC FLUCTUATIONS

April 1974. The first cut came in December 1974, thirteen months after the cycle peak.

Minutes of the meeting of December 18, 1973 report Chairman Burns as saying that “the task of monetary policy could not be the same as in a classical recession. The continuance of sharp inflation clearly required caution and some restraint in carrying out a policy of monetary easing.”

### **Cycle Peak of January 1980**

Over the 12 months ending with the cycle peak of January 1980, the CPI rose by 13.9 percent. Energy was not the whole story; the CPI less food and energy—the core CPI—was up by 12.0 percent over the same 12 months. The Fed increased the discount rate in February 1980; the first rate cut came in May.

The March 1980 *Federal Reserve Bulletin* reported on the FOMC meeting of January 8-9, 1980. This report noted that “concern was expressed that any substantial declines in interest rates might be interpreted as a significant easing of monetary policy and thus could have adverse consequences for inflationary expectations and for the foreign exchange value of the dollar.”

### **Cycle Peak of July 1981**

Over the 12 months ending with the cycle peak of July 1981, the CPI rose by 10.8 percent; the core CPI was up by 11.1 percent. The Fed had increased the discount rate in May 1981; the first cut came in November. After so many false starts in dealing with inflation, by this time the Fed was in a very difficult position.

The minutes of the FOMC meeting of August 18, 1981, report Chairman Volcker as saying: “Given that we are in the early stages, if I can put it that way, of any success in the anti-inflationary effort—given that kind of outlook and given the demonstrated apparent resilience of the economy in the face of very high interest rates despite the distortions in the economy and the very different impacts on different sectors—it seems to me that there is still a considerable

danger, and maybe an overriding danger, of underkill rather than overkill...

It would be lovely to steer those interest rates down if we knew how to steer them, which I don't think we do. But if we did, what are the risks that in a few months we will [witness] another rebound in the economy and Henry Kaufman's [unintelligible] scenario will come true? Then we will be in an even more difficult period, losing time at the very least in the fundamental fight on inflation; and we will [face] a more awkward market and I suppose a [worse] political situation not very many months down the road, with higher interest rates, more concern about financial institutions, bankruptcies, the outlook for the economy, and all the rest.”

### **Cycle Peak of July 1990**

Over the 12 months ending with the cycle peak of July 1990, the CPI rose by 4.8 percent. The first discount rate cut came in December, six months after the cycle peak. Iraq's invasion of Kuwait in August had sent energy prices soaring, but that was not the whole story. Core CPI inflation had been creeping up, from 4 percent or a bit less in 1986 to 5 percent at the cycle peak before the invasion. After the invasion, CPI inflation reached about 6½ percent on a 12-month basis and core CPI inflation about 5½ percent. As had happened so often before, the Fed was in something of a bind because easing policy aggressively to resist the recession might have created fears of even higher inflation.

The background of inflation concerns was evident well before the cycle peak. The minutes of the FOMC meeting of May 15, 1990, report Chairman Greenspan as saying, “Nonetheless, I do think that the inflation problem is very troublesome. And while I would feel comfortable with ‘B’ either symmetric or asymmetric, I must say I would prefer symmetric and would have the policy record relate the concerns that have been expressed around this table on the issues of inflation and the instabilities that they create. But, like the last time, I think it's a tough call, and I suspect it may be no less easy as we get further on into

the year. So, my bottom line at this moment is ‘B’ symmetric, but with extensive language in the policy record on the issue of inflation.”

By the FOMC meeting of December 18, 1990, the Fed had started the easing process, but was still concerned about inflation. At that meeting, Chairman Greenspan said: “At some point we are going to come out of this and we want to make reasonably certain that when we do we’re not looking at a degree of liquidity in the system that brings with it [higher] inflation rates and the next downturn much more quickly than is usual.”

### **Cycle Peak of March 2001**

Over the 12 months ending with the cycle peak of March 2001, the CPI rose by 3.0 percent; the core CPI inflation rate was 2.7 percent. The first discount rate cut came in early January, two months before the cycle peak. The Fed cut rates aggressively throughout the year, without concern that doing so would rekindle inflation or fears of inflation.

Transcripts of FOMC meetings in 2001 will not be released for another four years. However, the published minutes, which do not attribute particular views to particular committee members, are available. Minutes of the January 3, 2001 FOMC meeting, which was held by conference call, note that: “Inflation expectations appeared to be declining, with businesses continuing to encounter marked and even increased resistance to their efforts to raise prices. On balance, the information already in hand indicated that the expansion clearly was weakening and by more than had been anticipated. In the circumstances, prompt and forceful policy action sooner and larger than expected by financial markets seemed called for.”

Perhaps the most dramatic evidence of the payoff from entrenched expectations of low inflation was the freedom the Fed had to respond to the terrorist attacks of September 11. I discussed the Fed’s role in dealing with the crisis in a speech last October. In brief, the Fed provided extra liquidity to the markets in a variety of ways. On Wednesday, September 12, the outstanding

volume of adjustment credit lent by the Fed to depository institutions through the discount window rose to \$45.5 billion, up from \$99 million the Wednesday before. Also by Wednesday, September 12, float had risen to \$22.9 billion, up from \$2.1 billion the previous Wednesday. The Open Market Desk at the New York Fed, itself operating from a contingency site because its office near the World Trade Center was closed, was able to purchase a large volume of securities through a combination of outright purchases and temporary purchases under repurchase agreements. Moreover, the Fed arranged currency swap agreements with several foreign central banks, which enabled them to provide dollars to their financial institutions.

All these mechanisms taken together expanded Federal Reserve credit by \$90 billion, or about 15 percent, between Wednesday, September 5 and Wednesday, September 12. At no point did the Fed or market participants fear that all this liquidity would cause an inflation explosion. As the financial system restored normal payments mechanisms, and securities markets reopened, the extra liquidity flowed back to the Federal Reserve. Loans at the discount window were repaid, float declined as checks cleared, and Open Market Desk purchases of securities under repurchase agreement expired. Within a few weeks, the system was functioning completely normally once again.

## **DISCUSSION**

Macroeconomists across the spectrum of beliefs agree that only the central bank can achieve price stability. That is, if the central bank does not follow appropriate policies, no other agency of government and no actions by private parties can achieve that goal. A central bank that fails in that mission will raise justifiable concerns in the markets that the failure might continue and possibly worsen. The time to deal with inflation is before it happens. Allowing inflation to drift up creates an economic vulnerability because inflation expectations may begin to develop just as the

## **ECONOMIC FLUCTUATIONS**

upward thrust of economic growth falters. Given inflation concerns, the central bank is then in a difficult position. Easing policy when growth falters, or appears to falter, may stoke inflation fears increasing the difficulty and cost of bringing inflation under control.

Contrary to thinking in tradeoff models, where we are asked to analyze the social cost of inflation as opposed to unemployment, I am convinced that sustained price stability creates the best environment for long-run high employment and reduced risk of recession-induced increases in unemployment. When inflation is low, the Fed can resist recession through aggressive rate cuts in a way it simply cannot when inflation is an issue in the markets. By keeping inflation continuously low, the Fed gains the freedom to respond as necessary to the inevitable surprises and shocks that hit the economy.

I hope that my review of experience in the neighborhood of cycle peaks will, if not convince you of the validity of my position, at least encourage you to study the record in detail yourself. I am not trying to say that low inflation is the only criterion for successful monetary policy; however, I am convinced that low inflation is an indispensable ingredient to providing room for monetary policy adjustments required to keep the economy on as stable a growth path as possible.