

# In Brief

## Economic Capsules

### Was the 1980-82 Inflation Slowdown Predictable?

The steep deceleration of inflation over 1980-82, even after taking account of the depth of the recession, is widely believed to have been unpredictable on the basis of standard models of inflation. Some analysts argue that the two successive recessions in 1980 and 1981-82 altered (or were altering) the response of inflation to demand influences, possibly by lowering wage-price expectations faster than had been indicated by statistical models. As a result, the historical relationships in labor and product markets would then have become less useful in predicting inflation rates.

Looking to the future, with the progress toward eliminating inflation as yet incomplete, many analysts fear that inflation may flare up again as economic expansion continues unless the changes in wage-price behavior turn out to be durable. This has led some to argue that substantial further reduction of inflation and long-run price stability would be likely only if another recession occurred in the next year or two.

Our research suggests that the steep deceleration in inflation during 1980-82 was very much in line with the historical relationship between inflation and its critical determinants—wage-price expectations, aggregate demand pressures, and productivity. That relationship, as embodied in a conventional two equation wage-price model, appears to have been quite reliable since around 1960.<sup>1</sup>

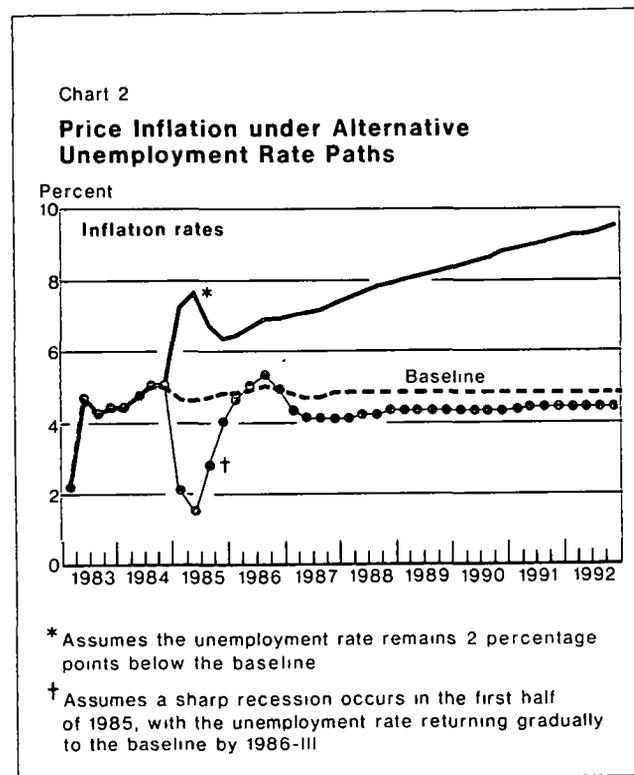
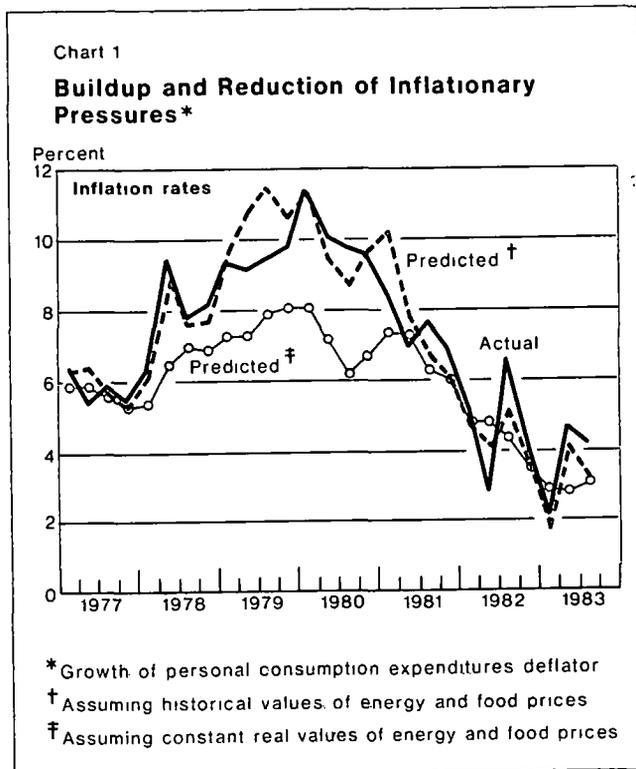
<sup>1</sup>The model used is a simpler version of that presented in A. Steven Englander and Cornelis A. Los, "Recovery without Accelerating Inflation?"; this *Quarterly Review* (Summer 1983). Wages are determined essentially by price expectations and the unemployment rate, while prices depend on labor compensation, productivity, and cyclical factors. Food and energy prices are exogenous.

As for the medium-term outlook, no one can rule out the possibility that the relationship between inflation and its major determinants may be changing at present. But so far there is no compelling evidence to suggest that it is. Given that past relationships hold in the future, our research suggests that a short third recession would not likely drive inflation out of the system. Instead, in the absence of a sharp break with past relationships, it would take a long time to eliminate the last traces of inflation. By contrast, a vigorous expansion of aggregate demand that some forecasters are predicting could pull wages and prices toward an accelerating course.

Chart 1 provides a historical perspective on the forecasting performance of our conventional two equation wage-price model beyond the estimation period. The structural relations of the model are based on pre-1977 information. Use of post-1976 information is limited to energy and food price shocks and to developments in demand. On the whole, this conventional model is able to pick up both the trends and turning points in inflation. Over the forecast period the model underpredicts inflation very slightly (0.04 percentage point per quarter), while the average absolute discrepancy between actual and forecasted inflation is 0.67 percentage point.

The ability of the conventional model to track inflation suggests that the relationships were stable in the late 1970s and early 1980s. Given information on future demand pressures and special factors, a forecaster in 1976 or 1977 would have been able to predict both the upturn and the downturn in inflation quite accurately. And, indeed, even in the absence of any information on energy and food price shocks, a forecaster could have predicted an acceleration of inflation from about 5.5 percent in late 1977 to about 8 percent at the end of 1979 (Chart 1). Thus, the assertion that the acceleration of inflation over 1978-79 and the subsequent deceleration were unpredictable is not true.

Turning to the future, we simulate the paths of



essentially the same model over the 1984-92 period under three alternative unemployment rate paths (Chart 2)<sup>2</sup> The *baseline* brings the unemployment rate gradually down to 6.5 percent (roughly the rate at which inflation is stable, commonly called the natural rate) by the third quarter of 1986 and keeps it there subsequently. The *expansion* path shows the effect of an unemployment rate path assumed to be 2 percentage points below the baseline throughout the period. The *recession* path raises the unemployment rate 2 percentage points above the baseline in the first half of 1985 and gradually returns it to the baseline. After the third quarter of 1986 the baseline and recession unemployment rates are the same.

The baseline inflation path gradually stabilizes at about 4-5 percent. In contrast, under the expansion path, inflation would climb close to 10 percent over time. Under the recession scenario, a sharp downturn would produce an immediate lowering of the inflation rate to

below 2 percent, but that would be reversed quickly with any recovery. The net gain three or four years after the recession, therefore, is fairly small.

The three inflation paths do not represent forecasts of the *actual* economy, looking a few years down the road. They are constructed to illustrate the consequences of different unemployment paths under certain assumptions, such as the absence of supply price shocks and a constant natural rate of unemployment. Any change in these assumptions would alter the baseline as well as the other two inflation scenarios. For example, another energy price shock would lead to a rise in the baseline inflation, while continuing energy conservation efforts could result in a lower inflation rate over time. Similarly, the baseline inflation path might trend downward if there is a decline in the natural rate of unemployment due to changes in the composition of the labor force and/or a rise in the trend growth rate in labor productivity.

In any case, changes in unemployment rates produce substantial short-term movements in inflation, but unless they are sustained the long-term effect is limited. Thus, for a *short* recession to lower inflation to zero and to maintain price stability over an extended period, the historical relationships would have to change. While

<sup>2</sup>In the estimation and 1977-83 simulations, we did not constrain the effects of, for example, a 10 percent increase in unit labor costs, food prices, and energy prices to produce a 10 percent increase in prices. We did impose this restriction over the 1984-92 simulations because there are strong theoretical reasons to expect it to hold over the long run.

recent moderation in wage settlements and strike activity hint at that possibility, it is too early to assess their significance.

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