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Inflation Targets and Inflation Expectations: Some Evidence from the Recent Oil Shocks

A great deal of recent research has pointed out the benefits of adopting inflation targets, emphasizing, in particular, their role in helping to stabilize inflation expectations. As we discuss below, these arguments suggest that inflation expectations in countries that target inflation should react differently to the recent oil price shocks than expectations in countries that do not target inflation. We examine whether this is indeed the case by comparing the recent behavior of inflation expectations in the U.S.—which does not have an explicit inflation target—with the behavior of inflation expectations in Canada and the U.K., which do.

Recent research and some data

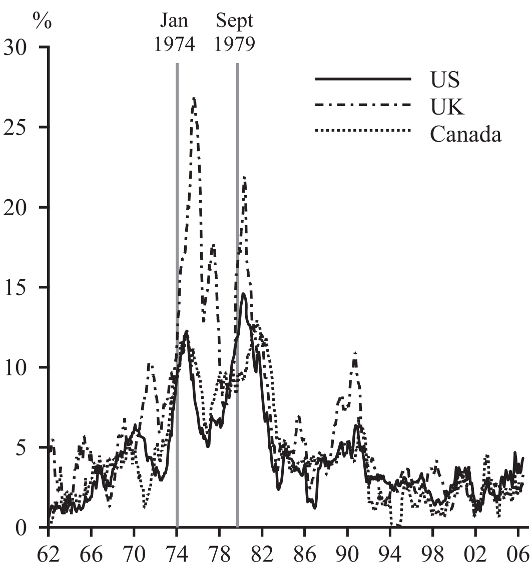
Proponents of inflation targeting have argued that it will decrease inflation variability, reduce the inflationary impact of shocks to the economy and anchor inflation expectations. For example, Mishkin (2004, p. 120) claims that the U.S. would benefit from adopting an inflation target in a number of ways: "First, an inflation target is readily understood by the public and is thus highly transparent. Framing the discussion of monetary policy around an inflation goal makes it easier for the Fed to communicate with the public and the markets. It can help decrease uncertainty about future monetary policy moves, thereby decreasing market volatility. It can help focus the political debate on what a central bank can do in the long run—that is, control inflation, rather than on what it cannot do, which is permanently increase economic growth and the number of jobs through expansionary monetary policy."

Not everyone is convinced about the usefulness of inflation targets. In a recent study, Ball and Sheridan (2005) examine a sample of developed countries (members of the OECD) and compare the performance of those that have adopted inflation targets with those that have not. They find that while countries that adopted inflation targets did succeed in reducing inflation, their macroeconomic performance was no better than countries that did not adopt inflation targets. They conclude that while they find no evidence against inflation targeting, "[n]othing in the data suggests that covert targeters would benefit from adopting explicit targets" (p. 273).

Other empirical studies have reached different conclusions. For instance, Swanson (2006) argues that inflation expectations in the U.S. are not as well anchored as in some inflation targeting countries. He bases this conclusion on the finding that measures of long term inflation expectations tend to go up in response to economic news, such as a higher-than-expected CPI inflation number. A similar response is not observed in three countries with explicit inflation targets (the U.K., Canada, and Sweden).

In this *Economic Letter* we examine how inflation expectations have been affected by the jump in the price of oil in recent years. The oil shock seems to provide a natural experiment to study this issue, since the oil shocks of the 1970s led to sharp increases in inflation in many countries. Figure 1 plots inflation rates—as measured by the CPI—in the three countries we examine: Canada, the U.K., and the U.S. The figure shows that positive oil price shocks were associated with large increases in inflation during the 1970s, with inflation rising above 10% in both the U.S. and Canada and above 20% in the U.K.

Figure 1
Oil shocks and inflation rates



Note: Vertical lines mark the dates of two major oil shocks as determined by Hoover and Perez (1994).

Given this history, it would not be surprising to see financial markets (as well as other agents in the economy) raise their expectations of inflation following the recent increases in oil prices. And to the extent that explicit inflation targets help to stabilize inflation expectations, expected inflation in countries that do not target inflation should rise by more than expected inflation in countries that do.

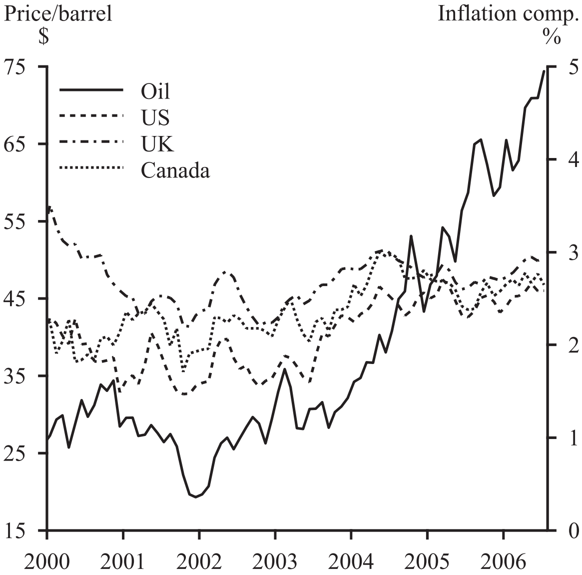
Comparing inflation expectations across countries

The measures of expected inflation we employ here come from financial markets. To construct a measure of expected inflation for the U.S. market, we subtract the yield on the 10-year TIPS (Treasury Inflation-Protected Securities) from the yield on 10-year Treasury Securities. Thus, we use the difference between a market-determined nominal yield and a market-determined real yield as a measure of expected inflation. We repeat this procedure for the U.K., using comparable securities. However, for Canada we only have real yields at a 30-year horizon, and so we plot a measure of inflation expectations at a 30-year horizon.

Figure 2 plots our measures of inflation expectations for these three countries together with the price of a barrel of (West Texas Intermediate crude) oil in dollars since 2000. The (monthly average) U.S. dollar price of oil has gone from roughly \$27 a barrel in January 2000 to more than \$74 in July 2006. Importantly, though, the dollar has depreciated against both the Canadian dollar and the pound. So while the U.S. dollar price of oil is up by nearly 173% over this period, the Canadian dollar price is up about 113% while the price in British pounds is up about 143%. The point is that for these two countries the "oil price shock" has been smaller than it has been for the U.S.; if everything else were the same across countries, the experience of the 1970s would lead one to expect U.S. inflation expectations to rise by more than inflation expectations in Canada or the U.K.

Turning to the figure, the first thing one notices is that inflation expectations in all three countries have been relatively stable—even though oil is now more than two-and-a-half times as expensive as it was at the beginning of 2000. Further, the net increase in inflation expectations over this period has not been very large. In the U.S., expected inflation rose from 2.3% in January 2000 to 2.6% in July 2006, in Canada it rose from 2.3% to 2.7%, while in Britain it actually fell from 3.5% to 2.9%. The stability of inflation expectations since early 2004 is particularly striking, especially since this is the period over which oil prices began to rise at a faster pace. Specifically, the price of oil averaged close to \$34 per barrel in January 2004 and was about \$40 per barrel higher in July 2006. (By contrast, it rose just about \$7 per barrel over the previous four years.) Remarkably, Figure 2 indicates that there has been almost no increase in inflation expectations over this period.

Figure 2
Inflation compensation and oil price



It is worth noting that for the U.S., these results are similar to those obtained from the survey of professional forecasters. The forecasts for inflation over the next ten years averaged 2.5% in the survey conducted in the first quarter of 2000, as well as in surveys conducted in the first quarter of 2004 and the third quarter of 2006.

Now, it is possible to argue that inflation expectations have not changed much over this period because markets were expecting a substantial increase in the price of oil and had factored this into their inflation forecasts at that time. But this argument is easily refuted with the help of data from futures markets. As of January 2004, oil futures data indicated that markets expected oil to average \$29.5 per barrel one year ahead and \$27.6 two years ahead. Thus, the recent price of oil is about \$50 per barrel higher than what markets were expecting at the beginning of 2004.

So—contrary to the experience of the 1970s—markets do not appear to expect that the recent jump in oil prices will translate into permanently higher inflation in any of the three countries that we are examining. Not only that, there is no obvious difference in how inflation expectations across the three countries have responded to the oil shock—and this despite the fact that U.S. inflation has been rising recently and is now above that prevailing in the other two countries, as shown in Figure 1. This suggests that inflation expectations in the U.S. are about as well anchored as they are in the U.K. and Canada, both of which have explicit inflation targets.

A caveat and some possible explanations

It is possible that there have been some other changes in the economy or the economic outlook over this period which could have the effect of offsetting the impact that oil price shocks might have on expected inflation. However, it is not obvious what these might be. And as for the behavior of U.S. inflation expectations relative to those in Canada and the U.K., it is worth recalling that the U.S. dollar has fallen relative to both the British pound and the Canadian dollar over this period. If anything, the falling dollar would be expected to push both actual and expected inflation in the U.S. above that in the U.K. and Canada (even apart from what these currency movements imply for the size of the oil price shock in the three countries).

It is then natural to wonder about why U.S. inflation expectations appear well anchored. One thing that the U.S. has in common with the other two countries is that it has brought inflation down from the high levels observed in the 1970s and kept it low for a while now. This achievement (which is not limited to the three countries under discussion) is likely to have strengthened the public's belief that the central bank authorities are committed to keeping inflation low. Indeed, in the U.S., Fed officials have repeatedly emphasized the need to keep inflation low in order to achieve maximum sustainable growth.

More recently, several Fed officials have talked about a "comfort zone" for inflation, a term that both financial markets and the press refer to fairly frequently. It is possible that the markets think of this zone as a de facto target range, even though neither the Fed nor Congress have announced any formal inflation targets. Indeed, in a recent paper, Goodfriend (2005) argues that the recent successes of monetary policy "…can be attributed in large part to inflation-targeting policy procedures that the Fed has adopted gradually and implicitly over the last two decades" and that "...some form of inflation targeting is likely to remain at the core of Fed monetary policy indefinitely" (p. 311).

Again, not everyone agrees. Commenting on the paper by Goodfriend, then-Governor Donald Kohn (2005) argued that the Fed has not pursued an inflation target but, instead, has implemented policy in a flexible manner, often behaving in ways that would be inconsistent with inflation targeting; the Fed has achieved greater credibility over time, and expectations have become well anchored, because monetary policy has kept inflation low for a sustained period.

Conclusions

Contrary to what the experience from the 1970s might suggest, the recent substantial increase in the price of oil does not appear to have led to a noticeable jump in inflation expectations in the U.S. In this respect, the U.S. experience seems similar to the experiences of Canada and the U.K. This suggests that inflation expectations in the U.S. are reasonably well anchored and that they may be about as well anchored as they are in countries that have announced inflation targets. The debate about the reasons for this is not settled yet: The Fed may have acquired greater credibility because it has kept inflation low for a sustained period of time now or because the public believes that the way the Fed is currently practicing monetary policy is not very different from inflation targeting as practiced by some other countries.

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