ECONOMIC SCENE

The Impact of Higher Oil Prices

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JAMES CARVILLE once mused that instead of coming back as the president or the pope or a .400 baseball hitter if there were reincarnation, he would rather come back as the bond market, because "you can intimidate everybody."

Perhaps he should reconsider: the oil market might be a better bet.

Gasoline prices surpassed $2 a gallon last week, up from $1.20 in early 2002. This increase was driven largely by an increase in the price of crude oil, which in turn has been fueled mainly by growing worldwide demand in the face of fairly stable supply. Other factors have also played a role. For example, terrorist attacks against foreign oil workers in Saudi Arabia have caused speculation that supply might drop in the future.

The run-up in oil prices has become a major issue in the presidential election, as well as a threat to the economy.

The detrimental effect of oil price increases on economic growth was first emphasized by economists in the early 1980's. In a landmark study, James Hamilton, now of the University of California, San Diego, concluded, "All but one of the U.S. recessions since World War II have been preceded, typically with a lag of around three-fourths of a year, by a dramatic increase in the price of crude oil." Surprisingly, Professor Hamilton found that oil price increases were associated with slower growth even before the 1973 OPEC oil embargo.

Time has been good to Professor Hamilton's hypothesis.

Many macroeconomic variables that appear to move together over time in a systematic way cease moving together after they are first studied. Sometimes this happens for mysterious reasons, like the unraveling of the relationship between inflation and unemployment in the 1990's, and sometimes it happens for expected reasons, like the tendency for stock prices to rise in January, which disappeared once investors became aware of it.

The correlation between oil prices and economic activity, however, has held up rather well.

Sharp increases in the price of oil preceded four of the last five recessions. The correlation between the real price of crude oil in a quarter and the unemployment rate a year later is a robust 0.72, according to a study by Alan A. Carruth of the University of Kent, Mark A. Hooker of State Street Global Advisors in London and Andrew J. Oswald of Warwick University.

"Oil price spikes are probably as close as we get to world laboratory experiments in macroeconomics," Professor Oswald said.

Still, economists have not reached a consensus on the reason that oil price spikes depress economic activity -- and probably never will because many aspects of the economy and economic policy change in tandem.

In addition to gasoline, crude oil is used to make rubber and plastics, asphalt, synthetic fibers and fuel for electrical power generators. Crude oil purchases account for about 2 percent of gross domestic product, and all energy sources -- their cost is probably linked to crude oil prices -- account for about 5 percent. While it is true that the share of oil dollars in the economy has declined, it is also likely that the ease of substitution for remaining uses of oil has also declined. There is little reason to believe that oil prices have become irrelevant for economic activity.

Some economists argue that oil price increases matter because they make it more costly to produce a variety of products. Consequently, prices increase. Unless workers are willing to accept lower real wages, employment falls. Others argue that oil price increases cause a shift in demand across sectors, disrupting production. For example, higher prices reduce the demand for S.U.V.'s and other gas guzzlers, causing Detroit to lay off workers. Still others argue that oil price increases act like a tax because most oil revenues flow overseas.

Another question involves the extent to which the adverse effect of oil price shocks on economic growth results from the shocks themselves, or from the response of the Federal Reserve Board to those shocks, which is typically to raise borrowing rates to cool inflation. Higher interest rates bring actual output in line with (the lower) potential output. If it were less worried about inflation, could the Fed offset the adverse effect of oil price increases on economic activity? In an important 1997 study, Ben S. Bernanke, now a member of the Fed; Mark Gertler of New York University; and Mark Watson of Princeton presented evidence indicating that interest rate adjustments account for nearly all of the depressing effects of oil price shocks on the economy.

In the latest issue of The Journal of Money, Credit and Banking, Professor Hamilton and Ana Maria Herrera of Michigan State University cast doubt on this view, and the three authors respond. The exchange is unlikely to settle the debate, but Professor Hamilton and Professor Herrera persuasively argue that the three set the bar too low by assuming that the effect of higher oil prices is shorter-lived than most other researchers do.

Elsewhere, Professor Hamilton has stressed that the relationship between oil prices and economic growth is not so straightforward. He finds that a price jump has less of an effect if prices had been high at some point in the preceding three years. Precisely such a situation now exists, as crude oil prices peaked at the end of 2000 and remained high through most of 2001 before dipping and then rebounding. As a result, he expects the 44 percent increase in crude oil prices over the last year to reduce G.D.P. by 0.5 percent from where it otherwise would have been by the end of this year.

Other estimates, which focus on the increase in oil prices irrespective of recent levels, imply a larger effect, on the order of a 2.2 percentage point reduction in output growth.

If the Fed refrains from raising the federal funds rate very much despite the rising price of oil, we will have as close as possible to a controlled experiment for estimating the impact of oil prices separately from Fed policy -- in other words, a test of whether it is better to come back as the oil market or the bond market.