THE INTERNATIONAL ECONOMY
THE MAGAZINE OF
INTERNATIONAL ECONOMIC POLICY
888 16th Street, N.W.
Suite 740
Washington, D.C. 20006
Phone: 202-861-0791
Fax: 202-861-0790
www.international-economy.com

How *Oil Shocks* Affect Markets

BY ROGER KUBARYCH

Consider the five most recent scenarios.

The five major oil shocks that have rattled the global economy since 1973 also had powerful effects on financial markets. But just as the economic impact of successive oil shocks has become progressively less destructive to growth, so too have the financial market effects become milder. Indeed, the latest surge in oil prices has been largely taken in stride within the financial markets, in contrast to past responses. In part that is because moderately higher crude oil prices no longer have a decisive effect on overall inflationary developments. In part, it is because rightly or wrongly market participants have been conditioned to expect the oil price to retreat after a temporary overshoot. And in part it is because a sharp rise in energy costs has differential effects on different sectors of the economy—some industries do worse, such as automakers, but others do better, such as energy developers. Here is a brief review of how the main financial sectors have responded to successive oil shocks since the big one in 1973.

Roger Kubarych is Senior Economic Adviser with HVB America, Inc.

The Five Shocks

1 1973–75: OPEC SQUEEZES THE WEST

The proximate cause was the Yom Kippur War in the fall of 1973, followed by the Arab boycott of countries judged to be supporting Israel against Egypt. But in the background was a long period of OPEC frustration that relatively constant oil prices, against a backdrop of rising global inflation, were resulting in a steady decline in real oil revenues. The geopolitical disturbance provided just the right degree of cover to slip through a new policy of using its latent market power to push up prices. Over the next year and a half, the price of Saudi light crude oil soared from $2 per barrel to over $13 per barrel. The price subsequently leveled off to trade in a narrow range just under $15 per barrel until the next geopolitical shock in 1979, the Iranian revolution.

In the background was a long period of OPEC frustration that relatively constant oil prices, against a backdrop of rising global inflation, were resulting in a steady decline in real oil revenues.

FINANCIAL MARKET RESPONSES

Bonds: The U.S. Treasury ten-year constant maturity bond posted a yield of 6.81 percent on October 18, 1973, the day before the oil embargo began. Initially the ten-year yield actually declined, reaching a low of 6.67 percent two months later. Over subsequent months, bond markets gradually sold off as the oil price hike began to be viewed as permanent, with serious inflationary consequences. But the bond market continued to trade in an orderly fashion. There were no sudden, sharp yield spikes. By March 18, 1974, when the oil embargo ended, ten-year Treasuries were up to a yield of just 7.24 percent. However, when prices continued upward even after the end of the embargo, bond yields resumed an upward path, topping 8 percent in the fall of 1974 and rising further to a peak of 8.5 percent a year later. All told, the first oil shock produced a cumulative increase of almost 2 percentage points in long-term U.S. Treasury yields.

Stock markets: The U.S. equity market, as measured by the S&P 500 index, was badly shaken by the events in the Middle East and the Arab oil embargo. From just before its imposition until oil prices began to stabilize in early 1975, average stock prices nearly halved. The value of U.S. equities dropped by 50 percent or $600 billion, about 40 percent of GDP. By comparison, that plunge was only slightly less severe than the collapse of the high tech bubble of 2000–03.

Currencies: The Japanese yen, which had been allowed to appreciate against the U.S. dollar after the 1971 collapse of the Bretton Woods system, weakened significantly in the aftermath of the oil shock. The Japanese economy was viewed as more vulnerable to a contraction in oil supplies. The currency traded at about 265 to the dollar just before the oil embargo. It weakened to about 300 by the middle of 1974 and then fluctuated narrowly around that level until 1977, when the Carter Administration took office with a mandate to deal with the growing Japanese trade surplus.

The German mark followed a similar pattern, but weakened less than the yen and turned up sooner. The deutschemark weakened from about 2.40 just before the embargo to above 2.80 by January 1974. But by the end of 1974 it was already stronger than before the oil shock and it continued to appreciate against the dollar subsequently.

2 1979–81: IRANIAN REVOLUTION AND IRAN-IRAQ WAR

Another geopolitical event with immense historic consequences triggered the second major oil shock. Coming into 1979, OPEC decided to exploit its pricing power after a period of restraint by announcing a 15 percent price rise for 1979. But that action was quickly made obsolete by rapidly unfolding events in Iran. Oil production had been declining in that country for some time as social unrest escalated. Market conditions deteriorated even before the Shah was deposed and the American embassy in Tehran was seized by militants in November 1979. The

Iranian revolution resulted in the loss of 2 million to 2.5 million barrels of oil per day between November 1978 and June 1979. Later, production almost halted.

Iraq invaded Iran in September 1980. Within weeks the combined production of both countries was only a million barrels per day or 6.5 million barrels per day less than a year before. Worldwide crude oil production was 10 percent lower than in 1979. In the meantime, there was a renewed scramble by numerous countries to build up oil stockpiles. By the time the market peaked in 1980–81, the price of Saudi light crude oil had climbed to just below $40 per barrel, a rise of about $25 per barrel and almost a tripling of the 1978 average price.

Worldwide crude oil production was 10 percent lower in 1980 than in 1979.

FINANCIAL MARKET RESPONSES

Bonds: The second oil shock had a far more profoundly adverse impact on bond markets than the initial one, even though oil price advance was relatively smaller. Yields on ten-year U.S. Treasuries were already moving progressively by the time events began to unfold in Iran late in 1978. By December the yield had pierced the 9 percent level, over 1 percentage point higher than the year before. As oil prices started to escalate in subsequent months, yields traded in a narrow range without a clear upward trend until the second half of the year. The swirl of events over the closing months of the year—the takeover of power by Ayatollah Khomeini, the hostage crisis, and the quick imposition of a freeze on Iranian assets in the United States—led to sharp increases in bond yields. By January 1980, ten-year Treasuries were quoted above 11 percent. Over the next several weeks, as the hostage crisis dragged on with no end in sight, market confidence weakened further. By late February, the yield climbed above 13.5 percent, then a record high. There were subsequent temporary rallies, but the bond market continued under pressure even after oil prices peaked.

Stock markets: It is remarkable, looking back at that turbulent period, that the major stock market indexes in the United States were little affected by the events in the oil and bond markets. To be sure, there were abrupt movements on a few days, but over all the stock market reacted more calmly than the bond market, especially during 1980. The best explanation is that some industries were thought to benefit from higher energy prices. Investors moved money out of investments in sectors thought to be most negatively affected—recall that this was the time of the U.S. government bail-out of Chrysler, so everyone knew that the auto industry was a casualty. But they moved into energy-related stocks and other industries, with no permanent net erosion of equity values.

Currencies: The Iranian revolution came just after the Carter Administration had put in place in November 1978 its elaborate program to defend the dollar. That included drawing on IMF credit lines as well as issuance of the so-called Carter bonds, in which the U.S. Treasury borrowed in currencies other than the dollar. That worked for a while to restore some confidence, and the dollar briefly rallied across the board. Like after the first oil price shock, the yen continued to come under some pressure in the foreign exchange markets as oil prices climbed higher. But the experience of the deutschemark was different. By the end of 1979, as the U.S. rate of inflation began to ratchet higher, the deutschemark was again appreciating strongly. That trend would continue well into 1980.

3 1990–91: IRAQ INVADES KUWAIT AND FIRST GULF WAR

The price of crude oil spiked in 1990 with the uncertainty associated with Iraq's invasion of Kuwait and the build-up to Operation Desert Storm, which eventually forced Saddam Hussein to withdraw. The price spike was substantial—within weeks of August 1990, Saudi light crude oil had jumped from about $15 per barrel to over $33 per barrel. But the impact on oil supplies was negligible, not least because Saudi Arabia and other Arab nations were allied with U.S. forces and they made efforts to counteract the price increase. Once it was clear that the United States was committed to expelling Iraq, prices began to slide. And they continued to plummet as the ensuing Gulf War turned out to be shorter, and with fewer casualties, than critics had predicted. Following the war, crude oil prices entered a steady decline until 1994, when inflation-adjusted prices fell to their lowest levels since 1973.

The impact on oil supplies was negligible, not least because Saudi Arabia and other Arab nations were allied with U.S. forces and made efforts to counteract the price increase.

FINANCIAL MARKET RESPONSES

Bonds: The yield on ten-year U.S. Treasuries was trading about 8 percent at the time of the Iraqi invasion. In sharp contrast to the previous oil shocks, the rapid run-up in crude oil prices had only a minimal impact on the bond market in this episode. The yield peaked at just over 9 percent in September and soon fluctuated gradually lower, both during the preparations for Operation Desert Storm and after its successful implementation. Bond market participants were convinced at the time that the oil price spike would not be sustained, in large measure because of Saudi involvement in the war effort. They were right.

Stock markets: In contrast to the bond market, stocks fell back noticeably between the Iraqi invasion and the end of 1990. But they quickly retraced the decline once it was clear that the operation would be successful.

Currencies: The exchange market reaction was entirely different from the first two oil shocks. The deutschemark and the Japanese yen actually strengthened during the run-up in oil prices, and only settled back after hostilities ended and oil prices retreated.

4 1996–99: DEMAND-INDUCED PRICE SURGE

In the wake of the Asian financial crisis and a pick-up of Iraqi oil sales under the United Nations oil-for-food program, oil prices plummeted to $10 per barrel in late 1998. Then oil prices began to head sharply higher—but this time, unlike the three previous episodes, without any geopolitical trigger. Rather, global demand began to swell as the high-tech bubble encouraged a big investment boom in North America and Europe and as the Asian economies began to recover. OPEC was either unable or unwilling to match increased demand by raising output. By the middle of 2000, oil prices tripled. It represented an even sharper price advance than during the shock of the Iranian revolution. The eventual peaking in the oil price coincided with President Clinton's decision to sell crude oil from the Strategic Petroleum Reserve, although analysts disagree as to how important that action was in taming the market pressures.

Global demand began to swell as the high-tech bubble encouraged a big investment boom in North America and Europe and as the Asian economies began to recover.

FINANCIAL MARKET RESPONSES

Bonds: Yields on ten-year U.S. Treasuries moved up alongside the rise in oil prices. At the end of 1998, the yield was just above 4.5 percent. By February 1999, it went above 5 percent. By June 1999 it exceeded 6 percent. Thereafter, it fluctuated narrowly just below that level by the time oil prices reached a peak. Naturally, rising oil prices were not the only factor influencing bond market participants. The furious increase in stock prices, especially for high tech companies, was generating huge reallocations of investment funds into stocks and out of bonds. Moreover, economic growth was accelerating. In the United States, the Federal Reserve, concerned about a buildup of inflationary pressures, was progressively tightening monetary policy. European monetary policies were also being tightened. So in a sense, it was a conventional late-cycle boom, with both oil prices and bond yields responding in a classic way.

Stocks: Stock markets largely ignored the crude oil price advance of 1999–2000. The lure of rapidly escalating high tech stocks overshadowed it.

Currencies: The deutschemark and Japanese yen reactions were entirely reversed from past experience. The yen strengthened sharply throughout the oil price advance, while the deutschemark tended to weaken.

5 2002–05: IRAQ II AND SURGING OIL DEMAND

Call it a rolling oil price shock or a second demand-induced price spike, the tripling of crude oil prices since early 2002 has had very different—generally more muted and often paradoxical—effects on the financial markets.

FINANCIAL MARKET RESPONSES

Bonds: Bond market participants have shown little of the concern, or sometimes fear, associated with oil price surges of similar magnitude in the previous thirty years. Accordingly, yields have exhibited little of the volatility, and none of the upward tendency, of the four previous episodes. Fed Chairman Greenspan has remarked that the recent bond market behavior is not readily explainable—his word is "conundrum." Part of that conundrum has to do with the absence of heightened inflationary expectations, despite the upward pressure on energy costs, which have yet to feed through into prices generally.

Stocks: While the stock market has rebounded from the depths of the tremendous sell-off of 2000–03, recently investors have expressed great uncertainty about future prospects for corporate earnings. The higher energy costs bother them, even as bond investors are unimpressed.

The tripling of crude oil prices since early 2002 has had generally more muted and often paradoxical effects on the financial markets.

Currencies: The dollar depreciated sharply from March 2002 until the end of 2004 but has rallied since. The latest oil price surge has been a factor in the Japanese yen market, but not in the market for euros. Other factors are weighing on the European common currency, including political questions raised by defeat of the constitutional referendums in France and the Netherlands.

WHAT NEXT?

Nobody likes to forecast continued increases in oil prices. History suggests that after a tripling in price, market pressures subside and prices slip back. That may well happen this time. But there are several worrisome features of the current situation that support the alternative view that further increases in oil prices are more likely.

First, a number of OPEC producers are operating at full capacity but below their explicit quotas. That means that the only genuine source of incremental supply is Saudi Arabia.

Second, relations between the governments of Saudi Arabia and the United States have deteriorated since the decision by the Bush Administration to use force to remove Saddam Hussein's regime. Continued violence in Iraq validates the concerns of several Saudi officials that regime change would lead to chaos. Thus, Saudi Arabia has little geopolitical incentive to relieve a tight supply-demand balance in global oil markets. They don't need the extra cash just now, either.

Third, the demand side pressures have been permanently intensified by the tremendous economic growth in China. Much of that growth is energy-intensive. New commercial buildings are constructed with modern air-conditioning and computer capabilities. Millions of cars and trucks are being added to the stock of motor vehicles, and that cumulatively lifts fuel demand.

Fourth, other Asian countries are also growing rapidly and the energy intensity of consumption is also on the rise. India will provide another injection of demand over the medium term.

Therefore, rather than a sharp pull-back in energy prices, a more likely scenario is for an irregular uptrend over the remainder of the decade.

BEST POLICY RESPONSE

Demand contraction policies, such as the high-tax environment of Europe and Japan, would have a minimal impact on energy use in the United States. That is because the main determinant of gasoline demand is the fuel efficiency of the installed motor vehicle stock and that can't be changed quickly. Plus, a sudden collapse in consumer purchases of U.S.-built sport-utility vehicles and other light trucks would push the main automakers to the brink of bankruptcy. So the chances of a high-gasoline tax approach being legislated are practically nil.

The Bush Administration has pushed for supply expansion instead. The problem is that the kinds of petroleum discovery and development they have in mind, mostly in environmentally protected areas of Alaska and in a few offshore locations, would yield very small increases to U.S. production. In the meantime, proposals for such activities do little more than unite environmental activists in opposition. And a growing environmental movement would essentially close off the one area where the United States should be rethinking its existing policies: that is, the arena of nuclear energy.

At present there is virtually no political support for redeveloping a nuclear power industry, unlike for example in countries such as France and Japan, which are committed to the nuclear option. It will take a monumental effort to shift U.S. attitudes. And even if this political effort would were successful, a long-shot to say the least, it would take the better part of a decade to design and build new nuclear power plants.

Therefore, about the only thing that can reliably lower oil prices is for a major increase in investment in three areas: new technology to burn coal more efficiently, development of alternative energy sources such as wind and solar, and a burst of innovation in areas such as fuel cells. There is actually a good deal of bipartisan support for each of these options, as indicated in the policy platforms of both the Bush and Kerry campaigns in 2004.

But none of this is going to happen soon. In the meantime, the complacency of the bond market is likely to be tested, and the apprehension of the stock market is likely to increase when oil prices once again rise above past peaks and their inflationary consequences become more apparent. ◆