

# the Southwest ECONOMY

THE FEDERAL RESERVE BANK OF DALLAS

MARCH/APRIL 1991

## The Rise and Fall of Oil Prices

*“Supply and demand fundamentals created the environment for the fall in oil prices.... [C]hanging market expectations were the spark that initiated the decline.”*

For five months after the Iraqi invasion of Kuwait, oil prices served as a faithful barometer of the world's expectations about the outbreak of war. West Texas Intermediate crude prices climbed from \$21.59 per barrel shortly before the invasion to a high of \$40 per barrel in the third week of October (Chart 1). As the world grew more accustomed to uncertainty, oil prices abated somewhat in December and early January, averaging about \$27 per barrel.

But on Jan. 16, the standoff ended and war broke out. Contrary to expectations, oil prices tumbled by more than \$10 per barrel. Even the modest easing of prices before the war did not prepare the world for such a collapse. Oil prices hovered around \$22-per-barrel

during the first week of the war and remained stable through the first half of February.

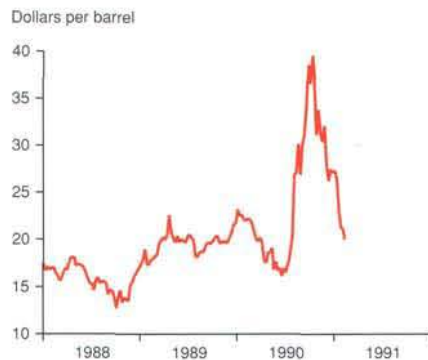
A closer examination of market conditions, however, reveals the price decline as a rational outcome. Supply and demand fundamentals created the environment for the fall in oil prices. Soon after the outbreak of war, changing market expectations were the spark that initiated the decline.

### Creating an Environment for a Price Collapse

After the invasion of Kuwait on Aug. 2, prices escalated because of market fears about a disruption in the supply of oil. In fact, the world lost 4.3 million barrels a day as a result of the United Nations embargo on Kuwaiti and Iraqi oil exports. Many observers did not believe that other producers could, or would, offset the losses. More threatening was the possibility that war could result in the loss of Saudi Arabian oil fields.

Meanwhile, as the world and its oil markets fretted about supply losses, both OPEC and non-OPEC oil producers worked

**Chart 1**  
Price of West Texas Intermediate Crude



I N S I D E

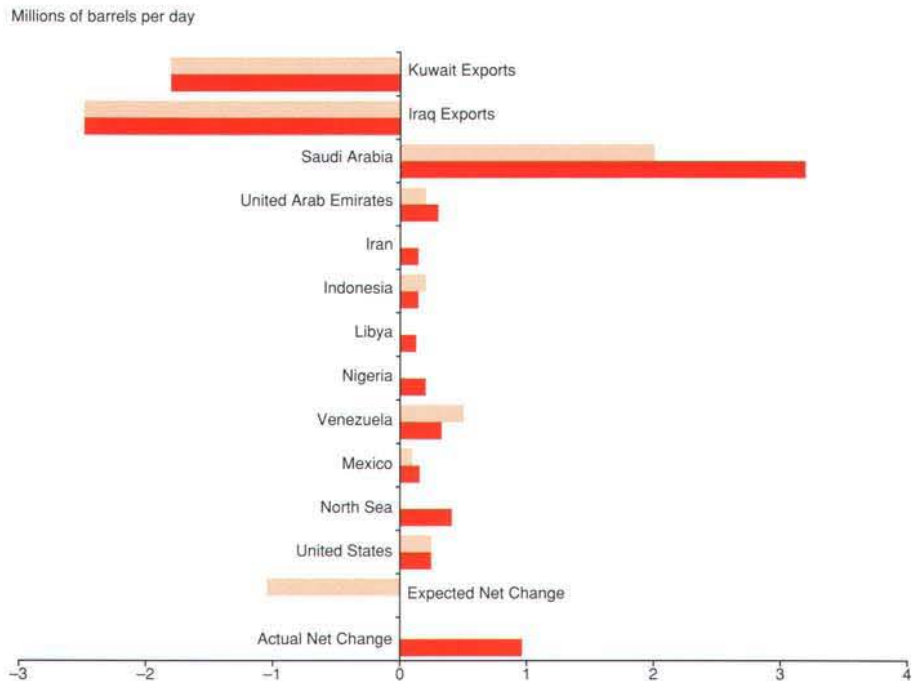
New Fed President

The Future of the  
Texas Economy

School Tax Reform

*“Higher oil prices also stimulated increased production from existing wells in the United States.”*

**Chart 2**  
Changes in Production Levels



quickly to increase capacity. These producers more than offset the loss of Iraqi and Kuwaiti exports (Chart 2). Boosting its production by 3.2 million barrels per day, Saudi Arabia became the largest source of the increase. Production also increased in Iran, Libya, Nigeria and the North Sea, areas to which analysts did not look for much help.

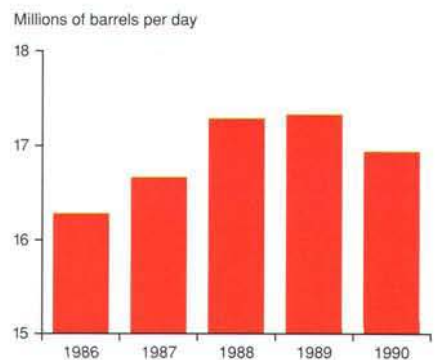
Higher oil prices also stimulated increased production from existing wells in the United States. Producers reopened formerly unprofitable wells and began to use more expensive extraction methods to recover additional oil. Nevertheless, producers correctly perceived the price increases as temporary and did not increase output by drilling new wells.

Other factors also ensured a stable supply of oil. The world had large inventories of both commercial and government oil stocks—oil already extracted and in storage. The U.S. Department of Energy reported that the fourth-quarter 1990 commercial oil stocks of free-world countries were 200 million barrels higher than the average stock level of the past four years.

The free world's government stocks were also substantial, totaling 853 million barrels. Of this, the U.S. Strategic Petroleum Reserve accounted for 586 million barrels. Japan, with 206 million barrels, and Europe, with 60 million barrels, made up the rest.

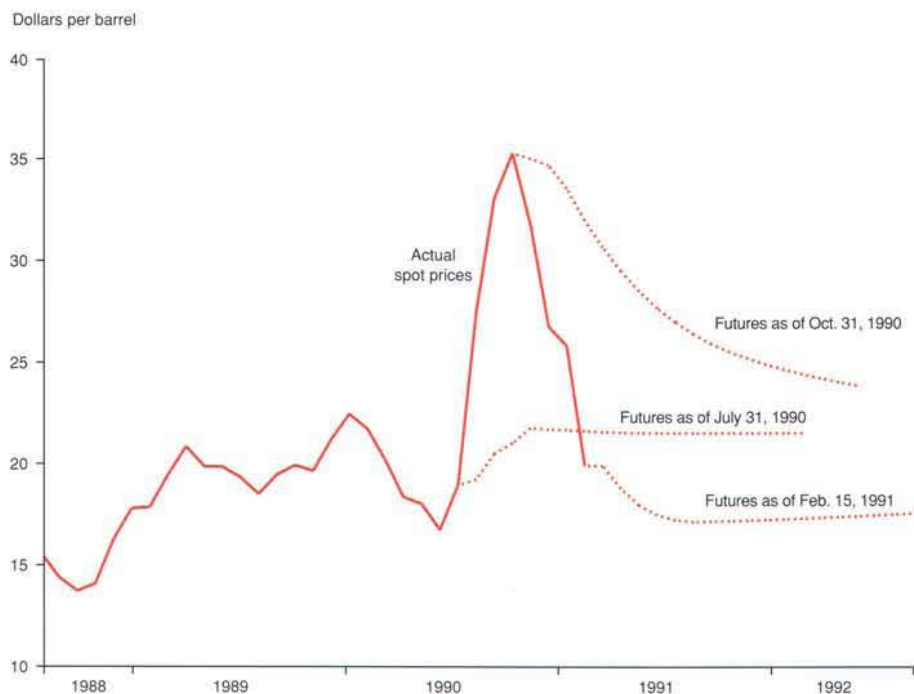
On the evening of the outbreak of war, President George Bush announced that he was ready to release 1.125 million barrels per day from the U.S. Strategic Petroleum Reserve. Other governments proffered another 0.8 million barrels per day from their stocks. Even though the stocks did not find

**Chart 3**  
U.S. Crude Oil Consumption





**Chart 4**  
West Texas Intermediate Crude Oil Prices



their way to market, the willingness of governments to supply oil allayed some of the concern about disruptions.

Abundant oil supplies, however, were not the only source of the downward price pressures. Reduced demand also played a role. Consumption of petroleum products dropped 2.1 percent in 1990 (Chart 3). A particularly mild winter, the warmest on record, contributed to this decline by decreasing the demand for oil in the fourth quarter. Also, as consumers faced a slowing economy, they conserved energy. Notably, in October motor vehicle usage showed its first year-over-year decrease since 1982. For the year, only the consumption of kerosene-type jet fuel, needed for the Middle East military operations, increased.

### The Catalyst for Lower Prices

Increases in oil production, ample inventories and decreased demand created an environment for a price collapse. What triggered the collapse was a change in market expectations following the

onset of war. The early successes of the allied air strikes and the limited ability of the Iraqi missiles to hit their targets reassured the market that Saudi Arabian oil supplies were secure.

Oil futures prices exemplify the changes in market expectations (Chart 4). Before the invasion of Kuwait, futures prices projected that oil would be about \$22 a barrel through May 1992. After the invasion, the embargo lowered supplies and the probability of further supply cuts seemed high. This combination elevated oil futures. Oil futures fell when war finally broke out and early allied successes reduced the threat to Saudi oil fields.

Postwar events could again change market perceptions and prices. If Kuwait and Iraq can quickly restore oil production to preinvasion levels, oil prices could fall even further. Prices could increase, however, if OPEC is able to reinstate quotas and curb production.

— Mine K. Yücel  
Paula K. Tucker

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