The Global Recovery's Soft Underbelly

How sweet crude could rise to $200 per barrel, dooming the recovery.

BY PHILIP K. VERLEGER, JR.

On July 27, 2008, the *Washington Post* published the first in a week-long series of articles on the high oil price. In it, author Steven Mufson included this ominous warning: "There is little prospect that drivers will ever again see gas prices retreat to the levels they enjoyed for much of the last generation." The title of the piece was "This Time, It's Different."

Mufson's article appeared on the front page of the Sunday *Post.* Many would have read the paper while sitting at Atlantic coast resorts like Virginia Beach. If they stopped to consider its content, they would probably have agreed. They might have even pondered forking out more than $4 per gallon to fill their gas tank when they headed east from sultry Washington, D.C., or down from Philadelphia. They might also have recalled that a year earlier they paid less than $3 per gallon. The few with good memories might even recall that nine years ago they paid less than a dollar per gallon when they filled up.

At the time, few questioned Mufson's opinions. Throughout the winter and spring of 2008, the popular press bombarded readers with warnings that oil supplies were growing short and that China's insatiable appetite would push prices higher and higher. Indeed, in April of that year, the *New York Time*'s Jad Mouawad said as much: "Producers are struggling to pump as much as they can to quench the

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thirst not only of the developed world, but fast-growing developing nations like China and India, the two most populous countries. To many experts, the steadily rising price underscored longer-term fears about the future of a system that has supplied cheap oil for more than a century."

Six months after Mufson's piece was published and nine months after Mouawad's article appeared, the situation was very different. On Christmas Day 2008, the same *Washington Post* readers might have paid less than $1.50 per gallon for gasoline. Gasoline prices, which Mufson said "had little prospect" of retreating to levels enjoyed in the past, had returned to a range last seen at the turn of the century. In some parts of the country, prices fell back to early 1990 levels.

In the first nine months of 2009, prices rose again, but only because market participants were offered an enormous financial incentive to accumulate inventories. In fact, following the Lehman Brothers collapse, the world witnessed one of the all-time greatest increases in oil stocks.

So what happened? Why did oil prices surge to almost $150 per barrel in 2008 only to collapse to $30 by year's end? Why did all of the world's leading journalists and pundits get the story so wrong? And finally, does the failure of the so-called "experts" to understand the cause of the 2008 price increase have implications for the global economy?

Start with the last question. I would argue that the failure to comprehend the cause of the 2008 price rise will have important and ominous consequences for the global economy. As I explain below, the 2008 increase resulted from incompatibility between world refineries and requirements imposed by environmental authorities. The 2008 crude price rise occurred because light sweet crude was not available in the quantities required to meet demand for low-sulfur diesel. Crude was plentiful but refiners could not process it into products satisfying environmental specifications. To paraphrase Samuel Taylor Coleridge, it was a case of "crude oil, crude oil everywhere, but not a drop worth processing."

These capacity constraints do not bind today due to the global recession. However, they will come into play again

Why did all of the world's leading journalists and pundits get the story so wrong?

ERIC KOUNCE

Pumpjack south of Midlands, Texas.

when the world economy recovers. New tighter regulations on the sulfur content of gasoline and marine bunker fuels will bring back the 2008 squeeze and could send crude prices above 2008 records. Further deterioration in the political situation of Nigeria, the world's largest sweet crude supplier, could also quickly sent crude to $100 per barrel or even $200 absent changes in environmental regulations.

So why did writers fail to understand the problem? The fundamental answer is almost all of those covering the subject, including reporters, academic economists, and those working at international institutions such as the International Monetary Fund, do not understand broader aspects of the oil market. In 2008, nearly everyone writing on the topic treated crude oil as just that, crude oil. They made no distinction between the high-sulfur crudes produced by Saudi Arabia and the sweet crude oils produced by Nigeria. No one noted the fact that high-sulfur crudes make up perhaps three-quarters of world supply. Nobody noticed that the world refining industry lacked the capacity to remove the required sulfur amounts from sour crude. And no one realized it would take ten years and perhaps $100 billion to fix the refining industry.

A year later, the International Energy Agency has provided the definitive explanation for the 2008 price rises. According to the agency, the increases in 2008 were not due to the inability of producers to supply crude oil but the inability of producers to provide the right type of crude oil. Now aware of the fact that some producers could not sell as much oil in 2008 as they wanted even when crude reached $147 per barrel, the IEA economists came to this conclusion: "Changes in required product specifications affected the type and amount of crude that refiners could process, effectively tightening fundamentals for these grades." The IEA economists also noted that "readily available heavy sour crudes were neither a practical nor economically viable substitute for light sweet crudes due to already-stretched refining capacity and the narrow price discount offered by many producers for their heavy/sour grades."

The explanation for the 2008 price increase that the IEA now ascribes to appeared first in simpler form in the Winter 2006 issue of *TIE*. In that article, I warned of how oil prices would soon rise to $100 per barrel due to environmental regulations on the diesel fuel sulfur content that Europe and other regions were adopting. I referred to rules that would require marketers in Europe to sell diesel fuel containing less than 10 parts per million sulfur by the beginning of 2009. The imposition of these standards put enormous strain on the global refining sector. The pressure was so great that the United States became a significant exporter of diesel fuel in 2008 for the first time in decades.

My 2006 article did not explain the details of the sulfur constraint. To describe it briefly, refiners can manufacture low-sulfur products in two ways. First, they can remove sulfur from high-sulfur sour crudes such as those coming from the Middle East. Alternatively, they can process low-sulfur sweet crudes. The first alternative loses viability when the refining capacity to remove sulfur is exhausted. In early 2008, refiners maxed out their ability to take sulfur from sour crudes. At that point, their only alternative was to purchase sweet crude, and consequently, they bid sweet crude prices higher and higher.

The refinery constraints in 2008 were exacerbated by political turmoil in Nigeria and the U.S. Department of Energy's decision to add sweet crude to the U.S. Strategic Petroleum Reserve, thus removing it from the market. Prices would not have climbed to $147 absent the Department of Energy action. The agency began filling the Strategic Petroleum Reserve in August 2007 when prices were $70 per barrel. The Department of Energy halted this practice in July 2008 after Congress passed legislation that forced the agency to cease and desist. It may be coincidental, but the price collapse from $147 began the week the Department of Energy stopped putting oil into the Strategic Petroleum Reserve.

In short, the 2008 oil price cycle was caused by a shortage of sweet crude oil at a time of surplus in the sour or high-sulfur crude market. A second and third cycle could occur in the not-too-distant future absent changes in the global approach to regulation of fuel composition and investment in refining. In fact, sweet crude prices could rise to $200 per barrel long before the global economy fully recovers from the current recession.

A return of high prices could happen if further regulations are imposed on petroleum product sulfur content before the world refining industry adds sufficient desulfurization capacity. Investment in such capacity today is lagging due to poor returns in the refining sector. The low earnings are not accidental. OPEC countries have deliberately limited sour crude output to keep export prices high. Their actions make it unprofitable for refiners to invest in sulfur-removal equipment.

Deterioration in the political situation of Nigeria, the world's largest sweet crude supplier, could also quickly sent crude to $100 per barrel or even $200 absent changes in environmental regulations.

A return to a very high crude price regime just as recovery from the current "Great Recession" begins is obviously the wrong medicine for the global economy. In fact, few developments could be worse. Yet public policy is being hatched today in a way that almost assures such an outcome. In every country, one group of officials develops economic policy while a second group formulates energy policy. Worse, in some countries, policies for financial (commodity) markets are overseen by yet a third group. Communication between these various parties is nonexistent. The lack of it sets the stage for a second and perhaps even a third surge in oil prices to record levels and, possibly, a second and third economic slowdown. Put another way, the stage is being set for a sequence of global economic slowdowns caused by high oil prices.

These cycles can be avoided. It is time for economic policymakers to recognize the oil price impacts of regulations that require sulfur removal from petroleum products. Steps should be taken to accelerate construction of sufficient desulfurization capacity at world refineries to make these regulations feasible. It is also time for environmental regulators to recognize that limiting petroleum product sulfur content could, if pushed to the extreme, cause a second serious global recession within three or four years. ◆