

*February 2, 2015*

## **Reflections on 1986**

Since last summer, oil prices have suffered a precipitous decline. The weakness is mostly due to supply and demand factors; however, because oil is a market with an active cartel, the decision by the cartel leader, Saudi Arabia, to allow prices to decline is also a key factor in price weakness.

This isn't the first time the kingdom has fostered a price breakdown. There were two other episodes in which the Saudis led oil prices lower. In 1986 and 1998, the kingdom boosted production and allowed prices to decline in a bid to maintain its market share.

In this report, we will focus solely on the geopolitics of the 1986 event. The analysis will begin with the basic economics of oil and cartels. From there, we will detail the history of the kingdom's decision to abandon OPEC's price targets in 1986 and the geopolitical fallout that emerged in the coming years. We will compare and contrast the 1986 situation to the present situation. As always, we will conclude with potential market ramifications.

### **Oil Markets and Cartel Behavior**

A cartel is a group of producers who band together to control supply and manipulate prices. In the U.S., this behavior violates anti-trust rules and is often referred to as "price fixing." Despite these legal restrictions, the oil markets have nearly always exhibited cartel-style behavior. The Standard Oil Trust, created by John D.

Rockefeller, controlled the oil markets from the 1870s into 1911, when the government broke the trust due to anti-competitive behaviors. In the early 1930s, during the East Texas oil boom, the Texas Railroad Commission (TRC) effectively acted as a cartel by allocating production among oil producers in the state. Although the activity of the TRC was on shaky legal grounds, the governor of Texas argued that aggressive "wildcatting" was leading to reservoir damage and thus it was in his power to preserve the oil fields in his state. Other oil-producing states created similar regulatory bodies. By the early 1970s, U.S. oil demand had risen to absorb all of America's oil output. At this point, OPEC became the dominant cartel.

The primary reason oil is susceptible to cartel behavior is due to the fact that production is often "lumpy." Major oil finds tend to flood the market, driving down prices and increasing volatility. At the same time, in the short run, the demand curve for oil is insensitive to price. This means that sudden increases in supply lead to a rapid decline in prices and little increase in the quantity of oil demanded. If producers are not restrained, they can react to the rapid price slide by boosting production to maintain revenue. This can lead to further overproduction, collapsing prices and damage resource recoverability in oil reservoirs.

The goal of the cartel is to fix a price that is (a) high enough to compensate for the opportunity costs of keeping some production offline and produce revenue in excess of the market clearing price, and yet

b) not too high so as to promote non-cartel production and encourage conservation. The cartel can purposely reduce production to lift the price; this not only creates a higher price but also a supply buffer. This unused capacity can be expanded or reduced in order to defend the target price. A properly functioning cartel will lead to a market with very low price volatility.

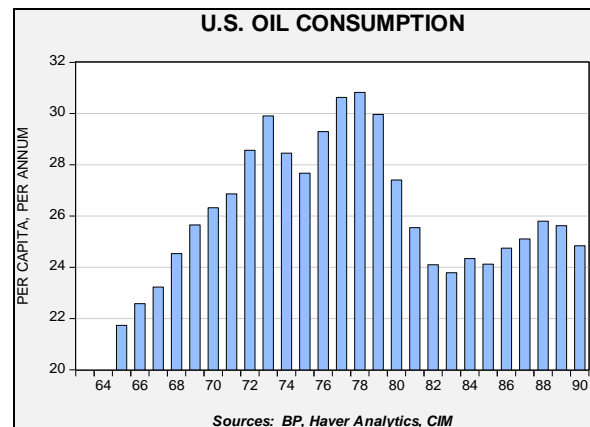
Getting a price “just right” is very hard. The first problem is that markets are not static. Demand will change due to external forces like income growth, seasonal patterns, expectations, etc. At the same time, productive capacity outside the cartel will tend to behave based on normal market incentives; if technology improves, for example, supply could increase without higher prices. Since production techniques tend to improve over time, the cartel may face persistent pressure to maintain the target price. Thus, what may be a proper price at one point in time may be too high or too low at a later date. Second, there is tension between the size of cartel membership and management. Obviously, the greater production capacity that the cartel controls, the easier it will be to manage prices. However, the more individual members there are within the cartel, the greater the incentive is to cheat. Although all cartel members benefit from supply reductions, a member that overproduces increases his revenue by selling at the cartel-controlled price at the expense of cartel members that comply with output discipline. Although it is rational for the individual member to cheat to maximize revenue, if all members cheat then the market will be over-supplied and all will be worse off.

**The 1985-86 Production Decision**

As Saudi Arabia became the largest producer within OPEC, it explicitly took on

the role of “swing producer” within the cartel. This meant that the Saudis would adjust their production to meet a set price. As world production rose or demand fell, the kingdom would reduce its output to maintain price levels.

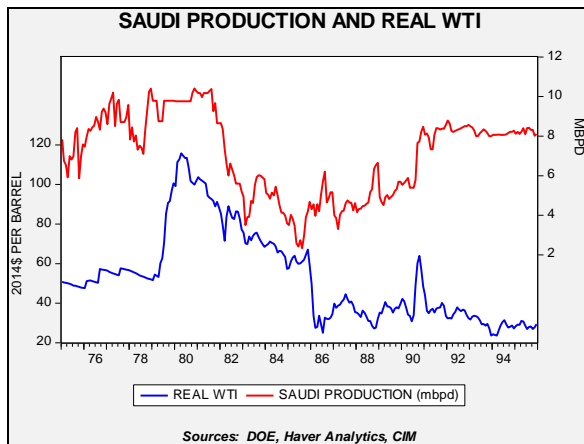
Saudi Arabia took on this role to enhance its status in the Middle East and in the world. When the kingdom began acting as swing producer, its decisions on production and its pronouncements were newsworthy events. However, two trends conspired against OPEC and Saudi Arabia. First, the U.S. suffered through the only “double dip” recession in postwar history as the short 1980 recession was soon followed by the much deeper 1981-82 downturn. At the same time, Europe was in recession for nearly 30 months starting in December 1979. Slowing global growth reduced consumption. The combination of weak economic activity in the developed world along with high prices led to increased conservation efforts.



This chart shows U.S. oil consumption on a per capita, per annum basis. As the chart shows, by the late 1970s, the average American was consuming nearly 31 barrels of oil per year. Even when consumption dipped in the mid-1970s, due primarily to the 1973-75 recession, demand made new highs during the recovery. Demand fell

precipitously during the 1980 and 1981-82 downturns. But, as the economy recovered, demand remained well below previous peaks. This change was not anticipated by oil producers. They expected the trend in demand witnessed from the mid-1960s into the late 1970s to be maintained. High prices and supply insecurity had led to dramatic improvements in conservation, putting pressure on prices. It should be noted that the Reagan administration removed price controls in the early 1980s, which had kept prices low but had also caused the infamous gasoline lines; gasoline lines were gone, replaced by higher market clearing prices, which accelerated conservation.

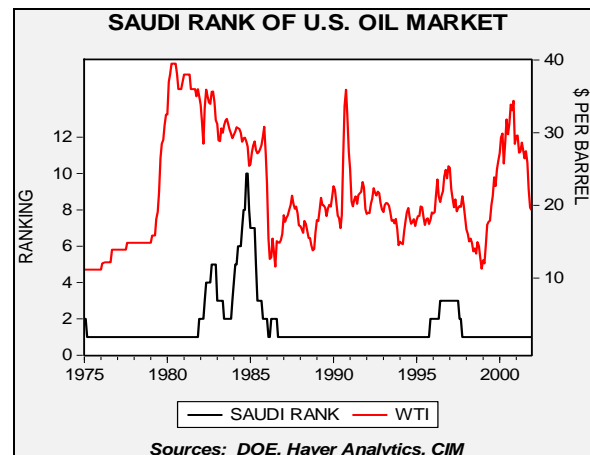
At the same time, high prices spurred oil production. The Saudis found themselves trying to defend a price level that was being undermined by rising production and falling consumption.



This chart shows inflation-adjusted West Texas Intermediate oil prices along with Saudi oil production. Note that oil prices started declining in the early 1980s. To try to maintain prices, the kingdom steadily reduced output. Despite these output cuts, prices continued to slide. In 1981, Saudi oil revenues were \$119 bn. By 1985, they had

declined to \$26 bn.<sup>1</sup> This sharp drop in revenues was a problem on its own; the kingdom’s social contract with its citizens is that the royal family gets to rule Saudi Arabia without democratic input. In return, it provides for its subjects’ economic needs. Falling revenues undermines the royal family’s ability to hold up its side of the bargain.

However, there are other issues as well. Giving up market share also reduced Saudi Arabia’s influence. As its production fell, the country was becoming less important to the world. The kingdom was typically the largest or second largest supplier of crude oil to the U.S. By late 1985, it had fallen to 10<sup>th</sup> place.



Since the U.S. was the largest consumer of oil in the world and provided defense to the kingdom, the Saudis believed they had to remain relevant to the U.S. Until China became a more important oil market, a reliable metric for Saudi behavior was its share of the U.S. import market. In general, any time the Saudi market share in the U.S. fell below second place, the kingdom would tend to increase production in a bid to contest market share. And so, as this chart

<sup>1</sup> Yergin, D. (1991). *The Prize: The Epic Quest for Oil, Money, and Power* (p. 747). New York: Simon & Schuster.

indicates, the Saudi decision to protect market share tended to bring much weaker prices.

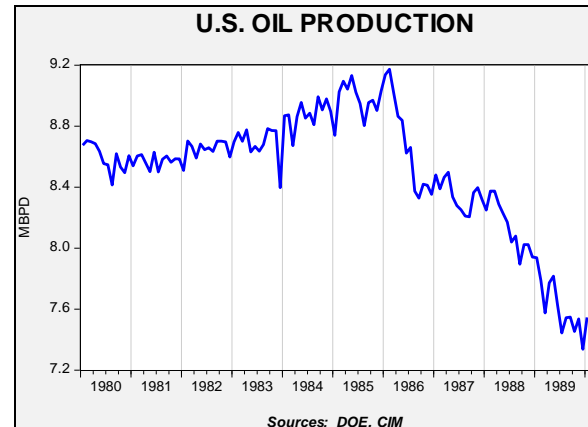
By mid-1985, Saudi Arabia was warning global oil producers that it would not give up market share indefinitely. Still, by summer, Saudi output had declined below North Sea production. In effect, Saudi production cuts were fostering higher cost North Sea output. In addition, other regional OPEC members were gaining market share on the Saudis as well. This situation was becoming unsustainable.

After receiving little support from other oil producers, the Saudis moved to defend their market share through netback pricing. In effect, the buyer of oil would pay Saudi Arabia based on the price of refined product. The refiner would receive a fixed spread regardless of the oil price. Essentially, there was no official oil price. The program started slowly at first, but by late autumn, oil prices had begun to slide. Other OPEC producers adopted netback pricing and the price decline accelerated.

At the time, most exporters expected prices to fall from the low \$30s to \$18-\$20 per barrel.<sup>2</sup> However, as is often the case, producers tend to expect other producers to cut output and prices tend to overshoot to the downside. The NYMEX nearby futures price was \$31.75 on November 20, 1985. At the OPEC meeting 10 days later the cartel agreed to increase production. Within a few months, oil was trading at \$10 per barrel.<sup>3</sup>

The price seemed to have overshoot to the downside but it didn't recover by magic. The reason prices weakened below the \$18 per barrel level was that it wasn't clear that

supplies would decline. However, two events occurred that supported price stabilization and recovery. First, U.S. oil production fell rapidly.



This chart shows U.S. crude oil production from 1980 to 1990. In February 1986, U.S. oil production was 9.2 mbpd; by September, it had declined by 0.9 mbpd to 8.3 mbpd, a nearly 10% decline. Because U.S. oil producers were not bound by long-term contracts, oil companies were able to rapidly cut production. In addition, oil futures were still a relatively young market and hedging was probably not as prevalent. Thus, U.S. oil producers were not protected from lower prices and this situation led to a rapid drop in output.

The second factor that helped stabilize prices, according to Yergin, was the diplomacy of Vice President George Bush.<sup>4</sup> Bush, who had made his fortune in the oil industry, was concerned that collapsing prices would permanently damage the American oil industry. Although his position was out of step with the free market ideology of the Reagan administration, Bush was able to convince the Saudis that the U.S. would consider oil tariffs to protect the

<sup>4</sup> Ibid, p. 753-58.

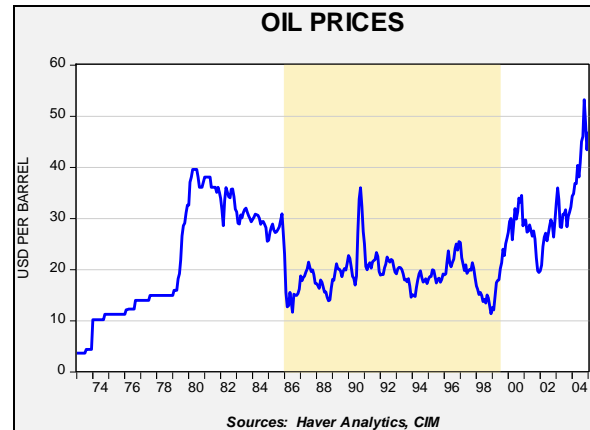
<sup>2</sup> Ibid, p. 749.

<sup>3</sup> Ibid, p. 750.

American oil sector.<sup>5</sup> Bush was able to raise enough concerns about Saudi policy that measures to support prices came under consideration.

By the autumn of 1986, oil producers and consumers came to the position that too low of price levels were potentially as bad as too high of prices. Prices that were too low created potential instability in the Middle East. They led to a retreat from conservation efforts in the industrialized world. OPEC nations began to worry that low prices would lead governments to raise energy taxes to capture the “economic rent” that exists between the market price and the low marginal cost producer (most likely an Arab OPEC nation).<sup>6</sup>

By the December 1986 OPEC meeting, new quotas were established and oil prices recovered. As the chart below shows, OPEC and the Saudis were able to create a relatively stable trading range from 1986 into mid-1999.



There were a couple of events during this time frame when prices diverged from the \$18 to \$20 preferred range. The 1990-91 Gulf War price spike, the Asian Debt Crisis and market share war with Venezuela led to the dip to \$10 per barrel in 1998. But, for the most part, the output program generally worked until the massive expansion of Chinese demand led to a rapid jump in prices after the turn of the century.

There were several geopolitical events that resulted from the Saudi decision to force oil prices lower, which were as follows.

#### **The Collapse of the Soviet Union:**

Although the inherent problems of communism, the draining losses of the Soviet-Afghan War and the inability of the Soviets to keep pace with the Reagan defense buildup were contributing factors to the downfall of the Soviet Union, the collapse in oil prices cut the Soviet Union's oil revenues by \$20 bn per year from the pre-1985 price levels. Gorbachev was unable to cut spending enough to offset this revenue loss, leading to increased indebtedness. By 1990, the Soviet Union had begun to dissolve.

**The Soviet-Afghan War:** The Soviet invasion of Afghanistan raised great fear that this move was the first step in Russia trying to expand its influence in the oil-rich

<sup>5</sup> Although such a policy wasn't likely, the Saudis remembered the Eisenhower oil quotas of 1959, which were implemented, in part, to preserve U.S. production for defense security purposes. These quotas remained in place until President Nixon lifted them in 1973.

Nerurkar, N. (2011). *U.S. Oil Imports: Context and Considerations*. Congressional Research Service.

<sup>6</sup> This was a legitimate worry. In 1992, the EU earned \$200 bn in oil taxes, almost tripling the \$74 bn that oil-exporting nations earned from oil sales. Stanislaw, J., & Yergin, D. (1993, September/October). Oil: Reopening the Door. *Foreign Affairs*, Vol. 72, No. 4.

Middle East. However, the war turned into a disaster for the U.S.S.R. The U.S., Pakistan and Saudi Arabia funded and armed a jihadist insurgency that eventually led General Secretary Gorbachev to withdraw troops from Afghanistan. Although this was a great victory at the time, it did create a blowback problem that emerged later in the 1990s.

**The Gulf War:** Saddam Hussein needed to boost revenues to recover from the heavy costs of the Iran-Iraq War. He was pressuring the Persian Gulf oil monarchies to cut output to boost prices. They refused, so Iraq invaded Kuwait in August 1990. Iraq’s military quickly overran the small nation. In response, President Bush quickly moved to protect Saudi Arabia by inserting American troops in the kingdom.<sup>7</sup> After insuring that Iraq would not move south into Saudi Arabia, President Bush and Secretary of State Baker painstakingly built a large international coalition to oust Iraqi troops from Kuwait.

**The Rise of al Qaeda:** King Fahd’s decision to ask U.S. troops to defend the kingdom was quite controversial. Osama bin Laden proposed that his insurgents could protect the kingdom; King Fahd disagreed. Anger at “infidels” being allowed into the country that houses Mecca led to the creation of al Qaeda, which executed several attacks against U.S. interests, including the horrific airplane attacks on the World Trade Center and the Pentagon in 2001.

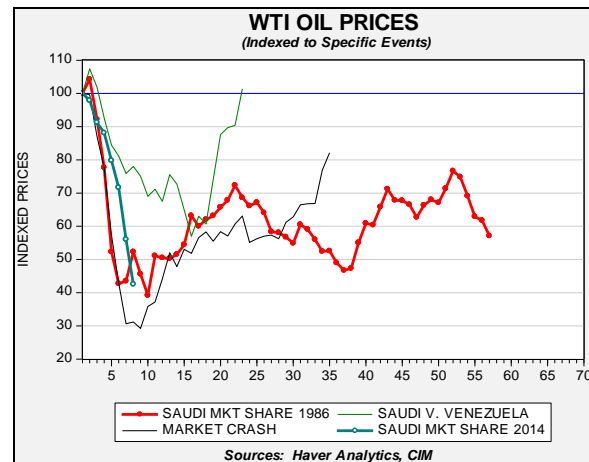
In a sense, the 1986 drop in oil prices had significant ramifications, some of which favored the U.S. while others did not. Large

<sup>7</sup> This was done at the invitation of King Fahd after approval by the Ulema. Obaid, N. (1999 September). The Power of Saudi Arabia’s Islamic Leaders. *Middle East Forum*, Vol. 6, No. 3.

price swings in oil, perhaps the most critical commodity, are important events.

**History’s Lessons for the Present**

There are two key similarities between the current situation and 1986. First, as we noted in the economics of cartels, the key to success is establishing the “right” price, one that is high enough to cover the cost of idling capacity but low enough to prevent supply competition and demand destruction. It appears the Saudis have decided that the prices seen last summer were too high and thus they are working to establish a lower price range.



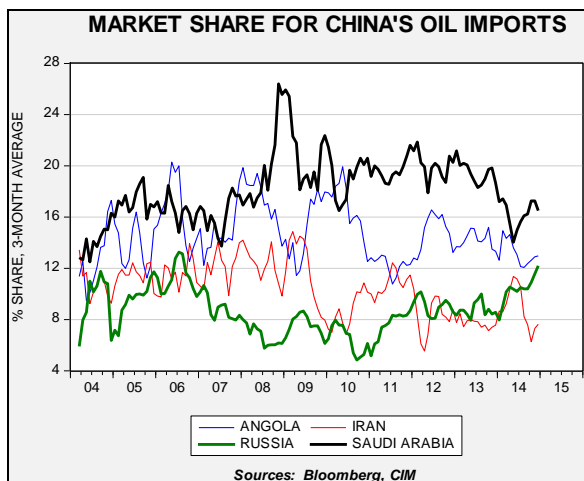
This chart indexes WTI oil prices to four specific market declines, three of which were caused by market share disputes and one due to the Great Financial Crisis. The current market share decline is acting very similar to the 1986 event; if we continue to follow that pattern, prices should be in the process of consolidating, with a recovery developing by autumn.

However, as the history of the 1986 event shows, the end of the price decline didn’t happen just due to market factors. The Saudis essentially signaled the end of the war by cutting output and re-establishing quotas. The same pattern ended the Saudi versus Venezuela oil war in the late 1990s.

Thus, to ensure that a bottom is in sight, Saudi Arabia will probably need to signal that prices are too low and need to stabilize and move higher. At the same time, it should be noted that U.S. production isn't expected to fall as rapidly as it did in the mid-1980s due to more extensive use of oil derivatives to protect from falling prices. Although low prices will eventually lead to lower output, we doubt that it will happen as quickly this time, which is a key difference from the 1986 period.

The second key similarity is the market share situation in the oil consumption market. In 1985, as noted above, the Saudi share of the U.S. oil import market had declined to 10<sup>th</sup> place. The decision to increase production also caused its market share to rise in the U.S. market.

The advent of shale output in the U.S. and the rapid rise of China has changed the focus of oil producers. Although the U.S. is still the world's largest oil importer, it is probably just a matter of time before China claims that "prize." And so, it makes sense for major oil exporters to focus on the rapidly growing Chinese market.



This chart shows the market share for China's oil imports. Saudi Arabia has been the largest supplier since 2008 but has faced

competition from Angola and Iran. However, as financial sanctions have been applied to Russia due to its invasion of Ukraine, President Putin has turned to China for access to finance and foreign demand. We are seeing a sharp increase in Russian oil exports to China as a result. Although Saudi statements have led some analysts to speculate that the U.S. oil shale industry is the target of the Saudi market share conflict, it is much more likely that the target is Russia. The kingdom is in direct competition with Russia over market share in China and thus, driving down the price to Chinese buyers is a tactic to overcome Putin's plan to use China to circumvent U.S. and EU sanctions. In the end, the more likely outcome is that Iran and Angola will lose share to Saudi Arabia and Russia. At the same time, until the Saudis are comfortable that Russia won't supplant them as the primary supplier to China, supplies will likely remain elevated.

Finally, as we discussed above, the 1986 price collapse had geopolitical reverberations over the following five years. Another round of similar events is possible in the next five years. The sharp decline in oil revenues combined with the redrawing of colonial borders in the Maghreb and the Levant could encourage attacks against the oil emirates in the Middle East. Russia may try to distract its population from its economic woes by military adventures in its near abroad. As the Gulf War showed, even in a relatively balanced oil market, such events can trigger major price advances. Finally, we doubt Iran will tolerate the Saudis undermining its economy through a low price policy without a response. The fact that the kingdom is in the midst of a leadership change may encourage Iran to move sooner rather than later, especially if negotiations over its nuclear program fail.

Overall, we expect that oil prices will probably stabilize near current levels in the coming months and gradually move into a \$55-\$65 trading range. However, this relative stability will mask deep underlying tensions that will occasionally lead to rapid price increases.

### **Ramifications**

We believe that Saudi Arabia's current oil policy has a close analog with the 1986 market share conflict. Using the 1986 event as a model for the current situation does offer some important insights into the future of oil prices and geopolitics. In particular, we should expect that oil prices will likely stabilize in the coming months and trade in a lower price range. We would expect the drop in oil prices to trigger geopolitical

events, such as interstate conflicts, civil unrest, terrorist events and other calamities that will likely trigger sharp but short-lived price increases. However, it will take a number of years of low prices to boost the trend in consumption and this outcome could be thwarted if oil consuming nations use the drop in prices as an opportunity to raise energy taxes as Europe generally did after the 1986 event. But, the bottom line is that we probably won't see a return to \$100+ oil on a sustained basis for at least five years, if not longer.

Bill O'Grady  
February 2, 2015

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