JOINT ECONOMIC COMMITTEE

CONGRESSMAN JIM SAXTON
RANKING REPUBLICAN MEMBER

RESEARCH REPORT #110-2
February 2007

OPEC STRATEGY AND OIL PRICE VOLATILITY

Testing the limits. The OPEC cartel has pursued a high price strategy in an oil market under pressure from rising demand. While it may have encountered short-run capacity constraints, OPEC did not commit to increase oil output and bring the price to a lower, more manageable level. Instead, it has actually *cut* oil output intermittently. Since last November, it decided to reduce its rate of production by 1.7 million barrels per day (b/d) in an apparent effort to keep the price of crude oil from falling below roughly $50 per barrel, and it still has given no guidance as to what it regards as an upper bound. This conduct tests the limits of what the market will bear; it does not aim to keep the price stable. Hence, price volatility does not imply weakness by the cartel. In the four years since the price began to exceed OPEC's previous target price band of $22 to $28 per barrel, its oil revenue more than tripled from $183 billion in 2002 to $580 billion in 2006 while the cartel increased oil output by a mere 17 percent.[1] High prices are prone to be volatile and difficult to control, and $50 to $60 is extremely expensive for a barrel of crude oil.

Control vs. leadership. In a strict sense, price control means setting an effective transactions price and preventing market forces from changing it. But in practice, even firms that have monopolized existing sources of supply cannot control the price, because (a) they do not control demand, and (b) the prospect of market entry by rivals is rarely foreclosed completely. High prices will lead buyers to reduce consumption and seek alternative inputs. High prices will also induce competitors to enter the market. A dominant supplier thus has a choice: it can "harvest" profits in the short run by escalating price at the expense of losing its dominance in the future, or it can charge a moderate price that perpetuates its market position and generates supra-competitive profits over time. When engaged in the latter strategy, the dominant supplier will try to lead the market by signaling what price it strives to maintain. Until the end of 2003, OPEC pursued this strategy with an explicit price band of $22 to $28 per barrel.

Change in strategy. Starting in 2004, oil demand increased sharply from developing countries, especially China, and advanced economies proved more resilient to rising oil prices than previously believed. Increasing and more inelastic demand for its product reduces the price-versus-market share trade-off for OPEC. In addition, the cost of competing sources of oil has increased. For example, non-conventional Canadian oil sands—a growing market entrant—are subject to much higher production costs than Alaskan or Mexican oil was when first developed in the early 1970's. Thus as changing market conditions strengthened its position, OPEC abandoned its announced price target range and put off setting a new one. Clearly, the cartel believes that a higher price has become sustainable but is not sure how much higher. OPEC offers mostly platitudes when price surges but intervenes decisively when short-term forces push it back.

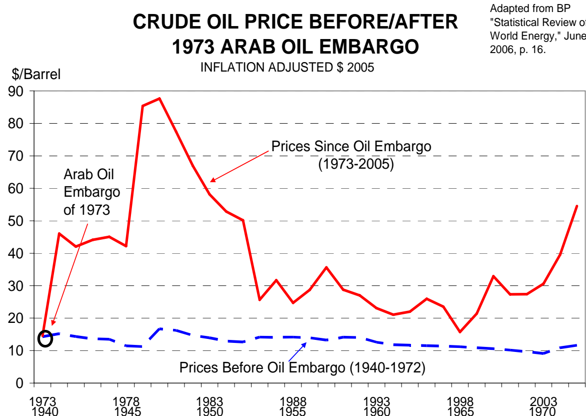
Power to restrict output. The cartel's true strength lies in holding back a flood of cheap oil. OPEC has extremely low production costs and holds most of the world's oil reserves. The large Persian Gulf producers have costs of less than $5 per barrel, and OPEC member costs outside the Persian Gulf average less than $9 per barrel. OPEC's share of conventional oil reserves is 80 percent and 70 percent if

[1] Source: Energy Information Administration (2007).

Canadian oil sands are included.[2] Since 1977, the oil supply in the rest of the world has increased from 32.2 to 50.7 million b/d. OPEC's oil output today is barely more than in 1977, even though it could easily drill more wells. In all of the Middle East, there are 11,948 producing oil wells, which is fewer than the number found in Brazil, 11,995.[3] OPEC's share of the oil market was 52 percent in 1973, reached a low of 29 percent in 1985, and since 1994 has been about 40 percent.

Data from "Worldwide Look at Reserves and Production," *Oil & Gas Journal (OGJ)*, 12/18/2006.

By keeping most of its resource off the market since the Arab oil embargo of 1973, the cartel catapulted the price of oil far above the pre-embargo level. In 33 years, the inflation-adjusted price approached the pre-embargo range only once, in 1998; the rest of the time, the price has been vastly higher.



[2] Oil sands have long-term production costs of about $25 per barrel and still hold a small market share. But since 2003, the *OGJ* includes them in reserve data. The oil price had been moving beyond OPEC's price band.

[3] As further illustration, OPEC member Kuwait, despite oil reserves more than 12 times those of non-member Norway (99 vs. 7.8 billion barrels), has fewer producing oil wells (790 vs. 801) and produces less crude oil (2.2 vs. 2.5 million b/d); see *OGJ*, 12/18/06.

Volatility. Price swings have to be viewed in the context of the staggering operating margins the cartel has achieved. The *variability* of the margin is an outgrowth of the cartel's price aggressiveness and its overreaching. The artificial scarcity created by the cartel shifts the market's focus away from cost and to the cartel's expected output behavior. Controlling price therefore requires managing expectations. When the cartel fails to send clear and reliable signals, speculation and hedging strategies arise. Oil buyers build precautionary inventories supplemented by governments (e.g., the Strategic Petroleum Reserve), the use of financial hedging instruments increases, and alternative suppliers base investment decisions in part on guesses about OPEC's intentions. The lack of consistent price leadership itself thus makes the market's functioning more complex, less predictable, and more difficult to control.

Conclusion. Much is made of disunity and cheating within the cartel, which no doubt exist, but a debate over strategy is to be expected. The fact that the outcome is more price aggressive than buyers and investors seeking stability would like is not necessarily a sign of weakness. Over decades, OPEC has succeeded in retarding its oil infrastructure investments and holding back huge stores of cheap oil. It has achieved enormous profit margins as a result. The higher the margin, the harder it is to control the price. OPEC could be a price leader, announce a moderate long-term price target, and consistently expand its oil output to stabilize the market. It has set that strategy aside. Instead, the cartel has opted to pursue prices and profits that exceed those it could safely maintain in a narrow range. The cartel may overplay its hand. Demand and competing sources of supply may be more responsive to high and volatile prices than OPEC expects, causing price to settle much lower eventually, but that would be the result of its chosen strategy and price aggressiveness, not a lack of market power.