

MAKING SENSE OF OIL PRICES

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*There's something happening here
What it is ain't exactly clear
-- Buffalo Springfield*

I was at a raucous Indian wedding party, recently, when a friend in the medical industry, pulled me aside and asked, “Since you are from the oil industry, can you explain what’s going on with oil prices?”

It was obvious from the setting that he was not looking for a long-winded dissertation but a quick synopsis that he could carry around in his mental hip pocket, and whip out whenever he participated in heated discussions about rising oil prices.

So, here is what I told him.

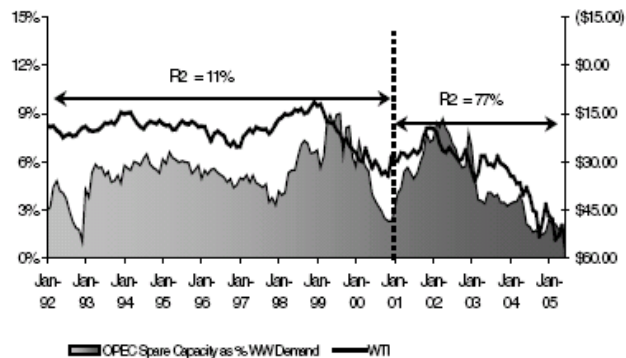
“The current frenzied run up in oil prices has been caused by the sudden recognition of two factors: one is that demand and supply are very tightly balanced, and, two, more important, there is a lurking specter that global production of hydrocarbons may have peaked.”

“If global oil production had truly maxed out, demand would exceed supply and we are in for huge oil price increases, to triple digits. This would create a deep global recession, from which we would emerge in the year 2020 or so, when some alternatives to hydrocarbons would begin to appear. Until then, we should be prepared to live a different lifestyle.”

With that somber prediction, I went back to some energetic *Bhangra* and *Dandiya* dancing, with a renewed *carpe diem* attitude and a commitment to provide some background information for my conclusions.

Since about January 2002, oil prices have become correlated with decreasing spare capacity, the difference between supply and demand. (See Figure 1 below. Source: Citigroup Investment Research, a division of Citigroup Global Markets Inc.).

Spare Capacity Has Greater Influence On Oil Prices



Source: IEA, Citigroup Investment Research; OPEC spare capacity as % Demand versus WTI Oil Price

Figure 1

Today that spare capacity is miniscule, and the slightest perturbation in supply creates wild fluctuations in prices. Instability in Iran, Venezuela, Nigeria, and other global petroleum hot spots adds to the anxiety.

The oil industry has seen these situations in the past, when supply and demand came dangerously close to each other, creating oil price spikes. However, lagging supply has always caught up and created a buffer that comfortably exceeded demand, stabilizing global oil prices for a brief period of time, before supply came dangerously close to demand.

However, this time around, we have a doomsday ingredient that creates that edge-of-the-seat, chilling specter of permanent high oil prices. *The Big Rollover* is that component that adds a very high degree of uncertainty to future oil supplies.

Les Magoon of the U.S. Geological Survey provided the most visibility to *The Big Rollover* (<http://geopubs.wr.usgs.gov/open-file/of00-320/of00-320.pdf>) by explaining through a series of figures (shown below) and answers to questions.

An Example:

Q! What's THE BIG ROLLOVER?

A! It's when the demand for oil outstrips the capacity to produce it.

He states that the US went through its rollover in 1973 (Figure 1, A) and Russia recently (Figure 1, B). A global rollover (hence The Big Rollover) was imminent and may have already occurred (Figure 1, K).

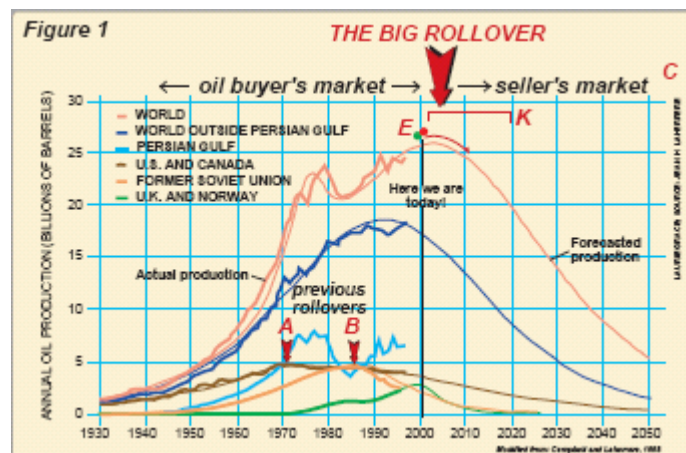


Figure 2

According to Magoon, when *the big rollover* does occur, oil markets will go from being a buyer's market to a seller's market. Some economists add that in this scenario energy, fuel (including gasoline) prices will skyrocket, and the world will sink into a recession, bringing demand and supply in equilibrium, but only after altering our lives, as we know it.

Leading that pessimistic charge is Matthew Simmons, a Houston-based investment banker, who first went to the rooftops and proclaimed that OPEC's swing producer (who assured that supply would always stay ahead of demand) Saudi Arabia's production had peaked. He followed through with a book, "Twilight in the Desert: The Coming Saudi Oil Shock and the World Economy."

The opposing faction is drawing its lessons from economics (sometimes called a *dismal science*!) and economists who believe that, over time, real oil prices will stay in line with consumers' wages – in layman's terms, they will be able to afford higher oil prices! They also believe that markets will find cheaper substitutes for hydrocarbons, citing examples from other commodity industries such as metals.

This group also has an ally in those who believe that new technologies have always helped the oil industry become more effective in their production, and the supply/demand imbalance will right itself in five years or so.

There are several reasons why these optimistic transitions will take a tad longer, at least two decades.

First reason, during boom times, the oil industry has been a reluctant adopter of new technologies to find new reserves and improve production from existing ones. In fact, it is only during industry recessions that they turn to new technologies for answers. For now, there are no incentives to change. The prevailing attitude is summarized by *laissez le bon temps rouler* – let the good times roll!

Additionally, if *the big rollover* has not occurred and has been postponed by a decade, given current global economic growth rates, spare capacity is not likely to increase rapidly. In other words, the balance between supply and demand will still be tight for a few more years, extending today's speculative premiums to higher levels, into triple digits, before coming back to familiar, comfortable levels. This period of false security will last until the next fear of supply shortfalls set in, a few years later.

If *the big rollover* has already occurred, we should be prepared for a global recession, which may be exasperated and exacerbated by irrational and dangerous behavior by a few net oil exporters, who will be tempted to take advantage of their new positions of economic strength.

Unlike the oil shock of the 1970's, which was induced by OPEC countries reducing supply, it will take the global economy longer to recover from this market induced oil shock. In the 1980's, OPEC countries had spare capacity and could open their spigots to avoid losing market share, and create a buyer's market. Today, there is no spare capacity in the market. Reports of swiftly adding production from marginal and poorer reserves are greatly exaggerated.

In both scenarios, oil prices will be high in the near future, if not longer because substitutes for oil and gas will take a long time to replace them.

The hydrocarbon industry's success is largely due to its sophisticated distribution infrastructures, built over the last one hundred and twenty five years, and has delivered products to its consumers in most convenient ways. Ubiquitous use of its alternatives will take, optimistically, at least a few decades, until 2020 at the earliest.

Until then we should be prepared to live in an era of high oil prices, with brief respites, if we are lucky.

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