

## The Global Oil Market: Have We Reached a New Plateau or Just Another Cycle?

By Fereidun Fesharaki\*

### Plateau Change vs. Cyclical Movement

We have seen many cyclical movements in the global oil market in the past 3 decades. But in the recent past, the volatility has increased significantly. Are we in the midst of another cyclical change or have we entered a new plateau?

It is our view that we have now entered a new plateau with very different market dynamics. Still, cycles will be seen and volatility will continue, but now from a *higher price base*. The plateau change is of great significance, much in the same way that the previous plateau change in the early 1970s showed a shift in the control of oil from oil companies to oil producing governments and OPEC.

We have essentially graduated from a \$15-25/b (Dubai/AL) oil market to a \$25-35/b in the short to mid term. Beyond 2010, we may well be in a long-term \$40-50/b market. The rate of economic growth, inventory situation, futures market, and OPEC policies can lead to more volatility than in the recent past. *But this time, the fundamentals have changed.*

A multitude of factors are responsible for such a fundamental change. It is not just China or just the U.S. or just economic growth. It is a change in the fundamentals.

### Supply and Demand Issues

Demand growth has been unusually strong, but it is a mistake to assume continued demand growth at current rates. The growth will surely slow down. Still, even the low growth is outstripping the supply in the medium term.

Capacity additions inside of OPEC have good prospects, but circumstances due to politics, legal issues, and lack of sufficient investment prospects will slow down the process. While currently only minor surplus capacity exists in Saudi Arabia, other countries such as Iran, Kuwait, Abu Dhabi, Nigeria, Venezuela, and Libya, as well as Saudi Arabia are planning new capacity. A smooth expansion process might only be seen in Saudi Arabia and Libya. Others will struggle with politics, legal issues, as well as a variety of other social factors and will surely face delays.

How about non-OPEC oil? While we do not subscribe to the theory of a global peak and a collapse in non-OPEC production by 2010, *there is a fundamental change in oil supply prospects*. Incremental non-OPEC oil supply which has been in excess of one million b/d in the past decade is drying up. Non-OPEC incremental growth by 2010 may be between zero to 300 kb/d only. While supplies in Russia and Central Asia will rise, declines in other areas will offset the growth. Thus, OPEC may recover its lost market share with little effort if it can muster enough production capacity.

This means that all new demand growth needs to come

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from OPEC and OPEC is neither ready nor prepared for the volumes needed.

Those who argue we are running out of oil (including some of our friends) have now mixed up politics and anti-Arab sentiments with reality. Attacking Saudi Arabia and arguing that the Saudis are unreliable suppliers and do not have adequate reserves does not serve any purpose and is counter-productive.

Meanwhile, the other camp (again, including some of our friends) is arguing that the world oil supplies will grow indefinitely, ignoring the geological realities. *A realistic analysis is lost in this argument.*

Are the Middle East oil reserves a big lie? Is there going to be a collapse in production? Proven Middle East reserves are not certified and we doubt that all the reserves are actually proven *as of now*. But, there will be no collapse in production for sure and it is more than likely that with application of new technologies and enhanced recovery, these reserves can be proven or even rise *in the fullness of time!*

### An Impossible Future?

When the IEA or EIA do their forecasts showing very large OPEC production, their analysis are seen by the uninitiated as the evidence that such a production will be forthcoming from OPEC. It is not! All that the forecasts show is that OPEC production must reach a certain level *to balance the market*.

Indeed, the forecasts that show 22-24 million b/d of Saudi production by 2025 do not mean that Saudi production will reach these levels. The forecasts are simply indicative of the consequences of business as usual and show us an **impossible future**. There is virtually no chance of Saudi Arabia producing oil at these levels on a sustained basis for technical reasons. Oil demand must simply be reduced by higher prices or technological breakthroughs. As such, these forecasts do us a great service so we can understand the consequences of the present path, but it behooves us to understand what these numbers really mean.

There will be no oil shortage or collapse in the world economy! Higher prices will reduce demand and encourage alternatives as economic theory tells us: All we have to do is to be aware, to help the transition, not put up roadblocks, and not encourage unrealistic government policies.

On the supply side, we will be exhausting the supply growth potential, if demand remains strong. Higher prices are inevitable unless demand is drastically curtailed by recession, taxation or through regulatory mechanisms.

### Can High Oil Prices Reduce Demand?

What level does the price of oil need to reach to stop the demand growth or reduce the demand? Is the price already too high?

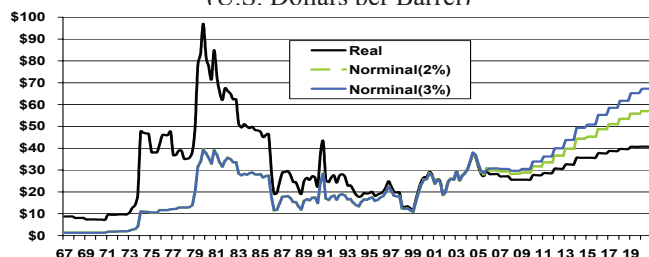
Figure 1 shows the real and nominal price of oil and our base case forecasts for Arab Light. The price of oil today is not much higher than it was in 1973, in real terms. Even our forecast of real prices by 2020 is at \$40/b and nominal price at \$55-65/b are still lower than the 1979/80 peak. Unless

the world is facing a serious economic recession, we doubt that these prices will create a collapse in oil demand. If the demand does remain strong, the price needs to reach much higher levels (\$70+/b nominal) and then demand will decline and new technologies will bring in new alternative sources.

### Short-Term Price Direction

In the short term, the price will decline as demand slows down and supply inventories build up. Indeed currently, supply exceeds demand by some 1.5 million b/d. Though, the hedge funds net buying position has not changed much in the past six months, their involvement has had an impact of several dollars a barrel on oil prices. Once they unload (and they will unload), the price will come down to WTI of \$30-35/b. Indeed, they may even go lower temporarily, but there is a fundamental floor below prices now. We expect the range of \$25-35/b to hold for the next few years. We may even be too conservative!

**Figure 1**  
Price of Arab Light Crude in Nominal and Real 2003 Prices (U.S. Dollars per Barrel)



### Are Natural Gas Prices in a New Plateau Too?

The natural gas prices have entered a new plateau too, led by the U.S. market. After decades of gas being sold in the United States at \$2/MMBtu range, the price has risen to some \$6/MMBtu. This is more dramatic than the oil market shift. While U.S. natural gas prices may also ease, it is highly doubtful that they will go below \$4/MMBtu and very likely will be higher.

Gas prices of \$6/MMBtu corresponds to WTI prices of well over \$40/b. The change in plateau is comprehensive and supported by fundamentals of both oil and gas markets.

As the U.S. leads the global gas market, becoming the second largest LNG importer in the span of less than a decade (and perhaps the largest by 2015-2020), the global gas price will shift upward in line with the global oil market and will be dominated by the U.S. futures prices for gas.

### Is the Refining Business Also Entering a New Plateau?

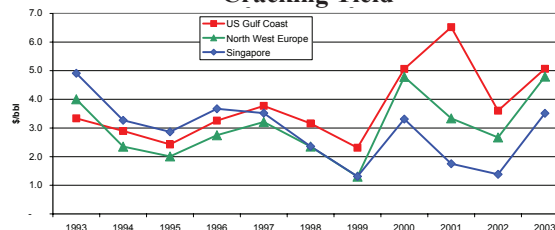
The refining business is also entering a new plateau. For many years, independent refining outside of the integrated oil companies seemed like a no-win proposition. Crude oil prices moved sharply with OPEC policies and political crises, but product prices lagged. Except for war periods where military needs for product supplies raised product prices, the refining margins sagged.

The Asian margins were always the strongest, followed

by European, and then the U.S. (Figure 2). Strong competition among U.S. refiners, rising environmental costs, threat of product imports, and slow oil demand growth capped the margins in the United States.

The Asian margins dropped in 1997 when the Asian refining surplus emerged. In 1996, two major Thai refineries (led by Shell and Caltex) came onstream at the heels of a major expansion by Exxon. Meanwhile, the Asian economic crisis of 1997/98 seriously reduced oil demand and resulted in major overcapacity.

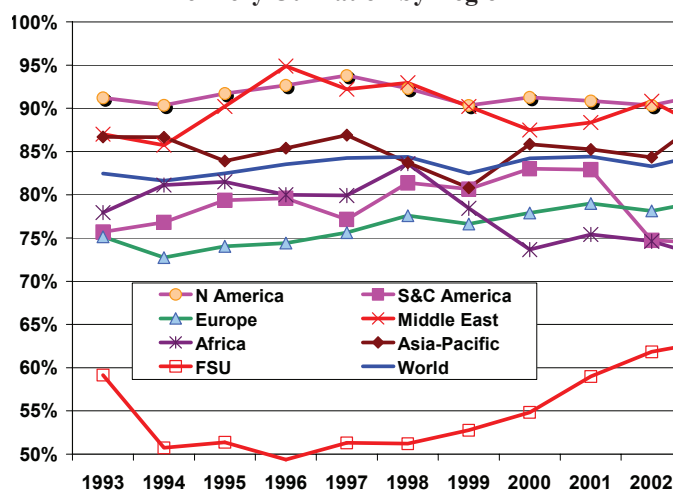
**Figure 2**  
Gross Refining Margins Based on Arab Light Crude Cracking Yield



In the U.S., rising demand, increased environmental standards, and inability to add any new capacity soaked up all excess refining capacity, closed down a few smaller less efficient ones, and began to reverse the trend, making the U.S. margins higher than Europe or Asia.

The rising demand everywhere has soaked up capacity as shown in Figure 3. Excluding former Soviet Union, the global refinery utilization is over 90%, the highest in recorded history—led by the United States.

**Figure 3**  
Refinery Utilization by Region

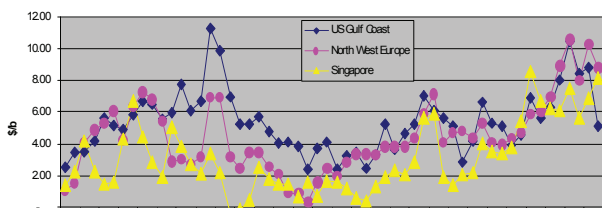


For the United States, Mexico and Venezuela are ideally placed to become the major beneficiaries, if they added new refining capacity. Both countries, beset by political problems, legal restrictions, and anti-American sentiments have not taken advantage of this great opportunity. The Middle East, with its large refining capacity, has fallen so behind in quality that it cannot supply the U.S. and Europe, and just barely Asia. Asian specs do not meet the U.S. standards with a few exceptions and few refiners are willing to raid their pool just to export to the United States.

The result has been higher margins for everyone (Figure 4). Indeed in the recent past, the Asian margins have once again overtaken the United States and Europe, though this will likely be temporary.

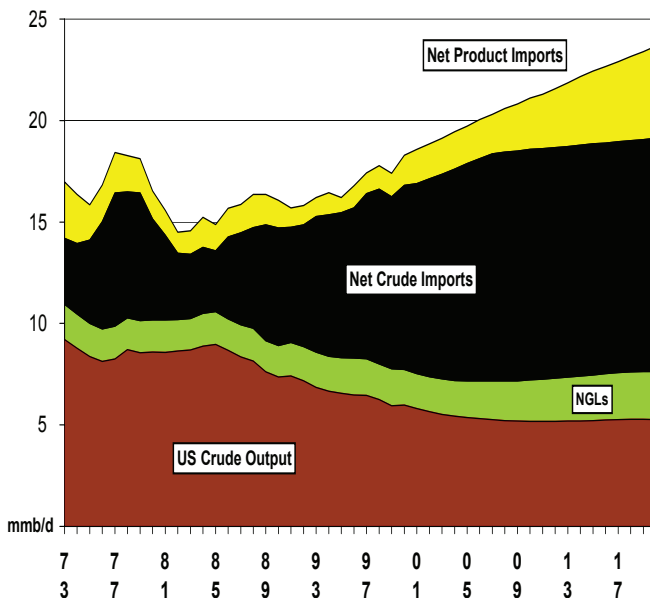
The U.S. will remain the region with the best long-term margins (Figure 5), simply because it cannot add new capacity. In Asia, new capacities from China and India are on the horizon. For the U.S., demand is the key. As long as demand does not decline, even a moderate growth will keep margins in place. The margins will face cycles for certain. Ups and downs will continue, but the base line has now shifted upwards.

**Figure 4**  
**Monthly Gross Refining Margins for U.S., Europe and Asia Based on Cracking Yield of Arab Light Crude**



For the time being, the only alternative supply for the U.S. is Europe, but the system is stretched there too. As Europe moves towards dieselization and as GTL projects from Qatar come onstream, Europe can release more products for export to the United States.

**Figure 5**  
**EIA: U.S. Oil Supply to 2020**



By 2012-2015, the three major regions—U.S., Asia, and Europe—will have very similar product quality standards. Something close to a *global product market is on the horizon* in the not too distant a future. Is this bad or good for the margins? The U.S. advantage for certain will disappear as products will move more easily across the globe. Still, California politicians and CARB will more than likely come up with *something* to ensure limited competition from the

outside world!

**What Does All This Mean?**

Upstream business is likely to be the key beneficiary. Oil companies will make more money whether they like it or not!!

The downstream business will also do well in the U.S., but margins in Asia and Europe are unlikely to do as well as the U.S.

OPEC countries have become fundamentally richer with no new effort as their resources gain in value. Economic reform will surely slow down and subsidies will be maintained or even increased with the new riches. Military expenditures are also sure to rise in the key oil exporting countries.

Today, there is an unusual confluence of positive factors coming together in the oil and gas markets: Everyone is making money in every part of the business—be it E&P, refining, shipping, trading, storage, etc. *This is unprecedented in history.*

If you are clever you can make a lot of money. If you are not, you can still make a lot of money!

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