INFORMATION AND OIL MARKETS

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Executive Summary

* The availability of accurate, credible and up-to-date oil and gas data is necessary to provide market stability and to allow for more openness and competition. Comprehensive information assists in proper planning at times of normalcy or crisis. However, transparency will not prevent volatility, since this could be the result of political upheavals, wars, speculation or high economic growth and recession.

* The strategic nature of the industry and its global operations, the geological risks and the profits that can be made, the competitiveness among companies and the sovereignty of the states involved have all contributed to a history of disseminating the least information possible, and only that which is necessary.

* It was possible for a long period of time to sustain a relatively limited system of information because markets were closed, supply and demand were generally balanced, prices were within range and there was hardly any dialogue underway between producers and consumers.

* However, global energy markets are in a state of transformation, not witnessed before. Profound changes in the world economy, major geopolitical developments, international trade patterns, rapid technological advancements and popular environmental concerns all influence the supply and demand of energy. There are accordingly constant fluctuations in the oil price, supply availability, new demand patterns, pipeline politics, the deregulation of power markets and tighter pollution controls.

* There is now recognition on the part of both consumers and producers that dialogue and not confrontation can serve the mutual interests of all concerned, and that transparency, data integrity and standardization of terminology are not only necessary, but imperative, to ensure smooth markets and stable
prices. This new recognition has been reinforced with laws and regulations demanding various degrees of transparency, the active role of the media in energy coverage and public concern about oil and gas prices, the health of the economy and the environment.

* It is important that this move towards a wider dissemination of oil information be supported by the governments of producer and consumer countries and the global industry through individual, collective, regional and multinational steps. A well-informed media with credible information and up-to-date data can provide better coverage and analysis to the interest of both producers and consumers alike, and serve the public, the ultimate user of energy.

* The establishment of The Joint Oil Data Initiative (JODI) in 2001 to collect key oil information from over 90 countries, through six international organizations, would not have been possible without the recognition for the need of a better system of oil data information. The intricate process to ensure the proper launching of JODI, and the systematic collection and verification of the data through the International Energy Forum Secretariat (IEFS), the coordinating organization, would not have been possible without the new state of mind that prevails today.

The Early Scene
Three decades ago, producers and consumers met in Paris to discuss the rise in oil prices. It was the first time such a dialogue took place. Positions were polarized and the many sessions and meetings ended with no concrete results or even an agenda to follow up future-developments.

Consumers focused on finding alternative sources of energy, rationalize consumption and guarantee security of supplies. The producers were occupied with the flow of “petrodollars”, and OPEC member states indulged in an exercise over market share, quota allocations and price escalation. Meanwhile, markets developed new instruments to buy and sell oil by introducing and expanding spot sales and future contracts.

Several issues received wide coverage with huge impact on market developments and public attention.

First, the media had a field day exposing the “weakness” of OPEC and wrote its obituary scores of times. What exacerbated matters were the wars and conflicts among some member states, the public bickering over quota discipline, and the lack of a dialogue among consumers and producers throughout the eighties.

At the center of the debate was the lack of transparency in production figures. OPEC member states adopted quota targets that they knew beforehand they could not meet, either because they had excess capacity that they wanted to put in the market or they had problems that did not enable them to reach the assigned target.

Second, the media and analysts published consumption figures that were not and could not have been based on factual data simply because it was difficult, if not impossible, to collect and ascertain such information. Basically, demand figures of most countries are not known until may months after they are reported by the media. There is even less current figures about
stocks outside the US. This led to the (missing barrels), which was another way of saying there was something basically wrong with the data.

Third, there was the problem of reporting a single (oil price) to the public. There are dozens of crudes trading at different prices, depending on their gravity, sulphur content and geographic location. When the media reports about oil prices, they usually mean two reference crudes: Brent and WTI. OPEC later developed its own Basket Price. Even with these limited references, the public remained confused as to the price of the day, since differentials between them, especially during irregular periods, went as high as 3 to 5 dollars per barrel.

Fourth, the media focused its attention on reports about the exhaustibility of oil resources and showed much skepticism about what can be achieved through technology. The case of the North Sea reflects the history of the oil industry as a whole.

Lord John Browne, BP Group Chief Executive, reported in October 2005 that when he became manager of the Forties field 25 years ago, “the accepted wisdom was that the field would plateau in production and be decommissioned by the mid 90s, having produced perhaps 45 per cent of the oil in place. The recovery rate from Forties has now reached well over 60 per cent and the field is still producing”.

One can also remember the serious announcement made by the Club of Rome in 1972 that oil will run out in 1990. Since then, oil reserves have doubled from 670 thousand million barrels to around 1200 million barrels, and gas reserves from 1900 trillion cubic feet to 6000 trillion cubic feet. Meanwhile, tens of billions of barrels were produced during these four decades. The extensive use of technology and IT has cut cost and made it possible to achieve developments that were previously considered not realistic.
It took a lot of public relations in the seventies to counter the Club of Rome statement and to convince the world that oil was not running out so soon. In fact, demand has been met and supplies increased, both because of new discoveries and higher recovery factors.

Finally, while there is no question that oil is a finite resource, what the industry is focusing on, and what the media and the hype in the markets sometimes neglect to consider, is the fact that new oil is constantly being found through continuous exploration and improved recovery techniques, both worldwide and in new areas and reservoirs.

However, the argument never stops, and it provides an appealing fodder to the media and interest groups. What caught attention a few decades ago was the ultimate recoverable reserves. The extension of this pessimistic line of thought today is peak oil and whether the world has enough reserves left to meet rising demand.

The difference in perspective reflects partly the nature of their work. The media focuses on immediate and readily available answers while industry works with long investment lead time and often with a global perspective.

**The Elusive Figures**

During the past three decades, the markets witnessed some sharp movements of very high and low prices, excess supplies and shortages, and stagnant demand or runaway consumption. These developments have impacted the growth of the oil industry and diverted it sometimes from its original plans, especially since there is a long lead time to plan for new investments and achievement of growth.

There are a number of reasons behind these tribulations in the markets. Some can be attributed to wars (the 1973 Arab-Israeli war, Iraq-Iran war, the invasion of Kuwait and the 2003 Iraq
war), sanctions (Iraq, Iran and Libya), domestic upheaval (the Islamic revolution in Iran and the fall of the USSR) and fundamental economic changes (the sustained growth in large developing countries such as China, India and Brazil, and rising energy consumption patterns in developed states).

While there are scores of articles analyzing in a very micro way the political and economic impact of these crises, there has been very little literature on their impact on the oil industry.

Specifically, there has been little published about the consequence of these crises on supply, demand, commercial and strategic stock movements, new or delayed investment opportunities, and production capacity building or shortfall. The example of Iraq lately, with shortfall of crude exports, rising products imports and delayed investment opportunities, is a case in point.

The problem, however, does not lie only with figuring out repercussions following periods of crisis. It also involves understanding and quantifying political and economic decisions of countries at normal times. This involves the anticipated production capacity building of an oil country, the impact on consumption of huge direct foreign investment, or the results of environmental and regulatory policies on refining capacity and products distribution.

In an industry as large and global as oil and gas, a statistical error of around 2% in supply or demand could make a big difference.

With world consumption today of over 82mn b/d, this could mean a difference of over 2mn b/d. This margin of error or thereabout is not unrealistic knowing the time lag taken to report demand figures worldwide (that is if reports are ever received from certain countries), and taking into consideration the fact
there is no standardization of terms, hence sometimes adding apples and oranges together.

The same, of course, can be said about production figures, with the tendency of many oil countries to exaggerate their figures at best, or simply not reporting them at all in many cases. The dependence on “secondary sources” is no relief, despite the serious effort of the media and consultants. The nature of the industry is such that only a few persons have an exact knowledge of the production figures in their country, and a fewer number would have a comprehensive picture of regional and international oil flow.

Unfortunately, these problems are not restricted to OPEC member states and Third World countries. In the US, for example, even with very transparent data, there are very often different statistics provided by the International Energy Agency (IEA) and the US Energy Information Administration (EIA); or between government data and that of the American Petroleum Institute (API).

There are also the revisions that are announced many months after earlier statements. The 2004 US demand growth, for example, was revised in July 2005 to 697,000 b/d or an increase of 3.5% over 2003. The previous figure was 484,000 b/d or 2.4% growth. The US figures are generally the most visible and correct, and the announced revision is small in percentage terms, but large in barrels.

The differences get compounded, even for the informed reader, depending on whether condensates and liquefied gas are added to the figures or not.

In the past 10 years, the oil industry has had to deal with several starkly different experiences of elusive figures.
The first was when OPEC decided to increase production by 2.5mn b/d in November 1997 to reach a ceiling of 27.5mn b/d. In fact, that decision did not mean much since production was already high. However, markets interpreted it as if OPEC was actually raising production, while at the same time the Asian economic crisis was taking place with demand down and stocks high. The result was the collapse of oil prices to as low as $10/B, and remaining at very low levels until April 1999.

A few months later, and as we approached the end of the millennium, the world was preoccupied first by the Y2K problem and then the cold spell in the US. Once more, oil planners were working in the dark. There were calls to raise crude oil production to alleviate the problems, without an exact knowledge of the impact of the millennium change on the industry or technology. At the end nothing happened. As for the US weather, the problem was different. What was needed was not more crude, but more products: specifically how to deliver heating oil to the consumers at the right time and place. Of course, this is a US industrial issue, and not one that OPEC can do much about.

What OPEC did in 2000 was that it increased production four times (March, June, September and November) for a total of 3 to 3.7mn b/d, depending on who is counting. The move on the part of OPEC that year raised two interesting questions.

First, what happened to the oil that was stored for the Y2K crisis? Why did price not fall in the second quarter of the year with the leftover high stocks, the lower seasonal demand and increasing OPEC production?

The second and more interesting question concerned the global picture of supply and demand. If OPEC raised production by around 3mn b/d and non-OPEC by an additional 1mn b/d, then what can one assume about 2000 demand? Did it increase by the
unrealistic figure of 4.5mn b/d? Obviously something was amiss. The question is what?

In late 2002/early 2003 there was a different crisis. Supply shortages occurred back-to-back. They started with the Venezuelan strike, followed by internal problems in Nigeria and then the war in Iraq. There were at times shortfalls of 2 to 3mn b/d of crude oil. However, world markets did not feel the pinch. There was enough spare capacity in OPEC, some planned for such emergencies, other available for lack of markets, that made the difference, without much spike in price.

Two specific experiences have been learned from the 2003 events.

First, when oil production is shut down for a few weeks or months, it is not easy to go back to the old production levels, especially in difficult and old oilfields. Moreover, the political problems that caused these shutdowns do not whither away, they linger for some time later, delaying earlier plans for expansion and growth.

Second, plans for major structural changes in the world oil industry do not happen overnight. Talk about replacing reliance on the Gulf with Iraq as a result of regime change have not materialized. The fault line here concerns both a proper understanding of the politics of a particular country and how long it takes to have stability after introducing fundamental changes, as well as the fact that to have a proper development of the local oil industry needs security, a stable political system, sets of laws and transparency.

In late 2003/early 2004, the oil industry had to cope with a different problem. Forecasts, based on projections for world economic growth, indicated lower demand. The tendency in early 2004 was to lower production or at best keep it where it is, depending on the movement of stock levels. However, the big
surprise for everyone concerned was the buoyant global demand that was taking place. This was realized by a 9% annual economic growth in China that raised local consumption by 18% and brought total oil demand to over 5.5mn b/d, making it the second largest oil consuming country in the world. This coincided with strong demand from the US, the largest oil consumer in the world, and rising demand from other Asian countries.

These developments and the elusive figures surrounding them brought the lesson home to all concerned that there was something missing with the scores of reports, data sheets and statistical tables that were being churned by governments, international organizations, consultants and the media. It was a wake up call to try to work together to get better data.

**The Price Spikes**

In 4Q05, the world was still trying to deal with the major changes taking place in the global economic system. The debate earlier in the year focused on whether or not there is enough production capacity and of what crude, whether there is enough refinery capacity to meet the rising demand and the new legislations and regulations, and whether the delivery system has been expanded enough to meet the sustained growth.

Suddenly at end-August, there was the emergency in the US due to the destruction of hurricanes Katrina and Rita with the outage of 1.5mn b/d of crude oil production, 10bn cfd of natural gas and 2mn b/d of refinery throughput for a few weeks, with some capacity closed for months. The US authorities took the necessary measures to make up for some of the shortfall and IEA and OPEC countries responded immediately to make up for loss of crude and product supplies. WTI price increased to over $70/B, a record level. It has since been hovering around $60/B.
What this particular crisis created is differences of opinion on future demand, more particularly whether there is or not a campaign for “Demand Destruction”? Specifically, just how much US demand weakened in the post Katrina/Rita period?

There were those who argued that because fuel deliveries from refineries was disrupted by the hurricane damage, there is some prospect that secondary inventory, held mainly by wholesalers, was drawn down by a larger than normal amount to meet consumer needs. The question that this raised is whether demand for September and October had been understated, or whether higher prices dampened demand even prior to the hurricanes.

There was a wider view that high prices have destroyed so much demand that the cyclical oil boom which started at the beginning of this decade has come to an end. Along with this demand destruction will come lower consumer spending, higher inflation and lower growth, which will reverberate throughout the global economy. These forecasts led in early October to the drop of both oil prices and the average share price of the international majors by around 10% each, as well as the switching of the net speculative length in crude oil futures of the large non-commercial participants, which reached 40,395 contracts in mid-August to a net short position of 27,251 contracts by October 4th, during which time total open interest dropped by about 100,000 contracts (Hetco Weekly Market View, October 11, 2005).

While analysts are right that high prices reduce demand, what was not emphasized sufficiently to the public, however, is the fact that there are serious shortfalls in the global oil industry and that it takes time and the marshalling of much capital to make up for the bottlenecks that have been created over the years in the upstream, midstream and downstream sectors. Until these gaps are filled and the constraints dealt with, and this may be years
away, the system will remain tight with very little cushion, and subject to spikes and fluctuations.

The problem, as defined by the Saudi Oil Minister, Ali Al-Naimi, is one of “oil deliverability to consumers”, basically the ability of the industry to increase production capacity, transportation and refining, as well as the delivery of petroleum products to end consumers on a regular and sustained levels.

In the past few month, there have been intriguing questions raised in public forums as to how world leaders and the global oil industry allow matters to reach this level, basically to have so many bottlenecks that give rise to such high price levels and constant market spikes?

One does not need to go far away to arrive at the answer.

The media is full of news about communities refusing to have infrastructure built in their backyards, be that the development of new oil and gas fields or the building of refineries and LNG terminals. There is also the increasingly complex regulatory system that has been legislated without due flexibility to the provision for proper logistics and supplies, or emergencies.

The media also reported extensively on price and refinery margins during the past 20 years, when both were rather low. What was not covered sufficiently at the time is the impact on low investments, greater consumption and the possibility of higher prices in the future.

The cycles of high and low oil prices make decision-making ever more difficult, and allows for the rise of many theories and prophecies that the media love to publicize. It makes interesting reading and leads to debate, which is what their job is all about. In the case of low prices, we have seen how sustained low prices bring out the obituaries of OPEC, while the high prices allow for
the flourishing of the peak oil theories, as is the case today and as it was in the early 70s.

Transparency and Communication

As early as June 1991, former OPEC Secretary General, Dr. Subroto, called for more transparency and better communication in oil markets. He told the Society of Petroleum Engineers in Lagos that “If we desire a stable oil market, then we have to take positive measures to bring this about. This does not mean market intervention. Not at all. But we do need to help the market function better, by giving it more comprehensive and timely information, in order to introduce greater transparency”.

This theme of more comprehensive and timely information, with greater transparency, has been repeatedly emphasized by senior energy officials and leading global organizations.

Saudi Oil Minister Ali a-Naimi told the World Economic Forum in Davos in February 2001 that a major challenge facing the oil industry is lack of transparency. “By that I mean the right data is often elusive. There seems to be no true consensus on consumption, oil stocks and production at any given time. There can be a wide baseline between the estimate of one source and another”. A second challenge, according to Mr. Naimi, is the lack of “accepted international standard for many aspects of the oil industry. Regulatory restrictions in one area may be absent in another, while laws regarding transportation, refining, product configuration and environmental protection vary widely from country to country”.

The IEA, as a representative of consumer nations, called in its World Energy Outlook 2004 for greater transparency and a standardized approach worldwide for the reporting and estimation of oil and gas reserves. Industrial world political and financial leaders have been repeating the same themes in their summits.
Addressing the same issue, EU Energy Commissioner Andris Piebalgs told the EuroGulf Energy Summit in Kuwait on 2 April, 2005 that “Market data about hydrocarbon reserves, production capacities, including spare capacities for coping with unpredicted demand, stocks and related investments need to be known by producers and consumers, and should be reliable”, adding that all parties “should explore and better understand the role of speculation in the oil future price settling mechanism, the IPE in London and NYMEX in New York. We accept the financial role of these petroleum exchange institutions, but the oil prices can not become hostages of speculation”.

While the call for transparency was a common theme in international forums, efforts were underway as early as November 2000 to establish a body to undertake the difficult and challenging task of collecting, standardizing and disseminating oil data.

A New Spirit of Cooperation

The first-ever joint press conference between the IEA and OPEC was held in Rio de Janeiro, Brazil on 5 September 2002. This is a long way from the start of the two organizations, OPEC in 1960 and the IEA in 1974. It is also quarter of a century away since the first Producer-Consumer Dialogue conference in Paris in 1975/76 which did not lead to any concrete results. However, it was in Paris in 1991 that the new series of international energy conferences between consumers and producers started being held, and led eventually to the bi-annual International Energy Forums.

One major outcome of these venues has been the common expression for greater market stability. Differences do remain as to the means to achieve this, but there is more readiness to work collectively to achieve this, definitely much more than there was in the past.
The producers maintain that the problem today lies in downstream bottlenecks, increasing regulations, problems with deliverability and the impact of hedge funds activities on prices. The consumers, on their part, call for more exploration and production, increasing transparency, greater refining capacity and better energy infrastructure.

A major conceptual gap, that reflects the different interests of the two groups, and that has yet to be addressed jointly, is the question of energy security.

The major consumer countries consider this issue as the most important criterion guiding IEA activities. Uppermost in their mind is the fact that oil accounts for 40% of energy consumption in OECD countries, that there remains increasing concentration of oil reserves in the Middle East, and that there is now rising oil demand outside the IEA member countries. OPEC is concerned about security of demand, the fact that while member countries have to spend billions of dollars to increase capacity there is no predictable environment for oil demand; moreover, there is a campaign, both politically and fiscally, against oil which does not help allocating more funds into expanding capacity.

While not much public dialogue has taken place among officials on this subject, there is much more coordination than meets the eye, as exemplified by the contacts and support extended following hurricane Katrina, as well as the role played by the producers during the various supply interruptions during 2003. The fact that the theme of the 10th IEF conference in Doha will be “Energy Security” is a testimony to the fact that such sensitive issues that were discussed in a monologue fashion before are now being deliberated on by senior energy officials in public forums.
Looking Ahead

Exactly five years ago, the 7th International Energy Forum (IEF) was held in Riyadh. The summary of the results of the Forum deliberations prepared by the host and co-host countries affirmed that “greater stability and transparency in the oil market to reduce price volatility is in the interests of producers and consumers” and that improvements in and timely access to energy data are “important for market assessment and transparency”.

A by-product of the 7th IEF was the launching by six international organizations of the Joint Oil Data Initiative (JODI) database by six international organizations at the 9th IEF in Amsterdam on 23 May, 2004. JODI was initiated by OPEC and the IEA, along with APEC, Eurostat, OLADE and the UN. The objective is to collect data on supply, consumption and inventory, hence providing better transparency that would help energy decision-makers.

Since its launching, the priority task at JODI has been solving problems with input received and the assessment of data quality. At the International Energy Forum Secretariat (IEFS) the installation of the database and user interface has been completed. An independent oil consultant was assigned to assess the quality of the JODI data, which now includes 94 countries (representing 94% of worldwide oil production and 95% of worldwide demand), with his work complemented by assessments received from the participating organizations. Accordingly, the quality of the data of 54 countries that are either in the top 30 producing countries, top 30 consuming countries and top 30 stock holding countries has been assessed. The data provided by each country includes: imports, exports, stocks and refinery intake for crude oil and the major petroleum products. Steps have been taken to make this data available to the member countries on a monthly basis and later to the public through the IEF Secretariat website.
JODI received a welcome support when the G8 Heads of State emphasized in their statement from the Gleneagles Summit in summer 2005 the important role of the producer-consumer dialogue in the IEF, and urged all countries to contribute to the success of JODI.

There are four further areas of cooperation that can be launched by the IEF in the future. First is energy technology, with joint research in areas of mutual interest: cleaner oil technologies, carbon capture with enhanced oil recovery, and greenhouse gas research and development. Second is a more comprehensive understanding of energy security, taking into consideration the interests of producers and consumers. Third is regional cooperation to create efficiency and achieve cost-cutting. Fourth is dialogue among national and international oil companies to help determine and prioritize key issues. In fact, three of these themes are already being tackled by the IEF.

The experience achieved so far indicates that as free energy markets expand, efficiency improves. However, this does not necessarily provide stability or sustainability, nor automatic transparency. As JODI fine tunes its methodology, collection procedures and uniformity and standardization of data, a new contribution is made in this direction. A more active dialogue, research and program on the other themes suggested would enhance the work of JODI and maintain the momentum towards better transparency in the oil markets.