The divorce between Brent and the oil prices

Salvatore Carollo

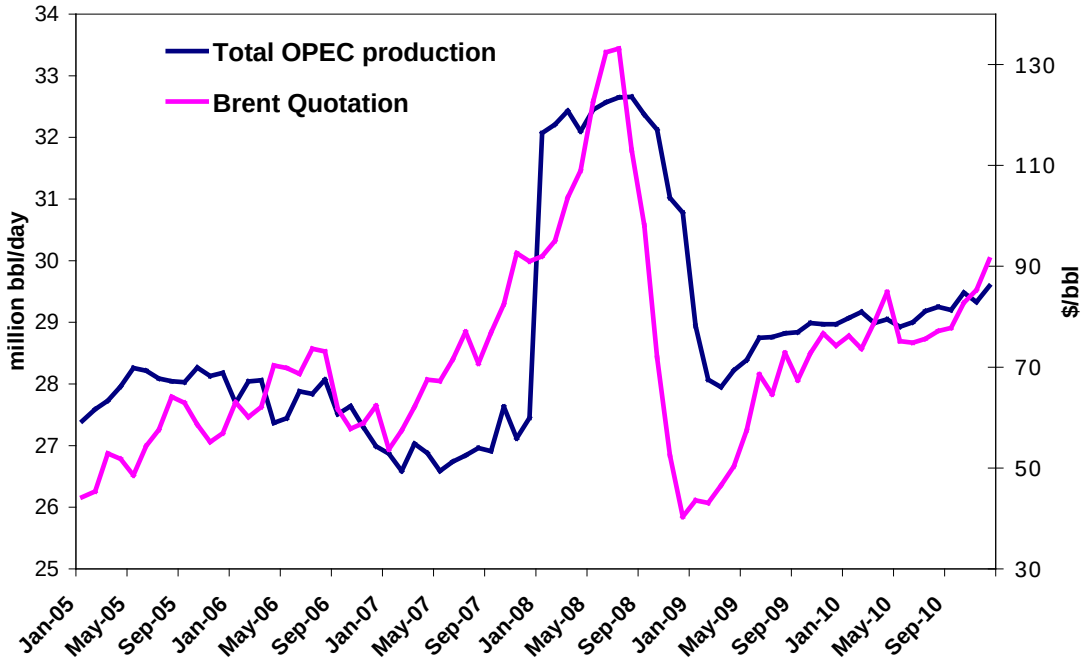
ENI

For some years now, the price of oil has been out of control. None of the of the industry players either oil companies, producing or consuming countries, is able to set the price level or influence its movement.

The price of oil, in the imagination of some consumers, is still determined within the context of the power balance between producers and consumers that developed during the 1970s and 1980s. Since the end of 1998, however, no one has been able to forecast the oil price l correctly, showing there is no control over the fundamentals of the market and no comprehension by observers of its real dynamics.

The main economic principle that the price is determined by the interaction between demand and supply, applied *tout-court* to the oil market does not work.
OPEC has implemented output cuts and hikes on numerous occasions, but always with limited effects . To every public announcement of increased production by the OPEC countries, the markets have responded with an increase in the crude oil price by at least a couple of dollars per barrel. And vice versa, when OPEC has announced output cuts.

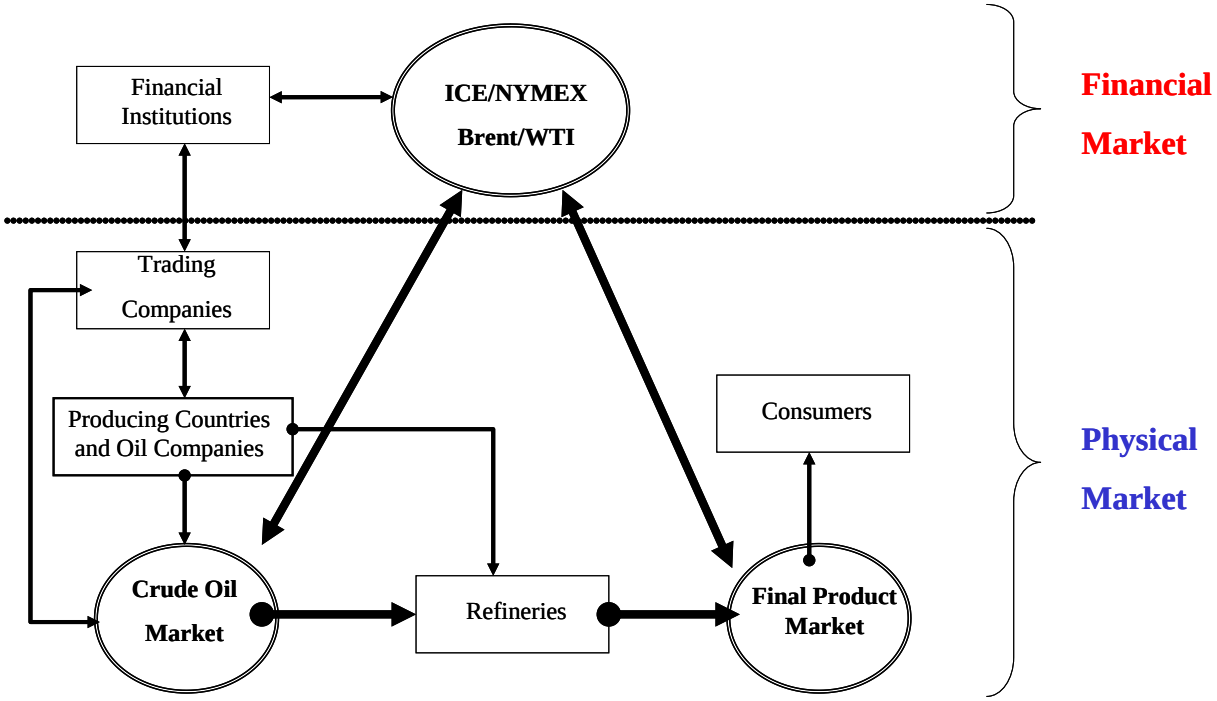
Figure 1. OPEC production Vs. Brent



Sources: International Energy Agency

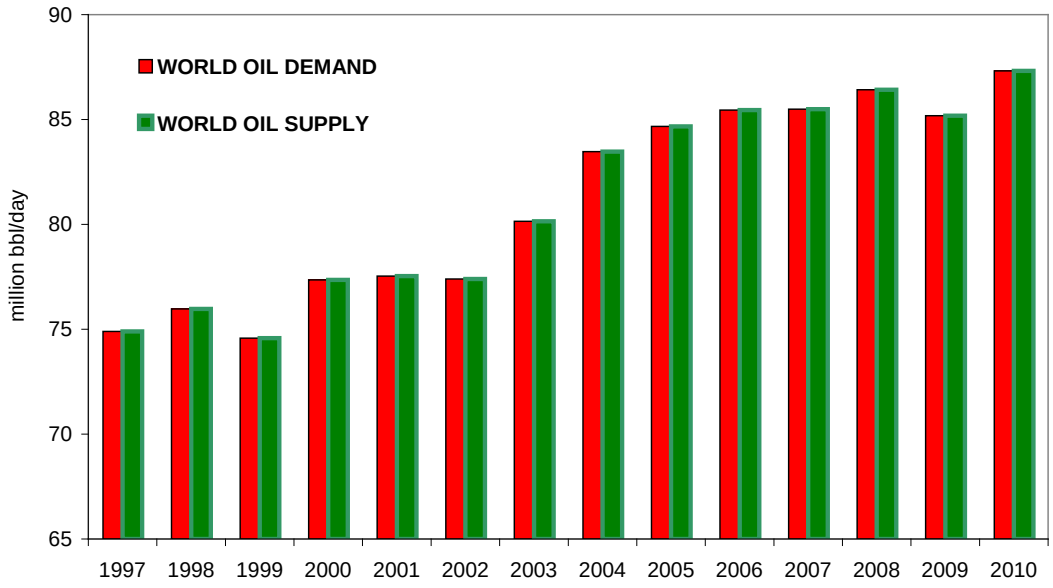
It is therefore reasonable to question whether the the supply demand framework should be applied to the oil market. Or, rather, that the technological complexity of this market does not allow it to be modelled on the simple relationship between demand and supply at a global level.
One starting point should be the recognition that what is commonly called the oil market is actually composed of different markets which operate separately and independently but which are linked by certain complex forms of interactions. . We cannot neglect the dramatic developments of the futures market and its predominant role in the today's world economy.

Figure 2. Complexity and interdependence in the oil market



The economic and strategic importance of the themes related to the price of crude oil would require a far more detailed technical analysis. We should always remember that in our cars and in the airplanes we do not use crude oil, but finished products, which are increasingly difficult to produce.

Figure 3. World oil demand versus supply



Source: International Energy Agency

The upward trend in prices underwent a brisk acceleration in spring 2008 and went on to touch a peak of 144 $/barrel in summer. After this we saw a spectacular nosedive of almost 110 $/barrel. Analysts, economists and commentators have tried in all possible ways to provide explanations, (sometimes far-fetched) for this phenomenon which apparently seemed unexplainable.

The growing divergence between the physical crude oil market and the dynamics of the crude oil price seems more and more linked to:

a. The distortions created by the new environmental laws, in the context of the lack of adequate investments in the world refining sector.

b. The effects deriving from the historical OPEC decision of indexing the price of their crude oils to the financial market of Brent.

The development of environmental regulations in the last two decades has created burdensome (but unchallengeable) limits on the oil industry, but has not driven the bodies concerned to make the investments necessary to create "compliant" energy and products. The result of these divergent processes has been the net reduction of availability of finished products marketable in the western industrialized countries. Clean gasoline and gasoil have become short. A glance at the newspapers is enough to discover the limitations imposed on motorists in Middle Eastern countries (Iran, Egypt,…) or all of West Africa.

The deficit of these high-quality finished products has bolstered the rise in crude oil prices, particularly the light varieties such as those from the North Sea or North Africa. Somewhat like what would happen if, for some reason, a rule was introduced to allow the sale of only choice cuts of meat (fillet steak, entrecòte, silverside): the price of these would rise but so would the price of the cow.

In December 1988, OPEC decided to adopt as reference for the price of crude oil (rather than the value of the Arabian light, the Saudi crude of light quality), the value of the Brent. At that time, everyone thought that this was the price of the crude produced in the North Sea the name of which was indeed Brent. No-one realised that this was a misunderstanding, a case of a homonym. The Brent in question was not a crude oil, but a financial commodity.

Let us imagine, for a moment and as a game that OPEC had decided to adopt, as a reference for fixing the price of oil, the value of a particular type of cherry tomato, to which the creator and biggest producer gave the name of “Brent”.

Once the decision was taken, it would become obvious that the price of oil would depend, almost exclusively, on the supply and demand of Brent cherry tomatoes on the international market. Plentiful harvest would yield low prices; a difficult year would yield high prices. Cherry tomatoes in fashion would yield high prices; and so on.In this context, no-one would dream of looking at the supply and demand of the physical crude oil to analyse the movements of the price or to make predictions of the future,.

What is in fact the Brent market, the true one that defines the price of oil?

In the eighties a paper market was created, that of the futures contracts, which are like plastic cards (or stickers) on which a barrel of crude is depicted. Whoever buys these plastic cards buys the ‘picture’ of a barrel, but does not have any possibility of exchanging a plastic card with a real barrel. The market of the oil stickers is a market that is almost totally independent from the real oil market, with bodies that operate there and dominate it and that normally have no relationship with or interest in the oil industry.

In December 1988, the OPEC Countries decided that the price of their crude oils would be fixed on the basis of the value of the “oil stickers”. This was an almost unnoticed change of a geo-political nature, that transferred control and management of the international oil market out of the hands of the OPEC Countries to those of the City of London and of Wall Street. This was the event that overturned the balance of the power that had been established starting from the crisis of 1973.

For years the constant expansion of this parallel market supported the real market. The value of the “picture of the barrel” was almost always higher than the one the physical market would have guaranteed, bringing benefits to those who invest in this sector and to the various producing Countries. Yes, it is a crazy game, but with a useful purpose.

In the autumn of 2008, the bankruptcy of the principal banks, that owned massive quantities of oil stickers, obliged them to sell the oil stickers and therefore causing a slump in the value of such stickers and hence in the price of oil, the reference value of which derives from these.

Initially, the oil futures market had in common with the oil market, apart from the name Brent, the historic fact that it was born to support the trading operations of the oil companies, as a financial instrument to provide risk hedging against oscillations in crude oil prices.

At the start of the year 2000, the oil futures market detached itself almost completely from its original nature, becoming a market purely for financial purposes. International banks entered this business without having any involment in the oil business, just as an opportunity to make profit, but also some oil

companies and almost all the oil trading organizations starting to consider the future market as an independent business beyond the hedging purposes.

All those analysts who tried to explain the movements of the crude oil price on the basis of the evolution of the relationship between demand and supply of physical crude have failed, simply because the link between the financial market and the crude oil market has become increasing ephemeral or even non-existent.

The following table clearly shows how the volume of business on the crude oil futures market has risen tenfold in the last 10 years, closely following the entry of the great financial institutions in this field and the change in the attitude of the traditional oil players. This has caused the complete disruption of the internal dynamics of the oil market.

Table 1. Comparative analysis of the value of WTI and Brent in the financial and physical markets

January 2008-December 2010

	Production of Physical Crude Oil	Transactions of Physical Crude Oil	Transaction of equivalent oil in the financial market	Ratio Futures/ Physical	Ratio Physical/ Futures
Volume (billion barrels)	93.7	23.4	623.1	27	3.8%
Value (billion $)	7,594	1,899	50,806	27	3.7%

Sources: Nymex, ICE, IEA

During 2008-2010, with world crude and NGL production around 86 million barrels/day, only about 20 million barrels/day were marketed. The remainder, about 65 million barrels/day, was not put on the international markets because it was consumed directly by the producing countries.

Now we can look at the volumes traded on the Exchange to discover that we have a totally different picture and with degrees of magnitude enormously higher. During 2008-2010, about 51 thousand billion dollars were traded on the futures market, that is to say, 27 times more than the value traded on the physical market and about 6-7 times more than the entire world production of crude.

The physical market represents only 3.8% of what we call “Oil Market”. And OPEC is just 30% of the 3.8%. In such a context, can OPEC really determine or even influence the oil price? ?

All these concepts have been developed in the book “Understanging Oil Prices” published by Wiley Finance, Author Salvatore Carollo, December 2012.