

Summary

The Oil Price

The oil market is the most volatile of all markets, with the exception of the Nasdaq. It is also the biggest commodity market in the world. Therefore one cannot avoid forecasting oil prices, nor can one expect to avoid the forecasting errors that have been made in the past. In his report, Joël Maurice draws a distinction between the short term and the medium-long term in analysing the outlook for oil prices.

Short term

In the short term, world demand for oil is virtually proportionate to economic growth and shows very little price elasticity. Oil is in fact mainly used for transportation purposes and there are very few substitutes for it.

The world oil supply can broadly speaking be divided between OPEC, which has a market share of approximately 40%, and the non-OPEC countries. The latter produce at full capacity (barring exceptional circumstances). OPEC thus behaves as the “swing producer”, which seeks to adjust the global supply of oil in relation to global demand by adjusting its own quotas. However it does not respond instantaneously. This implies that production also displays inertia in the near term.

Against this backdrop, an unexpected event (a shock), however minor, that affects quantities may have major impact on the price of crude oil. Producing an explanation for past events is thus relatively straightforward once the shocks have taken place and have been clearly identified. Forecasting a price that is so sensitive to unforeseen circumstances is a more complex exercise.

Developments in recent years provide some explanation of the sequence of events

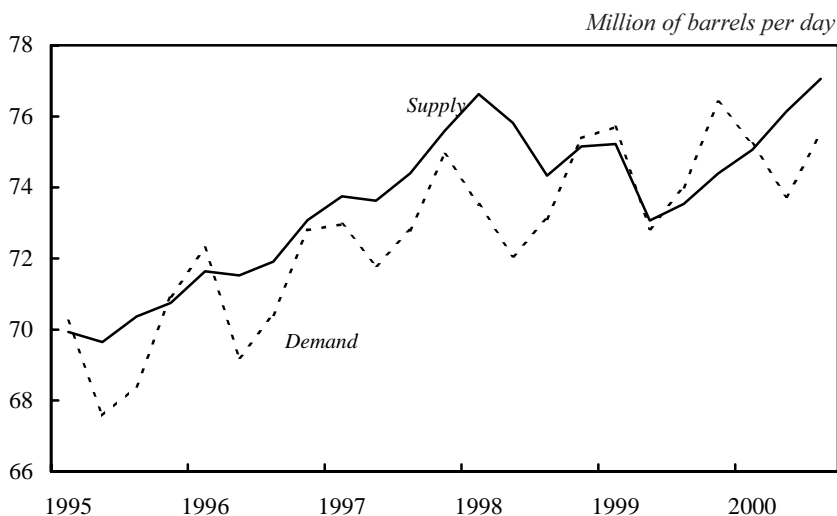
Graph 1 illustrates the trend in global supply and demand for oil since 1995 in millions of barrels per day (Mbl/d).

Apart from an upward trend and seasonal fluctuations, two unexpected shocks have affected demand. Firstly there was a sharp fall in early 1998 (the financial crisis that started in Thailand, spreading to Asia, Latin America

and Russia). There was a clear upturn in early 1999 (a rapid recovery in the emerging countries and an acceleration in US growth).

The response in terms of world oil production came late in both cases. This led to a supply glut during the course of 1998 and a shortage in 1999 and early 2000.

1. World supply and demand of oil



Source : Direction de la prévision.

Graph 2 illustrates the behaviour of oil prices in relation to OPEC decisions.

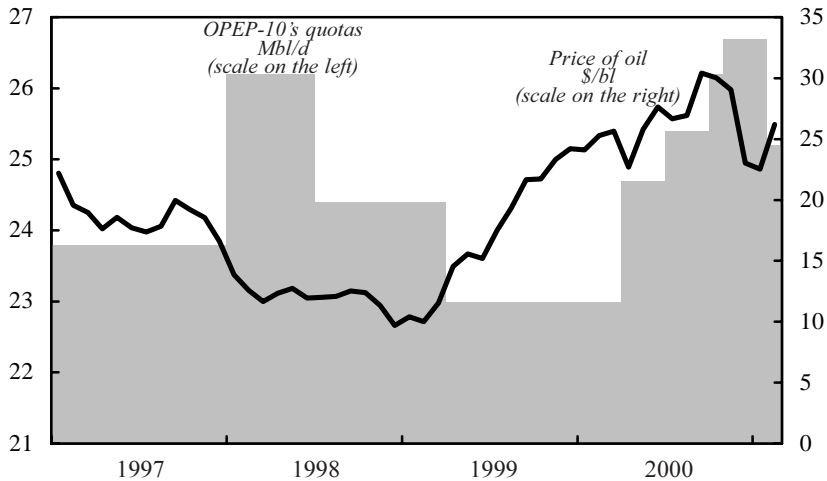
OPEC mistimed its response to both of the demand shocks mentioned above. It raised production quotas in early 1998, thereby precipitating a further fall in prices. Conversely it cut production quotas in April 1999, thereby further fuelling the rise in prices.

The first error proved extremely costly: the price fell to 10 dollars per barrel (\$/bl) and the fall prompted OPEC, led by Saudi Arabia and Venezuela (under the Hugo Chavez administration) to close ranks and declare its intention to produce a durable recovery in prices. The second error may in fact not have been a mistake at all, as OPEC was in fact able to retrieve some of the revenue lost in 1998.

The main point since then is that OPEC defined a *desired price range* of \$22-28/bl in April 1999 and established a mechanism enabling it to monitor prices closely.

Under the above framework, it has raised production quotas at fairly close intervals in order to curb the surge in prices which peaked at \$35/bl in October 2000. Supply thus exceeded demand once again and prices began to ease from early December 2000 onwards.

2. Price of a barrel of brent and OPEP-10's quotas(*)



Notes : (*) OPEP excluding Irak.

Source : Platt's and Arab Oil and Gaz, 2001.

Short term price outlook

On 17 January 2001, OPEC decided to cut production quotas by 1.5 million barrels per day. Its credibility was at stake, as there would certainly have been further excess supply at the end of the winter if the cuts had not been made and this would have triggered a fall in prices. This decision confirmed market expectations, thereby producing a rise in Brent crude prices from \$22/bl to approximately \$26/bl.

On 16 March 2001, OPEC decided to cut production quotas by another 1 million barrels per day.

According to these decisions, OPEC will in all likelihood achieve its objective and the price should settle around \$25/bl or slightly lower on average in 2001.

There are however several areas of uncertainty.

Two factors may combine to push prices lower:

- given the economic slowdown in the United States, world oil demand may in fact be lower than forecast;
- OPEC cohesion could be fragile: dissent on the part of one member could prove contagious.

Two other unforeseeable factors may on the contrary trigger a rise in prices:

- the economic recovery in the USA could happen sooner than anticipated:
- oil production could be restricted by Irak, whose behaviour can hardly be predicted.

There thus remains a risk of price volatility. As a reminder, an error of approximately 1 Mbl/d either on the upside or the downside in matching supply and demand for oil worldwide could produce an upward or downward price variation of \$3 to 10/bl (depending on the value of price elasticity).

The issue is whether OPEP will be able or not to stabilise the price of oil, when meeting next on 5 June 2001.

What steps can be taken to counter the volatility?

First of all, monitoring should be improved, and the level of inventories should be assessed more accurately, particularly outside the OECD.

A broader dialogue should be established with OPEC, in order to share similar views whenever possible regarding the situation in the market.

There should be more consultation within the European Union over oil policy and fuel tax policy.

Further measures should be introduced in order to reduce the impact of volatile oil prices on the end user. These measures should extend beyond the current tax stabilisation mechanism and should aim to encourage the development of hedging instruments on the basis of the financial instruments used by major private and public sector corporations.

The main energy-consuming countries should consider using strategic reserves in order to intervene when prices are no longer within a specific range.

Medium-long term

The “World Energy Outlook 2000 (WEO 2000” recently published by the International Energy Agency (IEA) provides excellent insight. The central scenario of the WEO 2000 describes the trend in energy supply and demand up to 2020, with an intermediate period up to 2010. The assumption is that the oil price will be around \$21/bl by 2010, gradually rising to \$28/bl in 2020. The IEA’s report concentrates on two key problems within this scenario.

Concentration of production

World oil production will gradually be concentrated among OPEC members. By 2020, OPEC production should more than double and OPEC’s

market share will reach 54%. The reason for this is that non-OPEC conventional oilfields sense will gradually be depleted and that there would not be an extensive use of non-conventional oils (heavy oil in the Orenoco and tar sands in Canada). This particular scenario is consistent with the fact that two thirds of the world's conventional oil reserves are located in the Middle East, particularly in Saudi Arabia.

This scenario is illustrated by a supplement to the CEA report suggesting that the most effective strategy for OPEC would probably be to set a price of \$24/bl for the next 20 years, while maintaining (reasonable) volatility, both in order to enforce discipline among OPEC members and to increase the element of risk regarding investments in the non-OPEC oilfields.

The reports suggests an alternative approach by raising the following question: will OPEC, and particularly Saudi Arabia, agree to draw so heavily on their available resources and build up major financial surpluses? If they decide to withhold their oil reserves, non-conventional oils would be required on a larger scale; despite the sharp fall in exploration costs produced by technical progress, this scenario could lead to higher oil prices.

Kyoto Protocol (quotas on CO₂ emissions)

According to the forecasts in the report, CO₂ emissions will be well in excess of the maximum levels agreed under the Kyoto Protocol by 2010.

Compliance with these limits requires the introduction of a tax, estimated at \$92 to 117 per ton of carbon (i.e. approximately \$9 to 12/bl of oil), or an equivalent mechanism such as a negotiable licence, in order to raise the price of hydrocarbons for the end user. By the same token, setting quotas for CO₂ emissions will help reduce world demand for oil and will have a restraining influence on the oil price (admittedly only by a few percentage points).

The widening of the “fiscal wedge” between consumer prices and production prices may well raise two main objections:

- consumers wish to counter the effects of climate change, yet seem reluctant to cover the related costs;
- the oil producing countries are demanding, admittedly on a somewhat spurious basis, a share of the “fiscal wedge” mentioned above.

What can be done in the medium-long term?

Dialogue between the producer countries and the energy-consuming countries should be encouraged on a medium term as well as on a short term basis.

Meeting the Kyoto commitments will require measures extending beyond higher hydrocarbon prices to the consumer, however important a policy component the latter may be. Furthermore structural requirements are

required: transportation has to become more efficient in terms of the use of energy, alternative means of transport have to be developed, more stringent criteria are required for heating insulation in buildings, and suburbanisation has to be contained.

Comments and supplements

The report is discussed by Michel Didier and Guy de Monchy. Furthermore, nine supplements have been written by Arnaud Buissé, Jean-Paul Depecker and Bruno Tissot; Denis Babusiaux; Didier Houssin and Xavier Burucoa; Olivier Appert; Patrick Criqui and Pierre-Noël Giraud; Frédéric Lasserre; Jean-Marie Chevalier; Stéphane Gallon; François Moisan.