The Oil Drum: Europe
DISCUSSIONS ABOUT ENERGY AND OUR FUTURE

Countdown to €100 Oil: €70 Oil

Posted by Jerome a Paris on March 21, 2008 - 12:00am in The Oil Drum: Europe
Topic: Economics/Finance
Tags: currency, euro, finance, money, oil prices [list all tags]

*This is a guest post by **DoDo**, a frontpager over at the European Tribune (and best known for his great Train Blogging series). This is an updated and adapted version of Oil prices in Euros, a story initially posted last October.* In the past half-year, we often saw simultaneous crude oil and Euro/dollar rallies. The question emerges, how would oil prices look in Euros?

(Click to enlarge)

Below the fold, I'll explain what data is displayed on the diagram, and show a few more diagrams.

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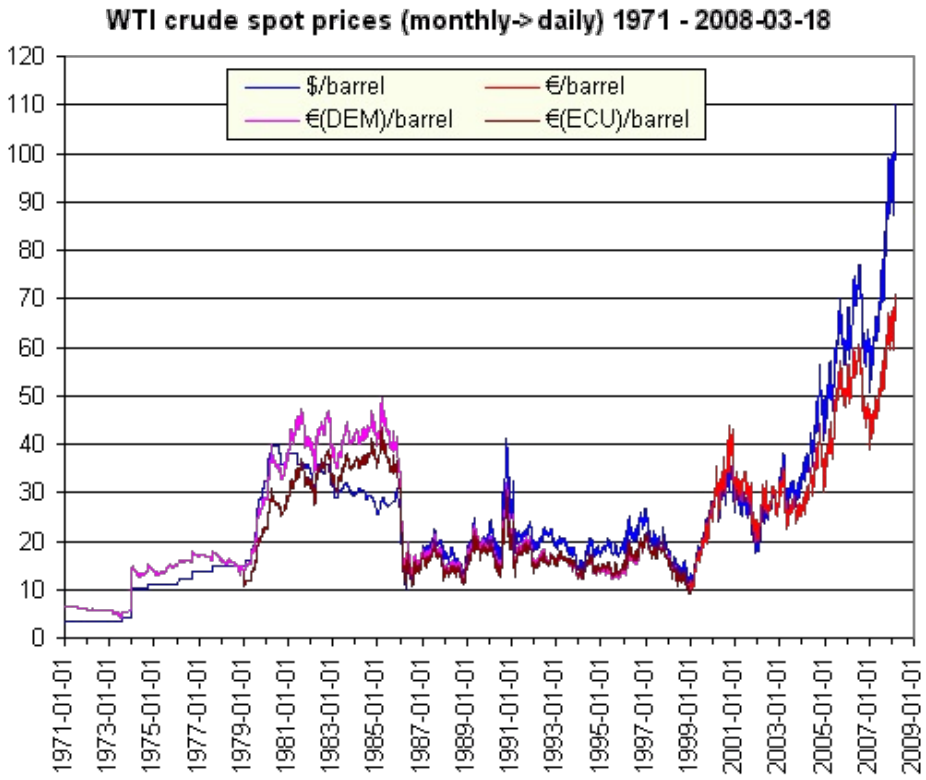


(Click to enlarge)

Below the fold, I'll explain what data is displayed on the diagram, and show a few more diagrams. The **Euro** itself as basis for a historical trend is not that straightforward. Over the past three

decades, the Euro (EUR, €) has been (and is) "under construction".

The Euro is presently the official currency of 15 of the currently 27 member states of the European Union (as well as four embedded micro-states, from Andorra to the Vatican), controlled by the monetary policy of the European Central Bank (ECB). But it became physical currency only in 2002, then in 12 of the then 15 EU member states, and started existence as accounting money of only 11 member states in 1999.

For the time before 1999, the Euro has to be pegged to some predecessor. There are two possibilities.

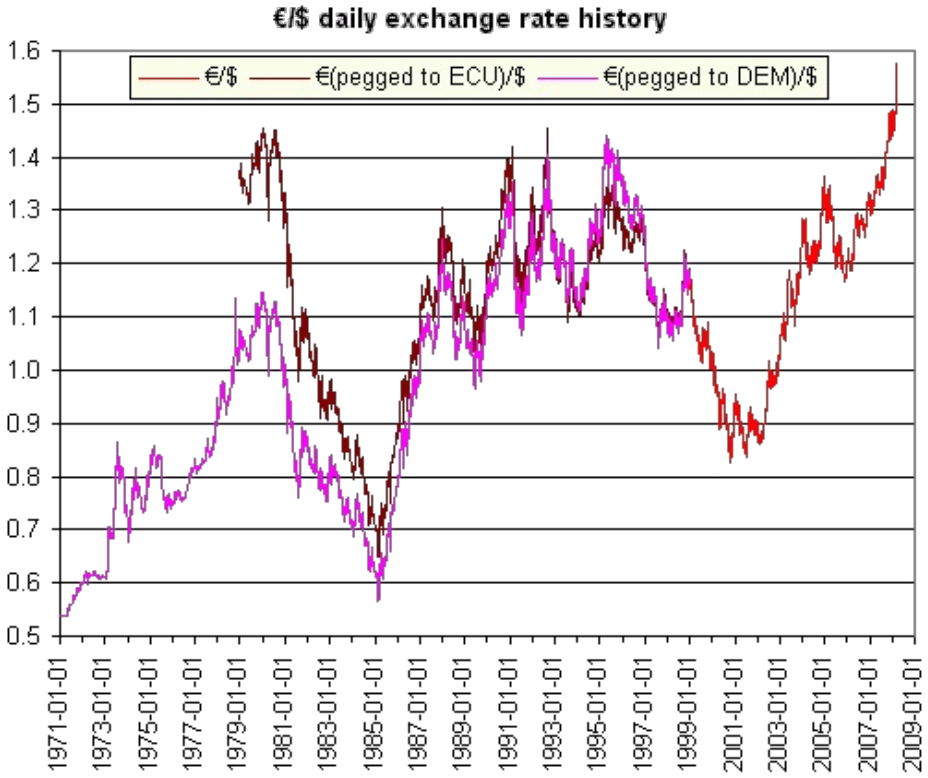
One is to use a virtual unit calculated from then extant national currencies. Preceding the Euro was a long convergence of European monetary policies and exchange rates, part of which was indeed the definition of such virtual monetary units. The last of these was the European Currency Unit (ECU). The Euro was set to equal the ECU at its launch. Thus the virtual Euro-ECU peg is simply 1:1.

The second possibility is to stick with the strongest of the preceding national currencies: the West German Mark (DEM). This makes sense because the ECB largely continues the monetary policy of the [West] German *Bundesbank*, thus in some practical respects, the Euro is more DEM 2.0 than ECU 2.0. In 1999-2001, the German Mark only served as paper money for the Euro, at a fixed exchange rate. Using this, the pre-1999 virtual Euro-German Mark peg can be set at 1.95583:1.

The actual data I used:

- Euro/Dollar exchange rate, 1999-present: daily reference data from the US Federal Reserve Bank
- ECU/Dollar exchange rate, 1979-1998: daily reference data from the US Federal Reserve Bank
- DEM/Dollar exchange rate, 1971-1998: daily reference data from the US Federal Reserve Bank

With the above, the long-term exchange rate history:



As **oil price** in dollars, the currently preferred reference values are that of front-month futures. However, NYMEX's WTI futures started only in 1983, IPE's Brent futures even only in 1988. For a benchmark extending back to the two Energy Crises, we need spot prices. Fortunately, today spot prices follow front-month futures rather closely, thus the distinction is of little importance.

The datasets I found & used:

- WTI crude, 1986-present: daily closing spot prices at Cushing, OK, from the EIA (Energy Information Administration of the US Department of Energy)
- WTI crude, 1971-1985: monthly average spot prices at Cushing, OK, from Econo*magic*.com

Daily vs. monthly data: another incompatibility over time. Only exchange rates will give an indication of daily volatility. However, one can hardly tell how prices would have been if market response had been as fast as today: maybe spikes would have been even higher, but maybe not, because of faster declines after spikes.

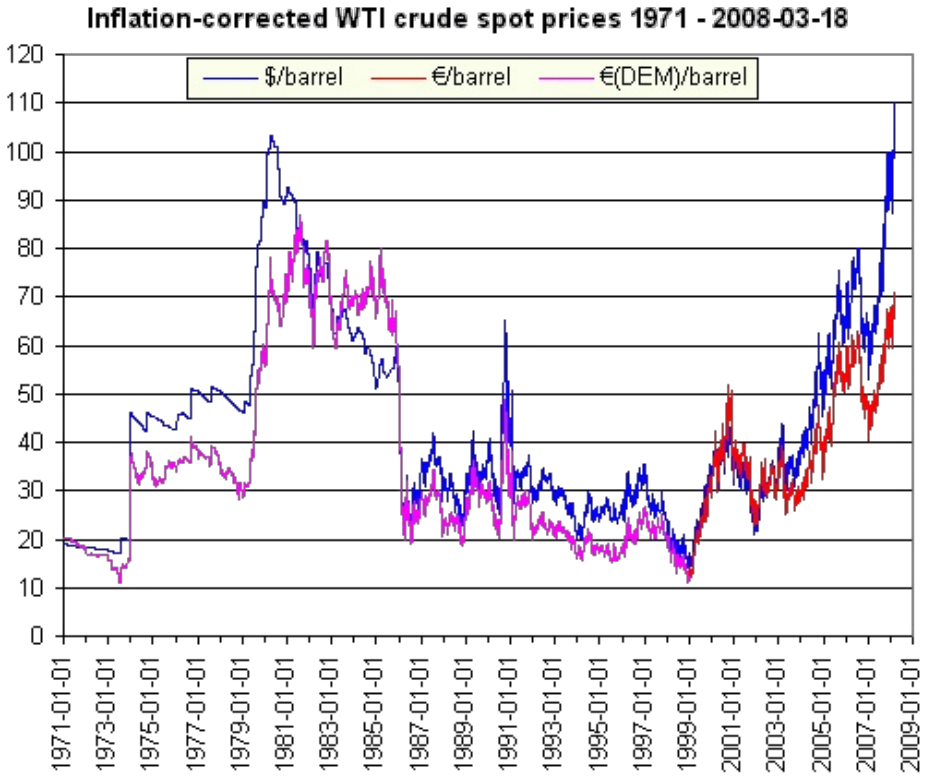
Now here is the finished graph again. One can observe the First and Second Energy Crisis, the seventies fall of the dollar, the 1985 dollar high and oil low, the Iraqi invasion of Kuweit energy mini-crisis, the early nineties ECU and DEM highs, and the Bush II Era.

How would oil prices look if **corrected for inflation**? That depends on the deflator used. The German Mark-pegged prices above give an opportunity for another crude comparison. The price indexes used:

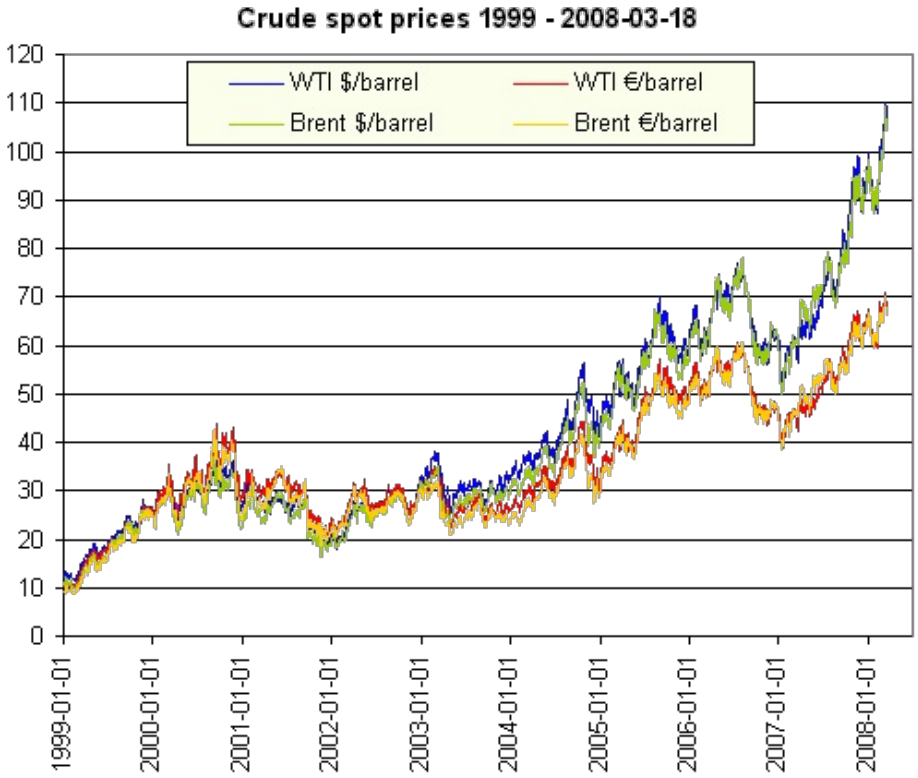
- For the dollar-denominated oil prices, 1971-2008: monthly US Consumer Price Index (CPI) from InflationData.com
- For the Euro-denominated oil prices, 1999-2008: monthly Eurozone Harmonised Index of Consumer Prices (HICP) from the ECB
- For the post-Reunification DEM-pegged virtual Euro-denominated oil prices, 1991-1998: monthly German *Verbrauherpreisindex* (CPI) from the Federal Statistical Agency of Germany

- For the West German DEM-pegged virtual Euro-denominated oil prices, 1971-1990: annual West German *Preisindex für die Lebenserhaltung* (Life sustainment Price Index) [pdf!] from the Federal Statistical Agency of Germany

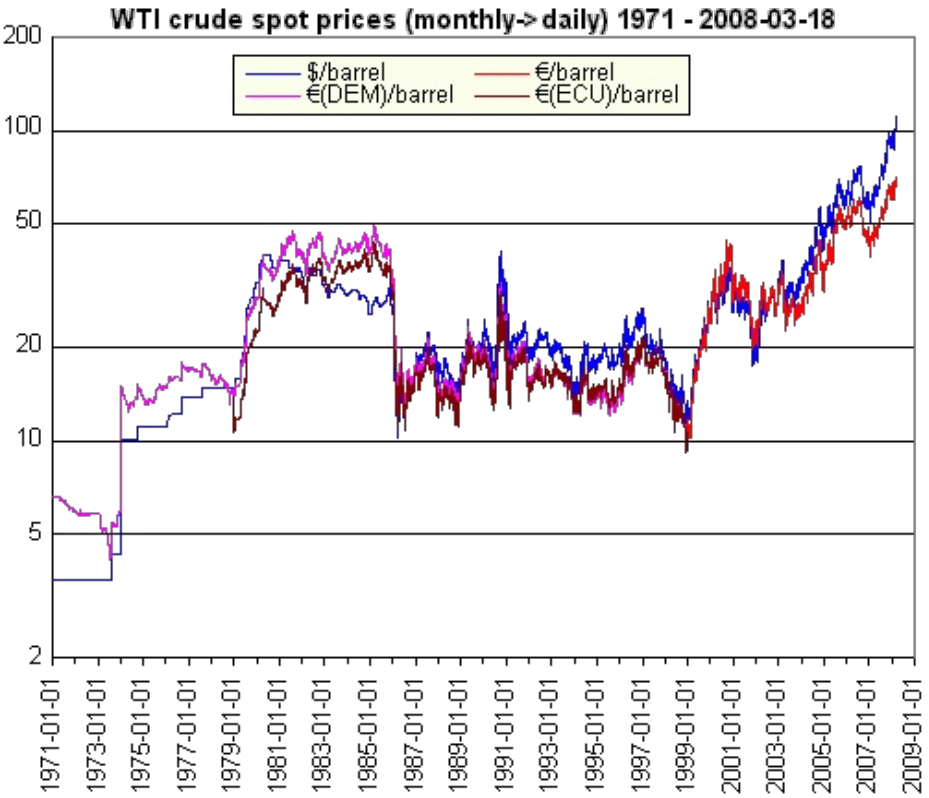
On the resulting diagram, I call attention to the curves of the Second Energy Crisis:

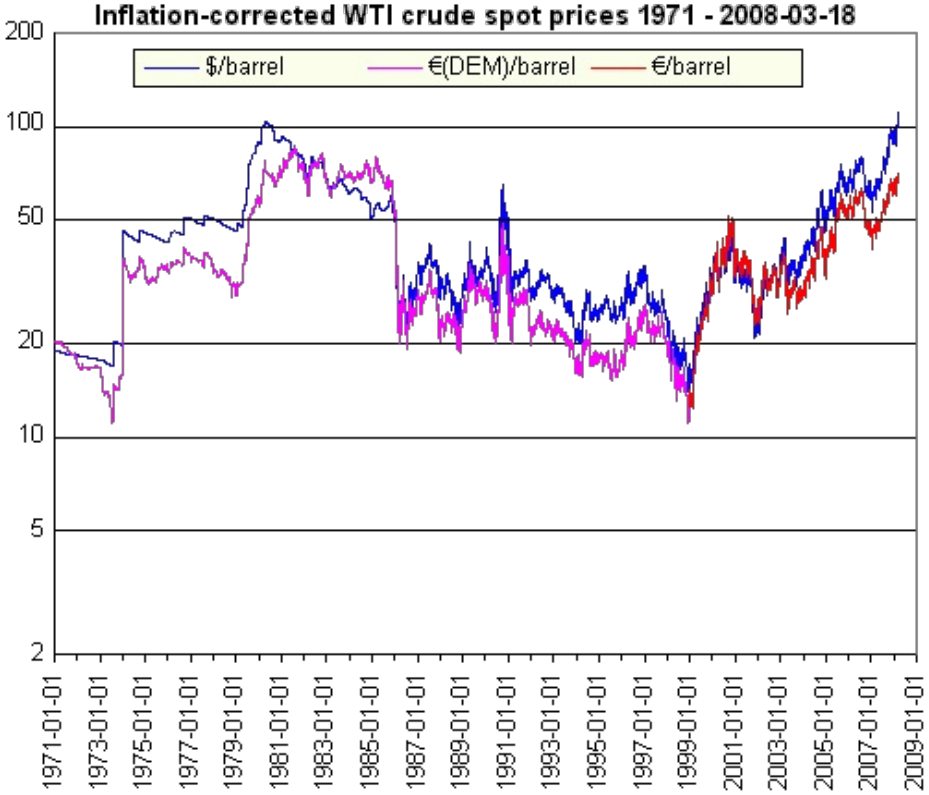


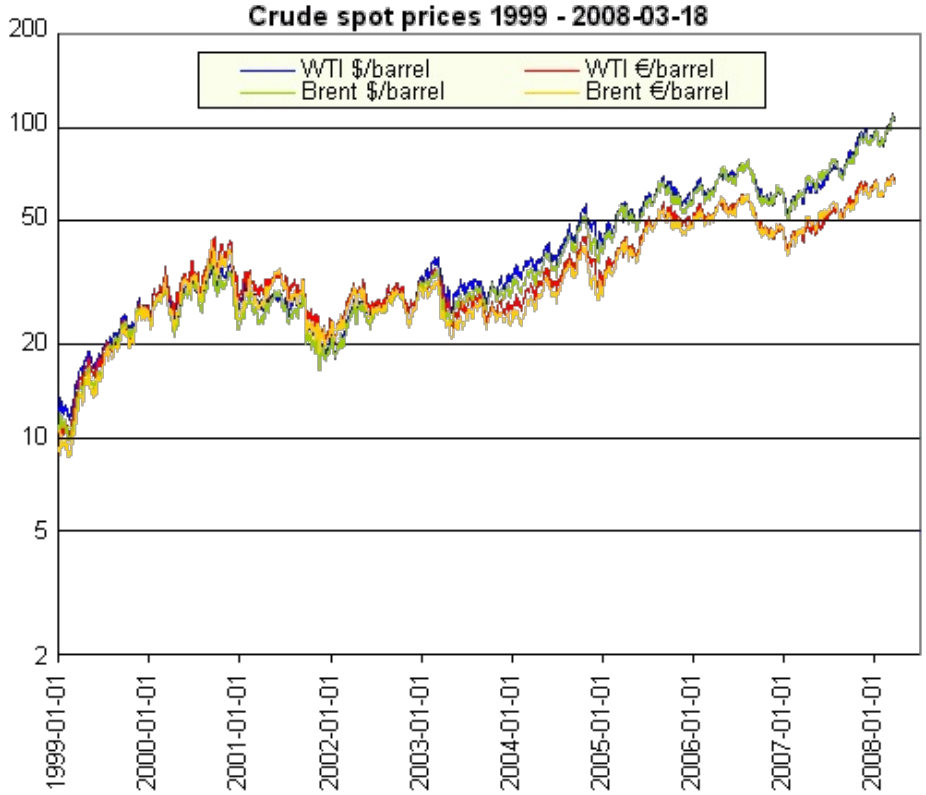
In the next diagram, let's zoom in on the **Euro era** (e.g. 1999-present). This period includes the Euro weakness bottoming out in 2001 and the rally since. For this, I also included daily Brent spot prices from the EIA, which is more relevant for European consumption. Price development in Euros is more moderate (we passed the August 2006 highs only with the October rally), but the trend is the same.



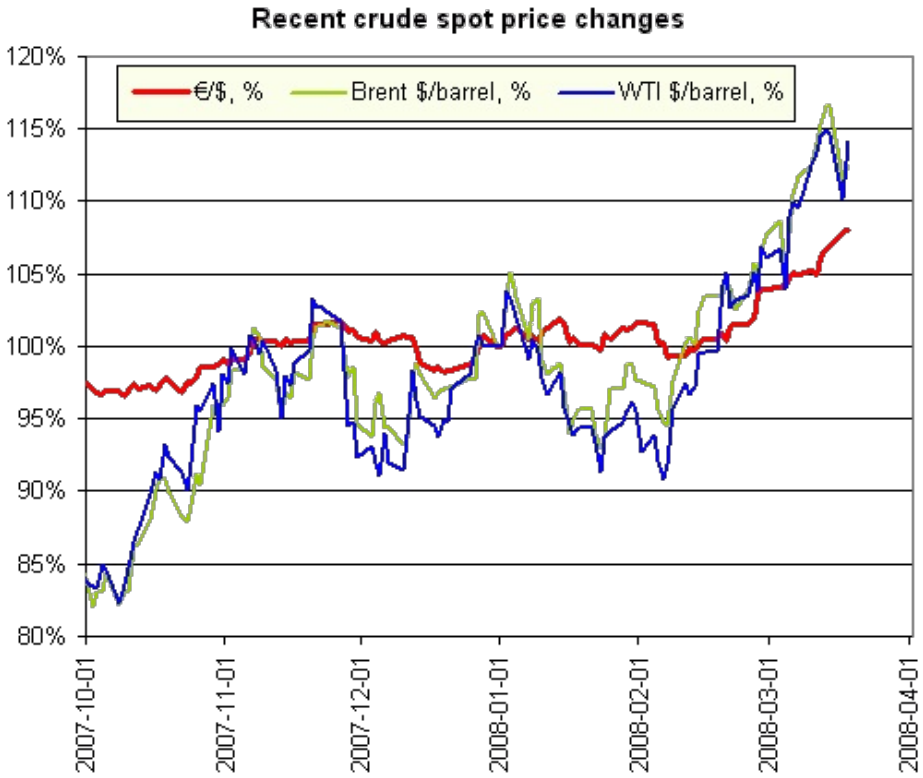
To have a better picture of *relative* changes, it is better to have prices on a **logarithmic scale**. I re-did all three three graphs above:







One a final diagram, let's compare the recent **percent change** of daily closing spot prices and that of the Euro/dollar exchange rate (using the end of last year as 100%) over the last six months. It seems apart from the very peaks, the fall of the dollar doesn't determine the oil price rise.



For more graphs of oil prices from 2006, in a greater variety of world currencies, check this Oil Drum story.

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