

# **BIEE one-day Seminar**

**Are 'financial' investors destabilising the  
oil market?**

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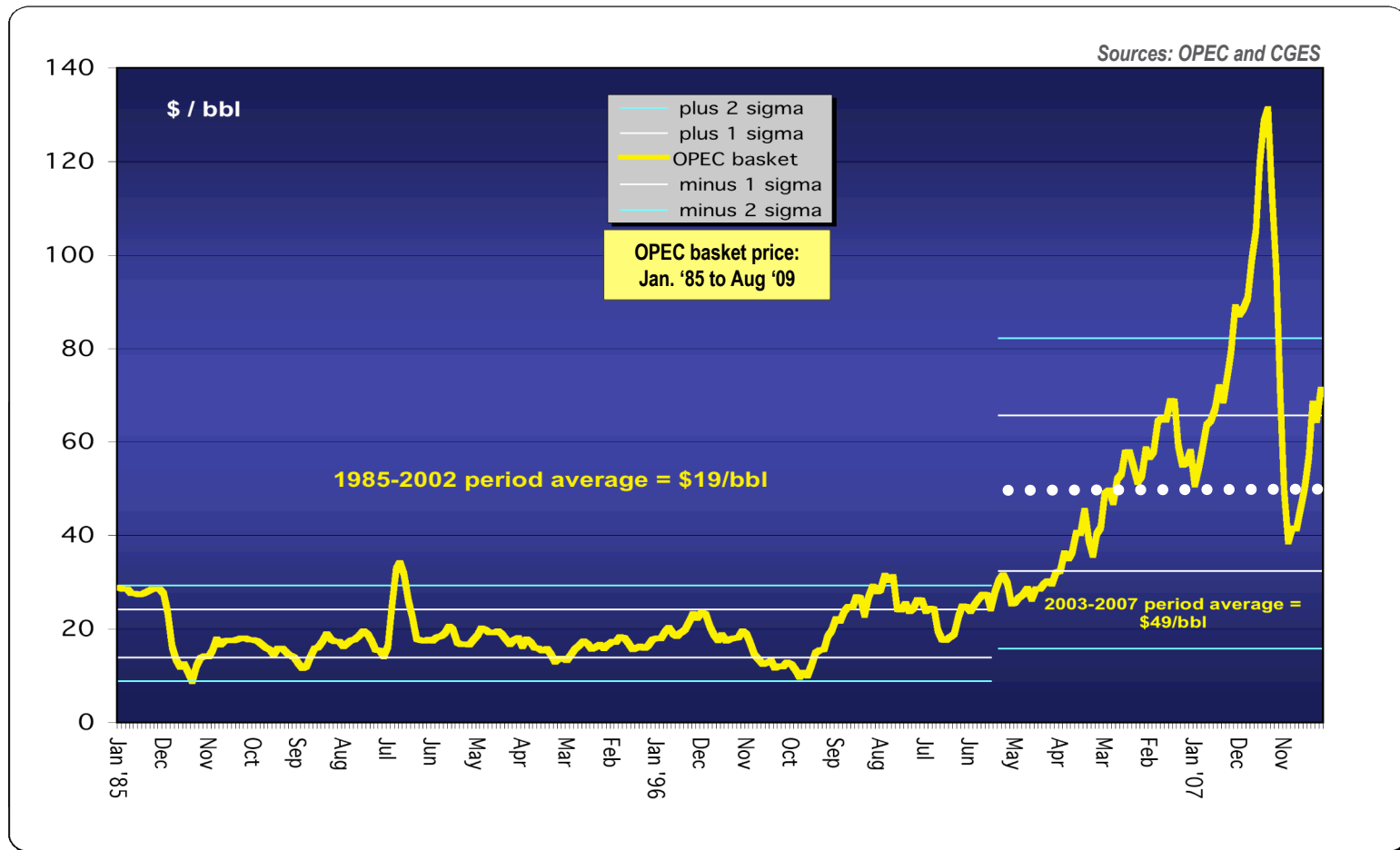
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# The narrative so far and key issues

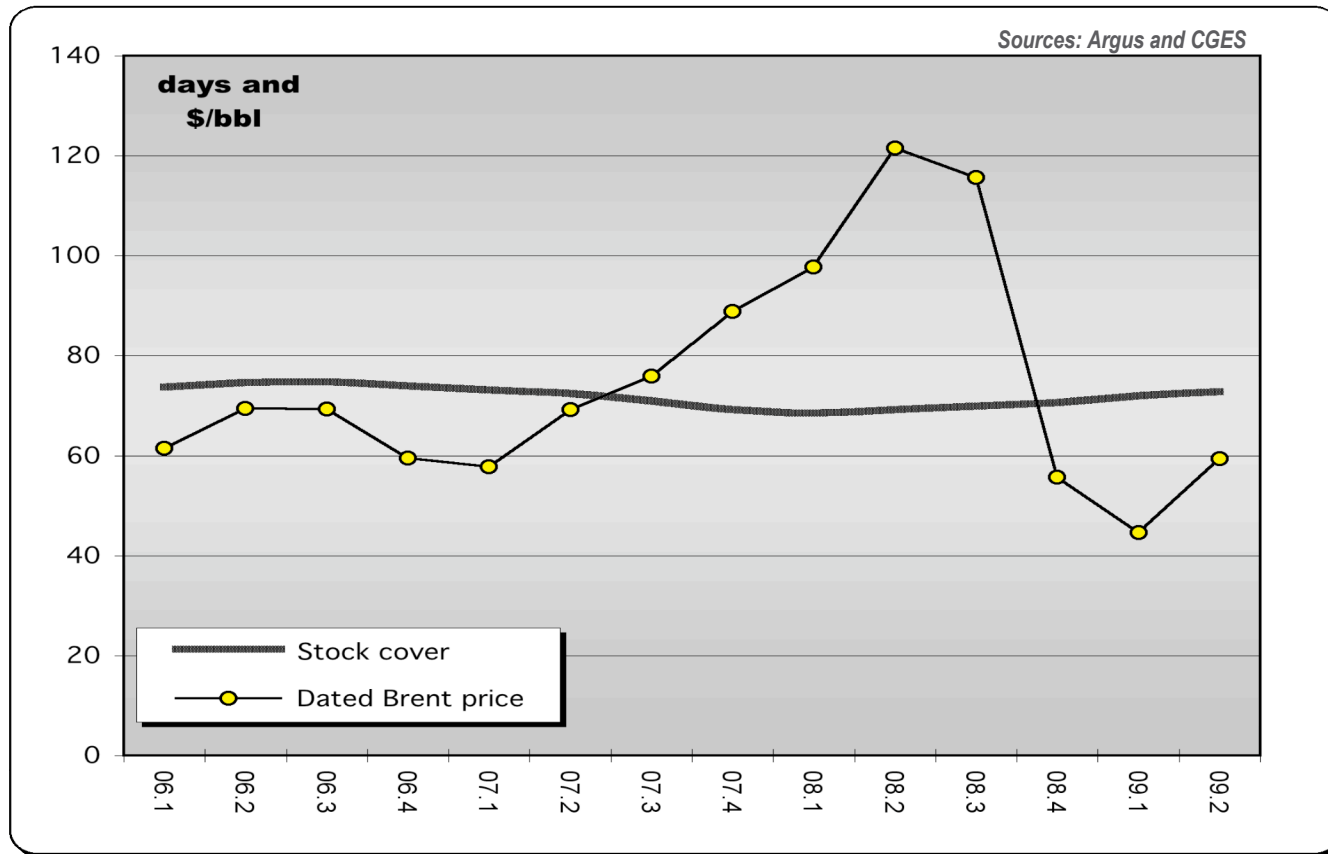
- Oil price volatility has been extreme in the last two years and the question is what has caused it?
- Are fundamentals to blame, or is the mighty oil futures market the culprit, with speculators as the prime suspects?
- From a different perspective this question is really about what determines oil prices in the short run.
- Our research suggests that spot oil prices are driven by inventory disequilibrium, i.e. the difference between desired and actual inventories.
- Inventory levels are clearly determined by fundamentals, but desired inventories are a function of oil demand, stocks and the shape of the forward curve.
- The forward curve, in turn, is exclusively a product of the futures market, which is heavily influenced by expectations.

# Oil price volatility



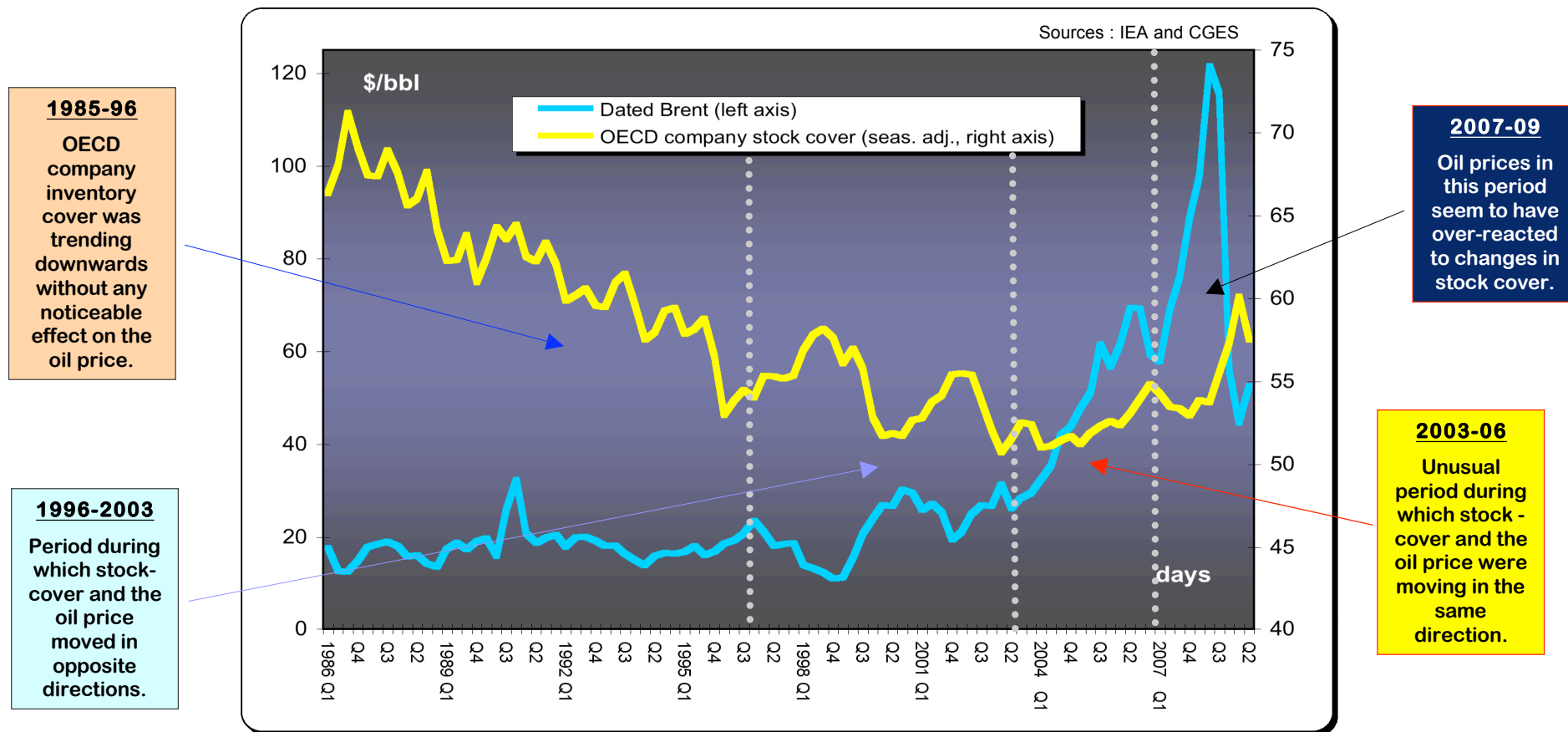
If we thought the price of oil was volatile in the years between 1985 and 2002, we obviously had seen nothing yet! During the years 2003 to 2007 the oil price's standard deviation (at \$17/bbl) was more than three times that of the earlier period (at \$5/bbl).

# The price of oil and global oil inventory cover



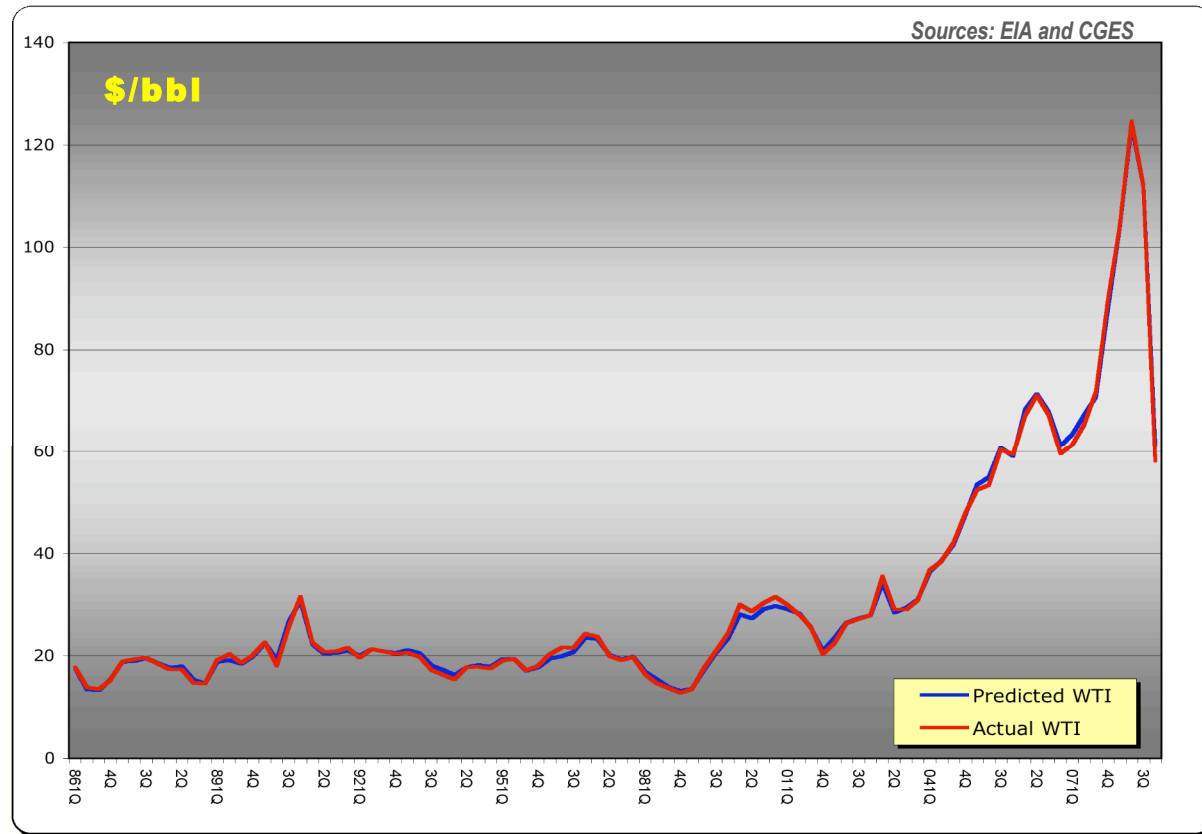
It is difficult to reconcile the wild swings of the oil price since 1Q07 with the sedate undulations of global inventory cover, unless some other consideration is introduced. A good candidate is the futures market, where expectations of the direction in which oil's fundamentals are heading intermingle with investor-speculators' ideas about other commodity and currency plays to give oil's forward curve a particular shape.

# OECD stock cover and oil prices



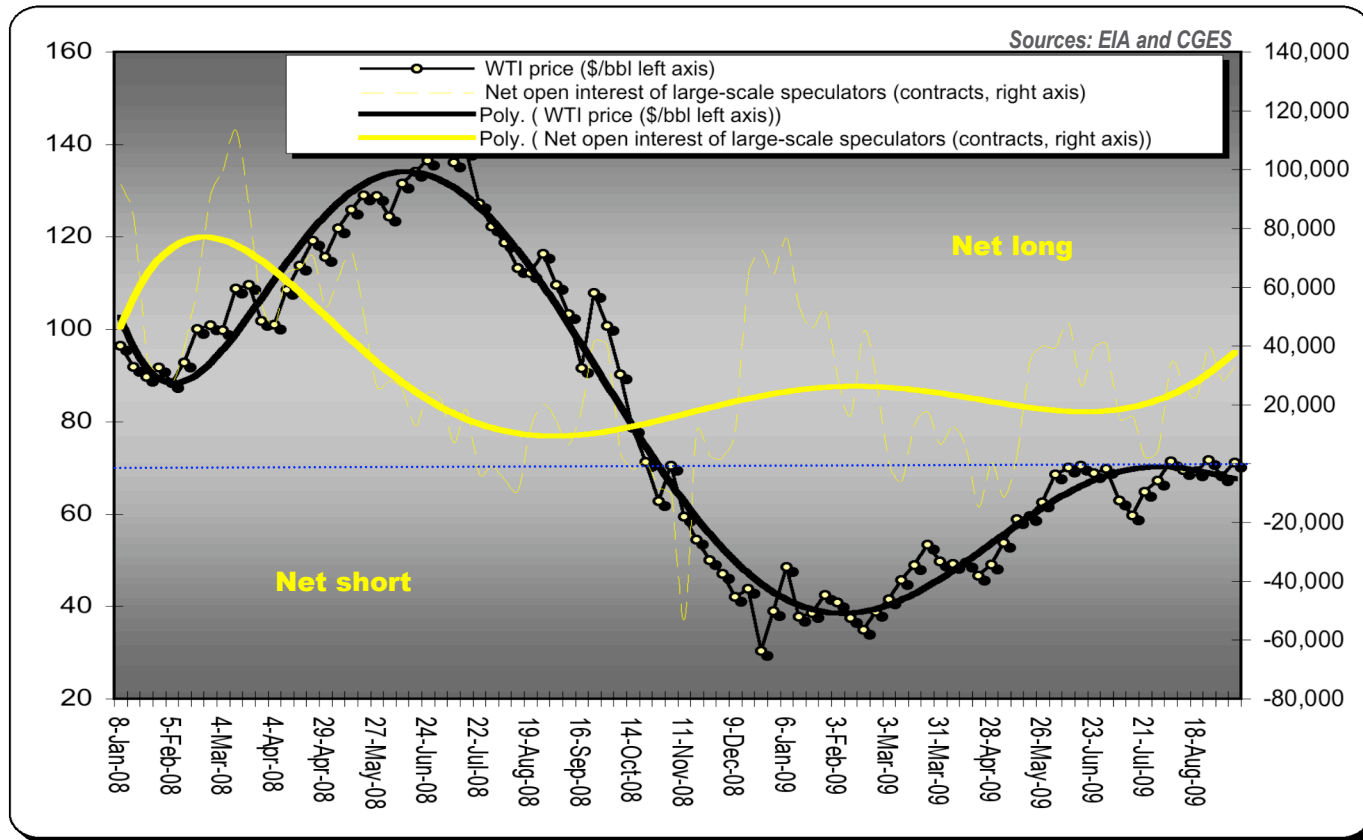
The relationship between inventory cover and oil prices is not straightforward. From 2Q03 onwards forward cover rose from 51 days to 55 days, yet oil prices rose relentlessly, except for two episodes of price weakness (4Q05 and 4Q06-1Q07), both associated with rises in inventory cover. After 1Q07 OECD company stock cover first fell and then rose; oil prices moved accordingly, but in a grossly exaggerated fashion.

# Explaining the price of WTI crude from 1Q86 to 4Q08



Fundamental considerations like oil consumption and inventories do have a role to play in determining the price of WTI (global spare production capacity apparently does not), but they are not enough. The most important influence on the spot price of WTI, both in terms of magnitude and statistical significance, is the third-month WTI futures price in relation to a short-term US interest rate, which acts as a proxy for the cost of carry.

# Does speculation drive the price of WTI?



These players (net long for most of the time) get on and off the oil price bandwagon once they have become convinced that either a price trend is likely to continue or it has gone too far. When WTI was rising inexorably during 1H08, these speculators initially increased their net long positions, but as prices got higher they reduced their positions, expecting a price reversal. Some time after WTI began its long descent these speculators started to go increasingly net long, but when WTI continued to slide they cut back heavily, eventually plunging into net-short territory. However, the lower prices got the greater became the expectation that they would rise again, leading in turn to a renewed build in net long positions and so on so forth in an ongoing series of interactions between prices and sentiment.

# Current elements of instability

- **OPEC** thinks oil demand is highly inelastic and that by restricting the world's residual supplies of oil it will ensure rising prices and ever-growing revenues; it also does not differentiate between consumers, tending to treat them as one.
- **OPEC** also believes that marginal non-OPEC production needs oil prices above \$70/bbl today in order to yield reasonable returns.
- **OPEC** wishes to keep oil inventories low, fearing the 'ghost of Jakarta' in 1997. Stock increases in 4Q06 led to an OPEC-led output squeeze.
- The **companies** are kept out of the low-cost areas with potential and are opportunity constrained as a result. Their horizons are foreshortened and they have not been investing enough, preferring to return funds to their shareholders.
- **Governments** of oil-consuming countries, especially in the developed world, wish to reduce their dependence on oil in the longer-term; they are also fearful of rising levels of CO<sub>2</sub> emissions and have pledged to reduce drastically their use of hydrocarbons.
- **The oil derivatives market** has grown hugely since 2001 and exaggerates the effect of changes in fundamentals.



## **Concluding remarks**

- Oil's fundamentals obviously affect the price of oil, but there are other considerations too.
- The inherent instability of the oil industry is reflected in changing expectations concerning future supplies, demand and costs.
- This underlying instability leads to price volatility, which creates a concomitant need for hedging.
- Oil futures (options and other derivatives) offer speculators an opportunity to profit from the oil market's instability.
- Some investors see the oil market as a commodity play and a US Dollar hedge.
- Speculators are not responsible for the oil market's instability, but they can exaggerate oil price movements by jumping on and off the oil-price bandwagon.