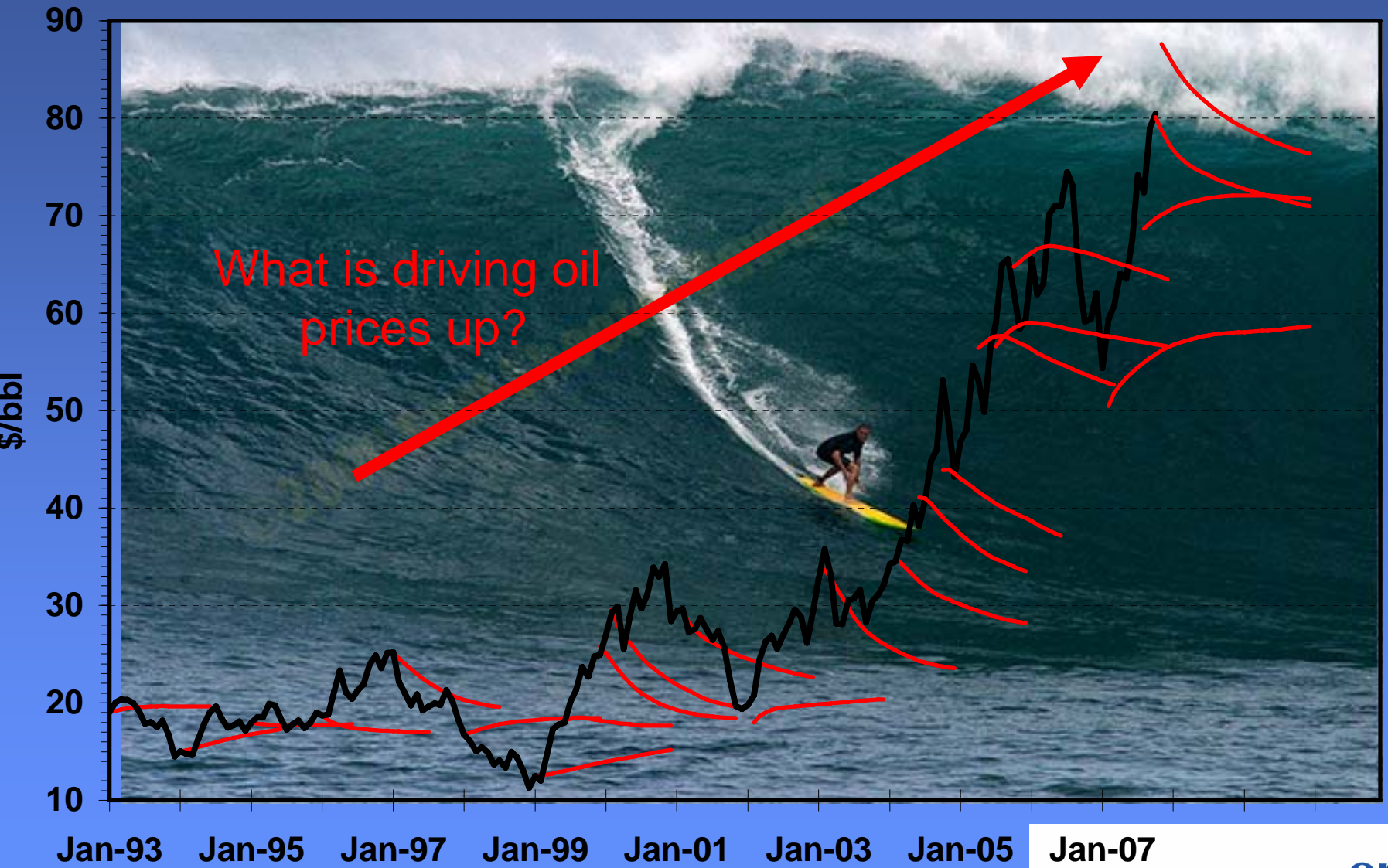


# Oil price determination: futures markets or fundamentals?

David Long  
Oxford Petroleum Research Associates  
CGES Oil Price Seminar  
18 October 2007  
[www.oxfordpetroleum.com](http://www.oxfordpetroleum.com)

# Why are oil prices so high?

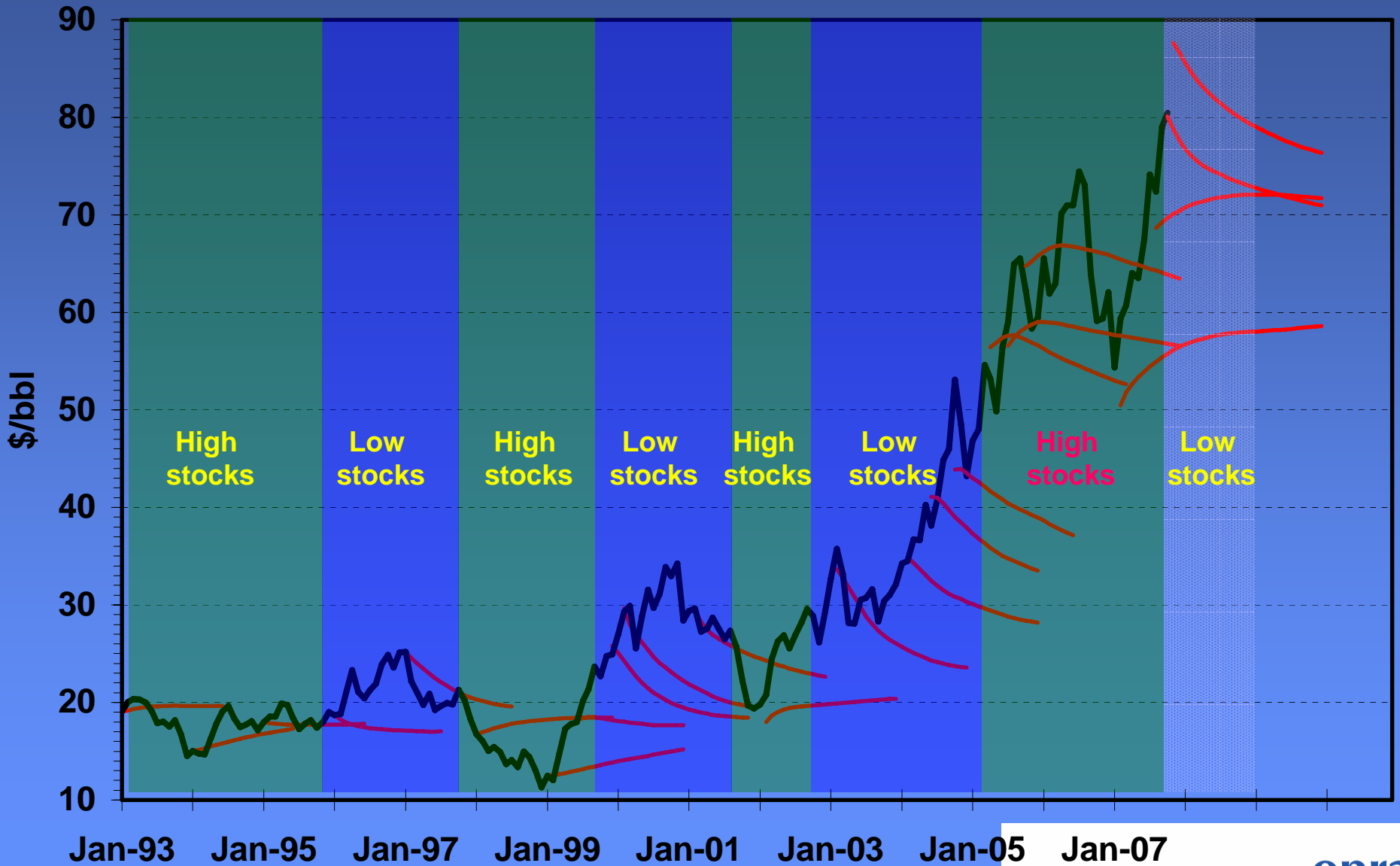


What is driving oil prices up?

Source: Nymex, Opra

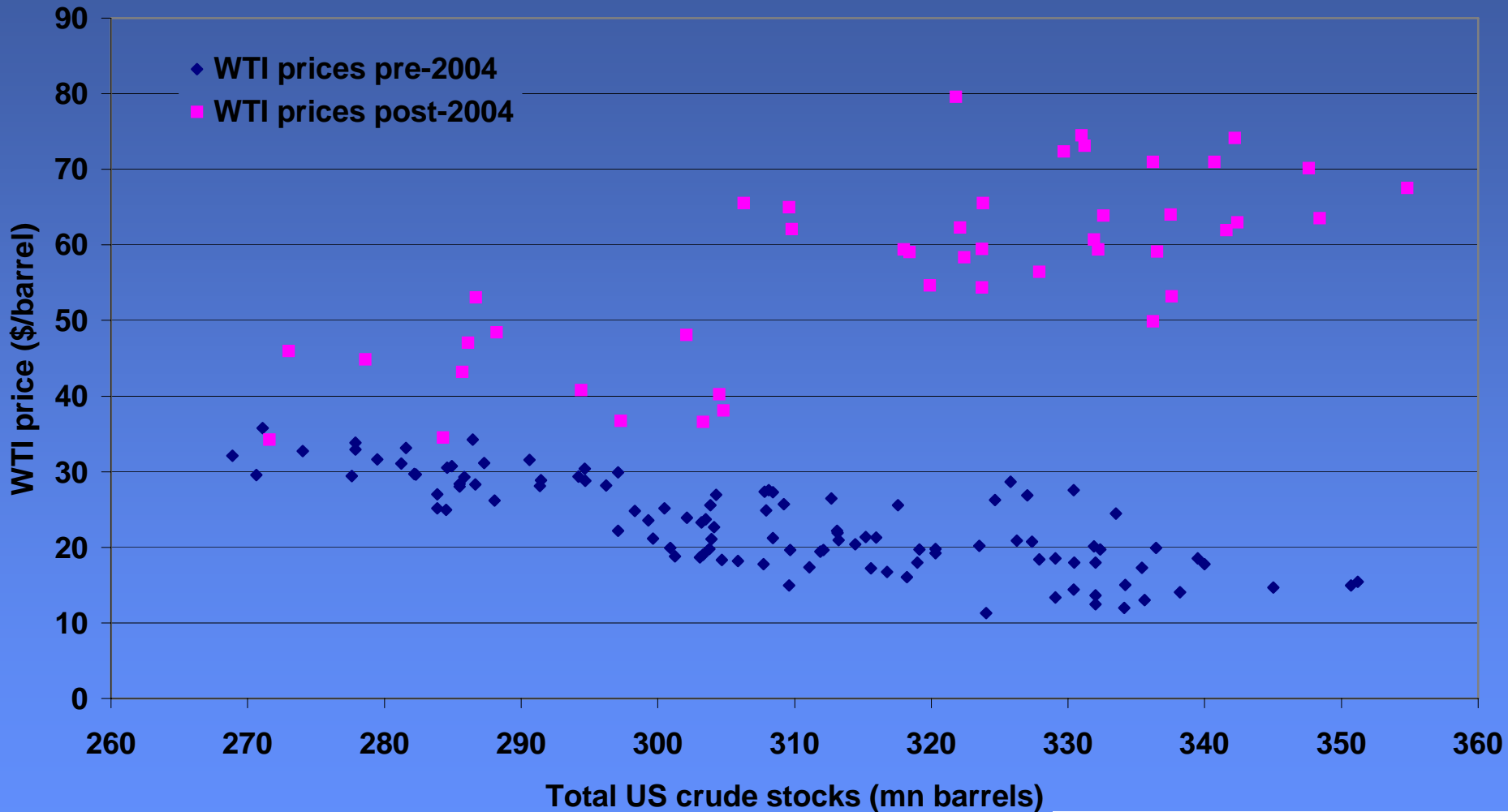
Jan-07

# Not stocks...



Source: Nymex, Opra

# Stock-price "relationship" broken ...



Source: Nymex, EIA, Opra

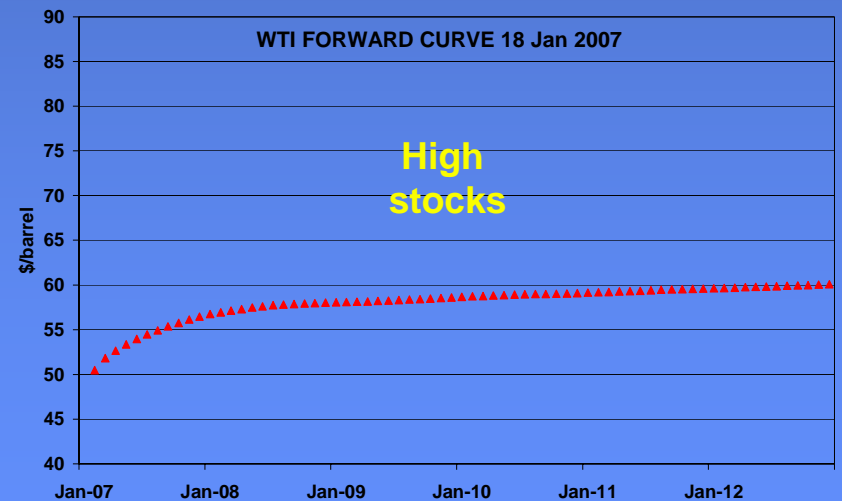
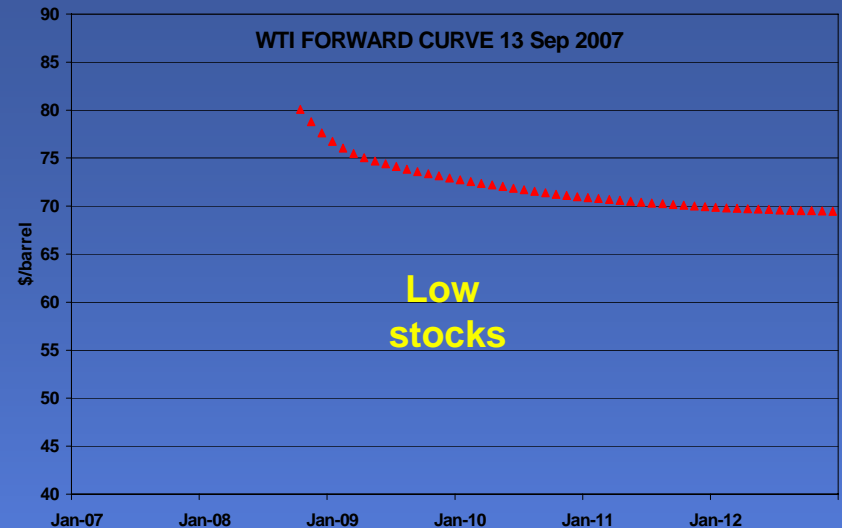
# ...stocks affect shape of forward curve

- **Backwardation**

- *origin: premium paid to buyer for delayed delivery*
- prompt price above forward
- price of accessibility
- disincentive to hold stocks
- no limit to backwardation

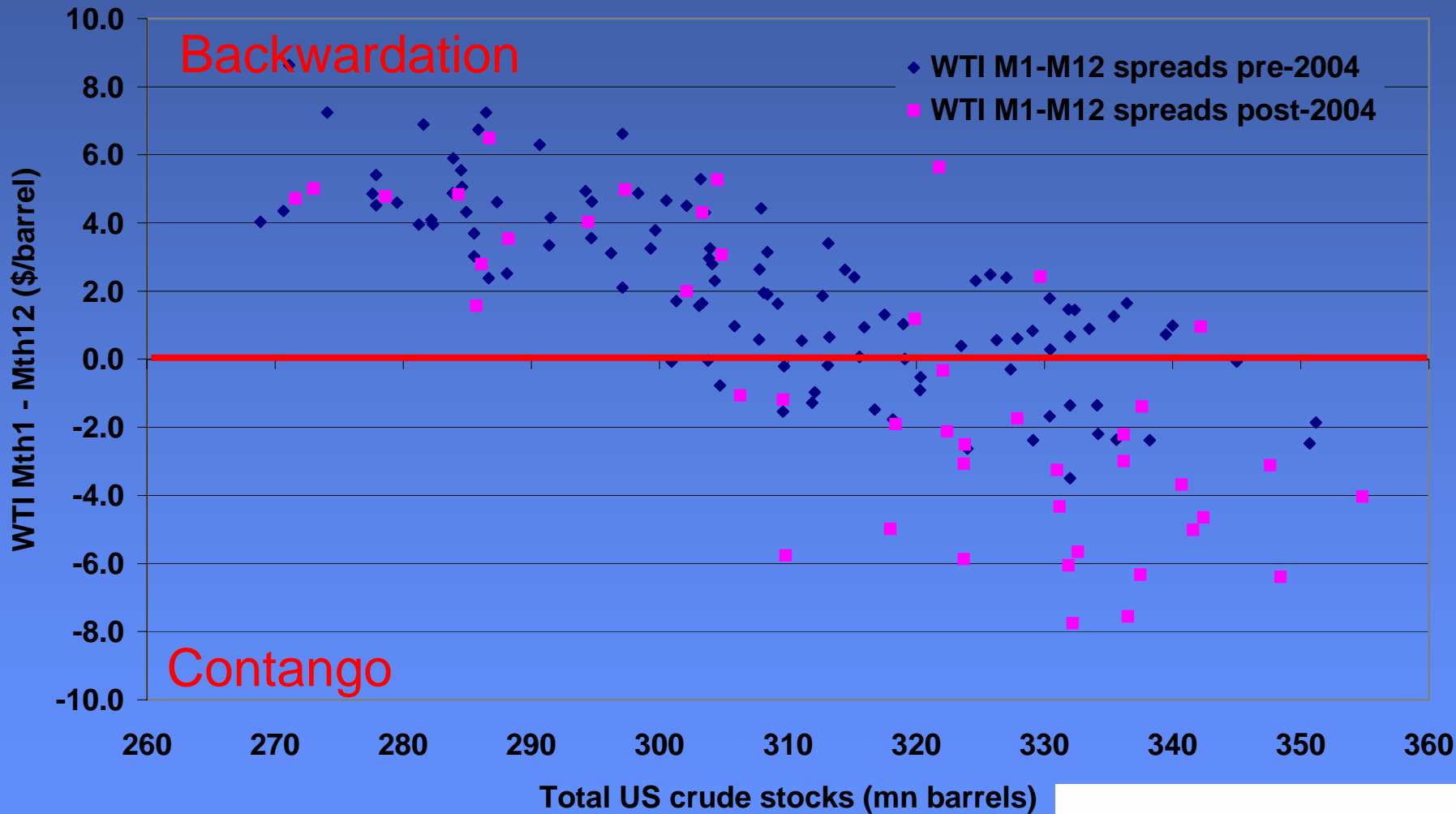
- **Contango**

- *origin: charge paid by buyer for delayed payment*
- prompt price below forward
- returns to storage
- incentive to hold stocks
- limited by cost of storage



Source: Nymex, Opra

# ...so stock-spread relationship holds up



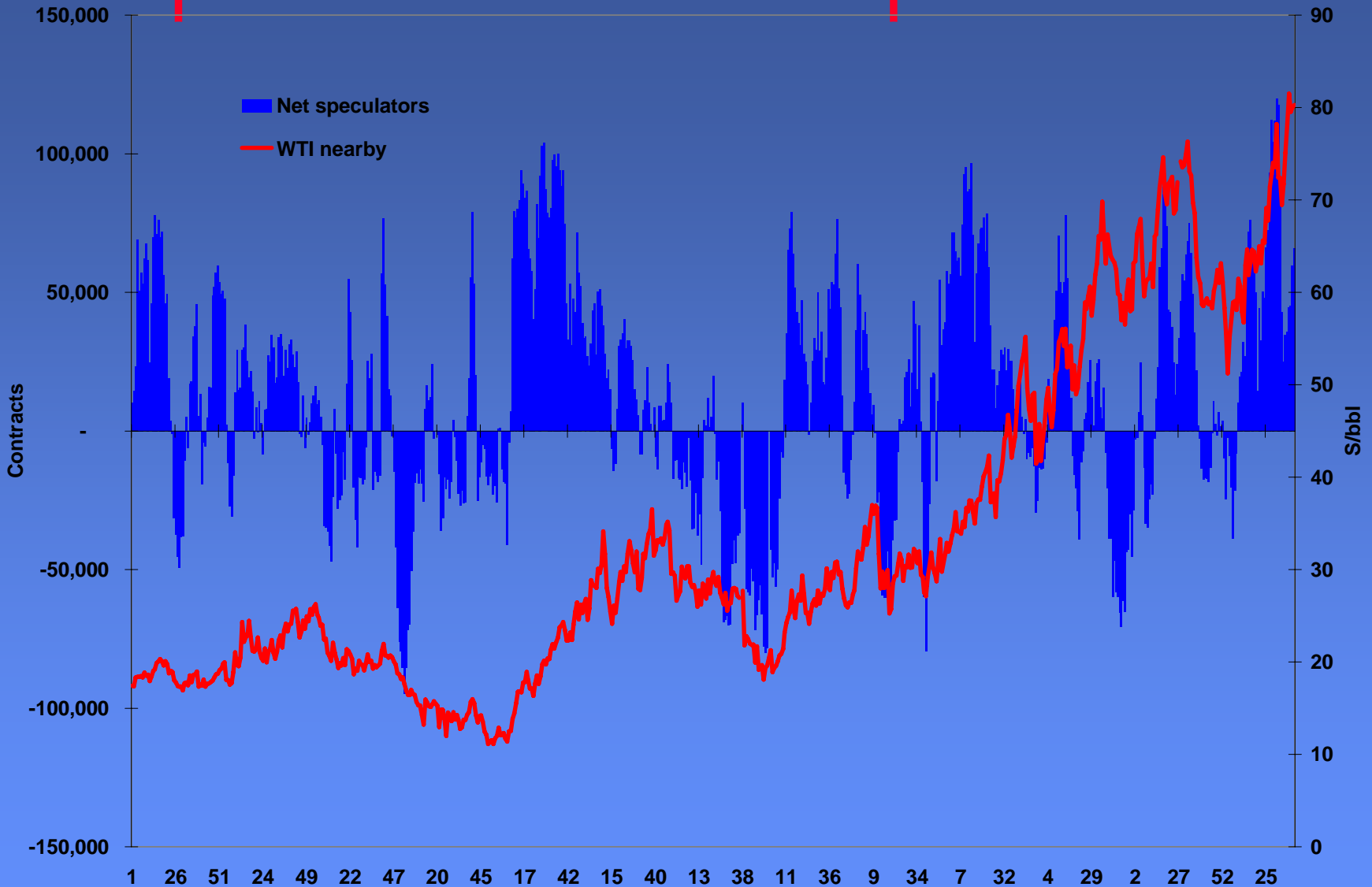
Source: Nymex, EIA, Opra

# Not speculators...



Source: CFTC, Nymex

# ...speculators follow price trends



1995

2000

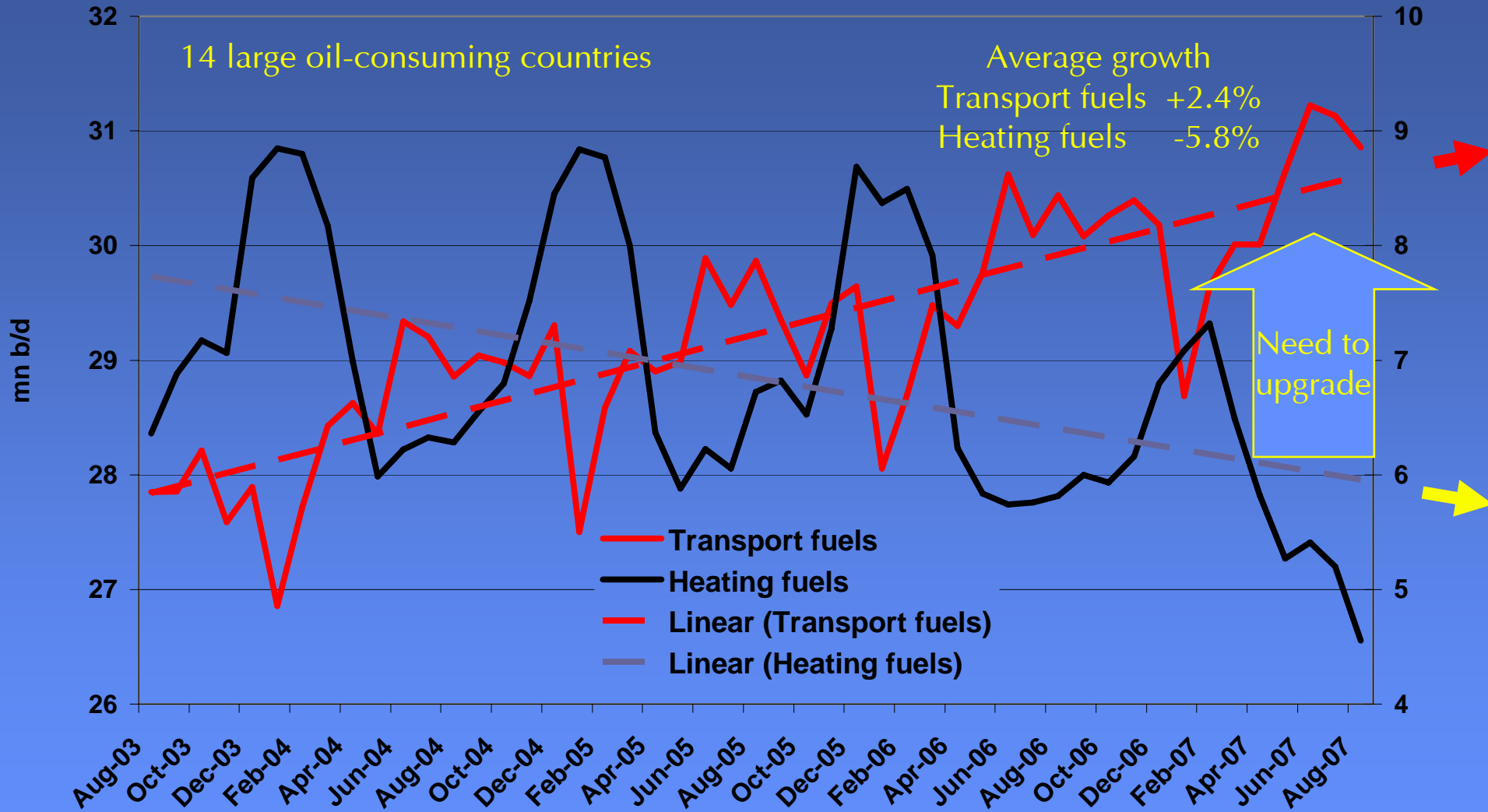
2005

Source: CFTC, Nymex

# Why *are* oil prices so high?

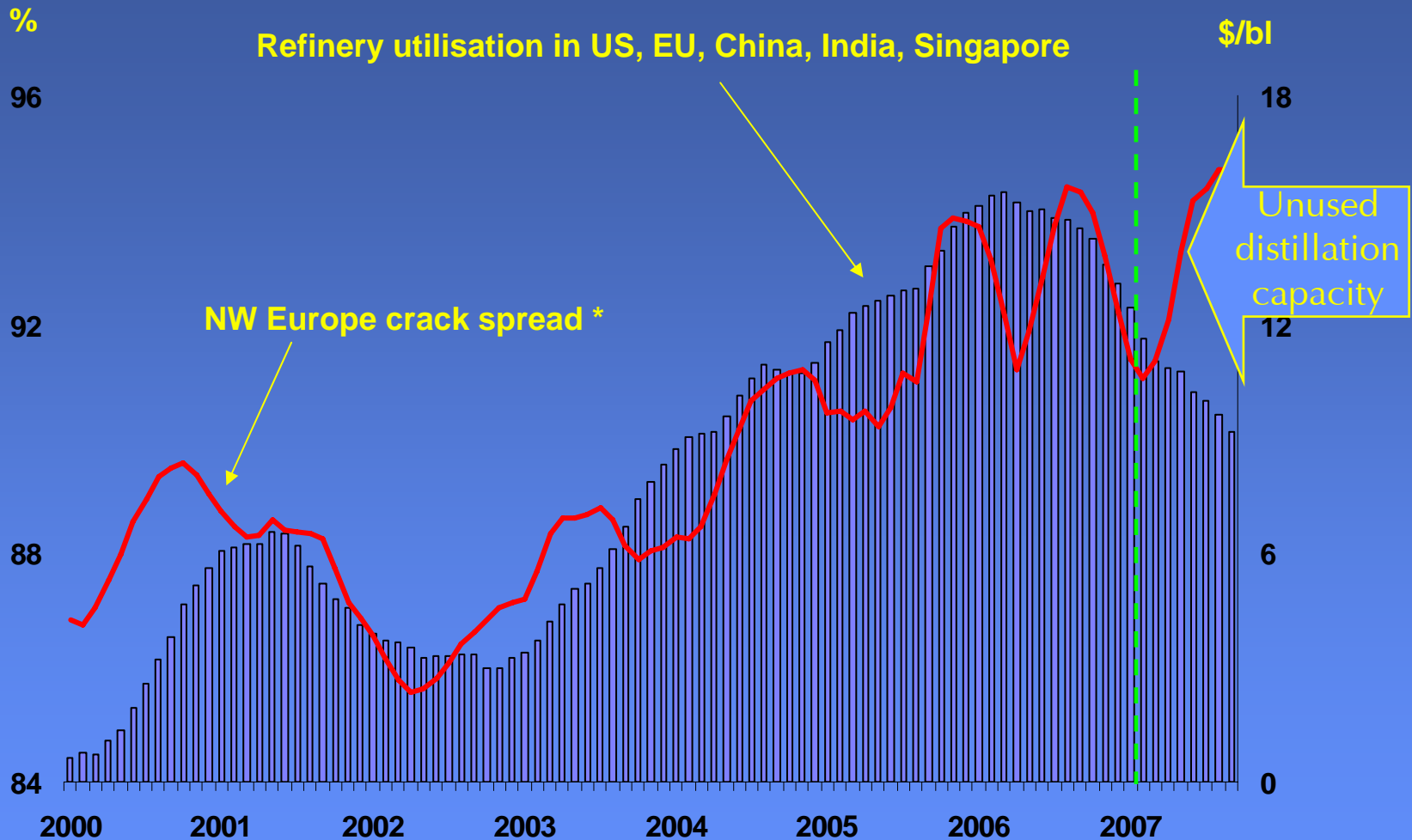
- Strong demand for transport fuels
- Downstream refinery bottlenecks
- Upstream supply rationing

# Strong demand for transport fuels



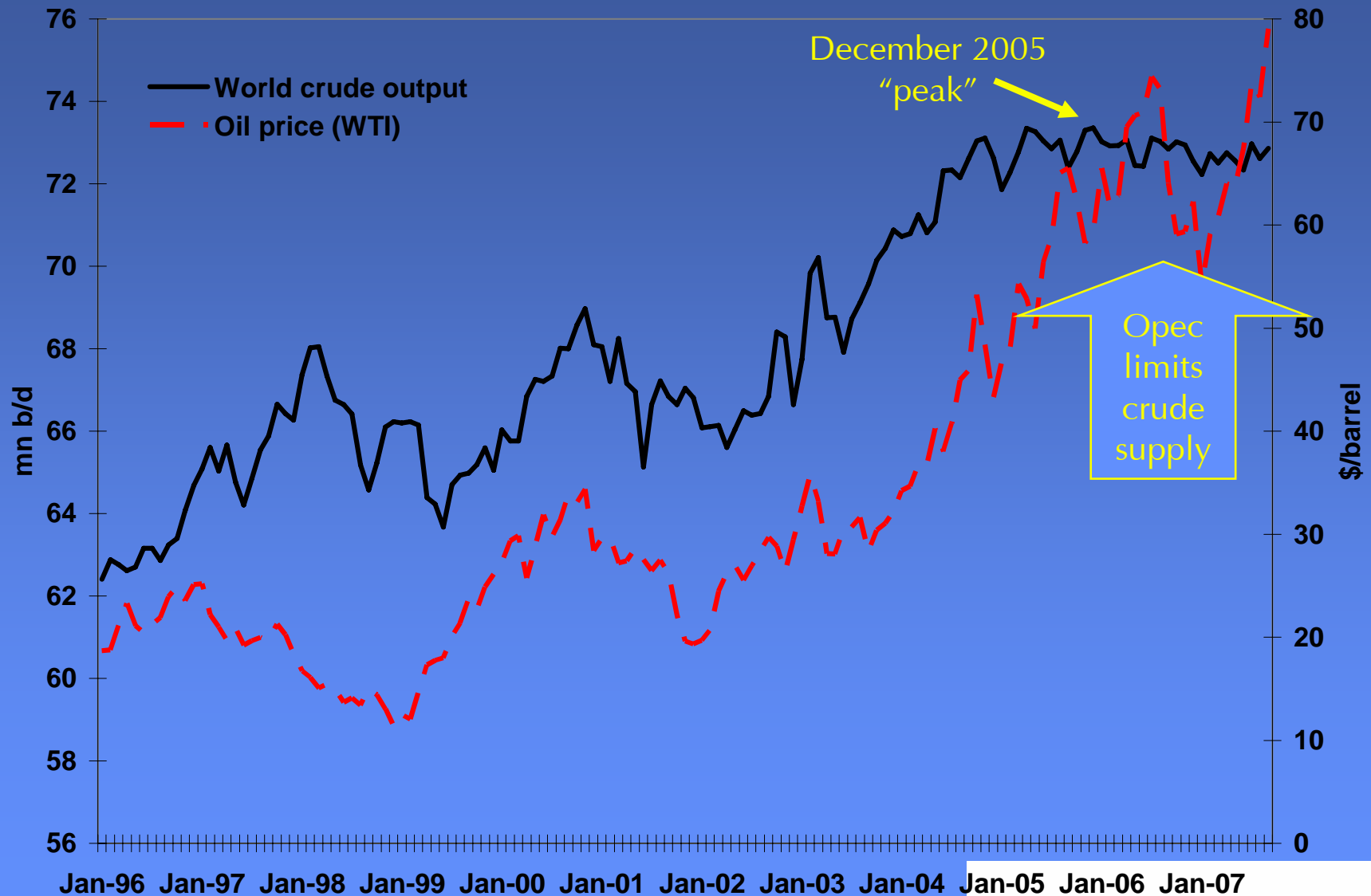
Source: Argus Fundamentals

# Downstream refinery bottlenecks



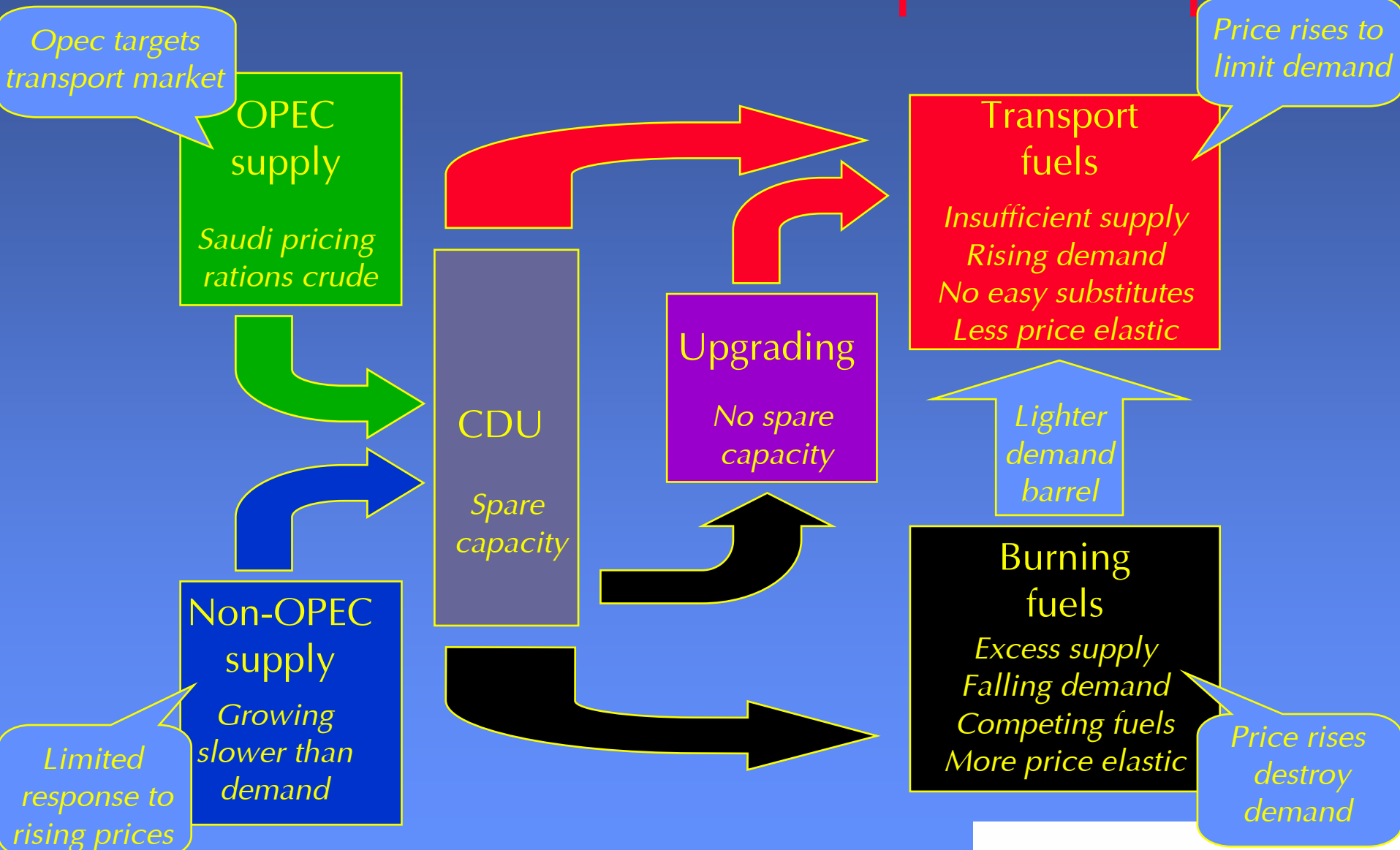
\* 211 crack spread = average gasoline/distillate less crude

# Upstream supply rationing

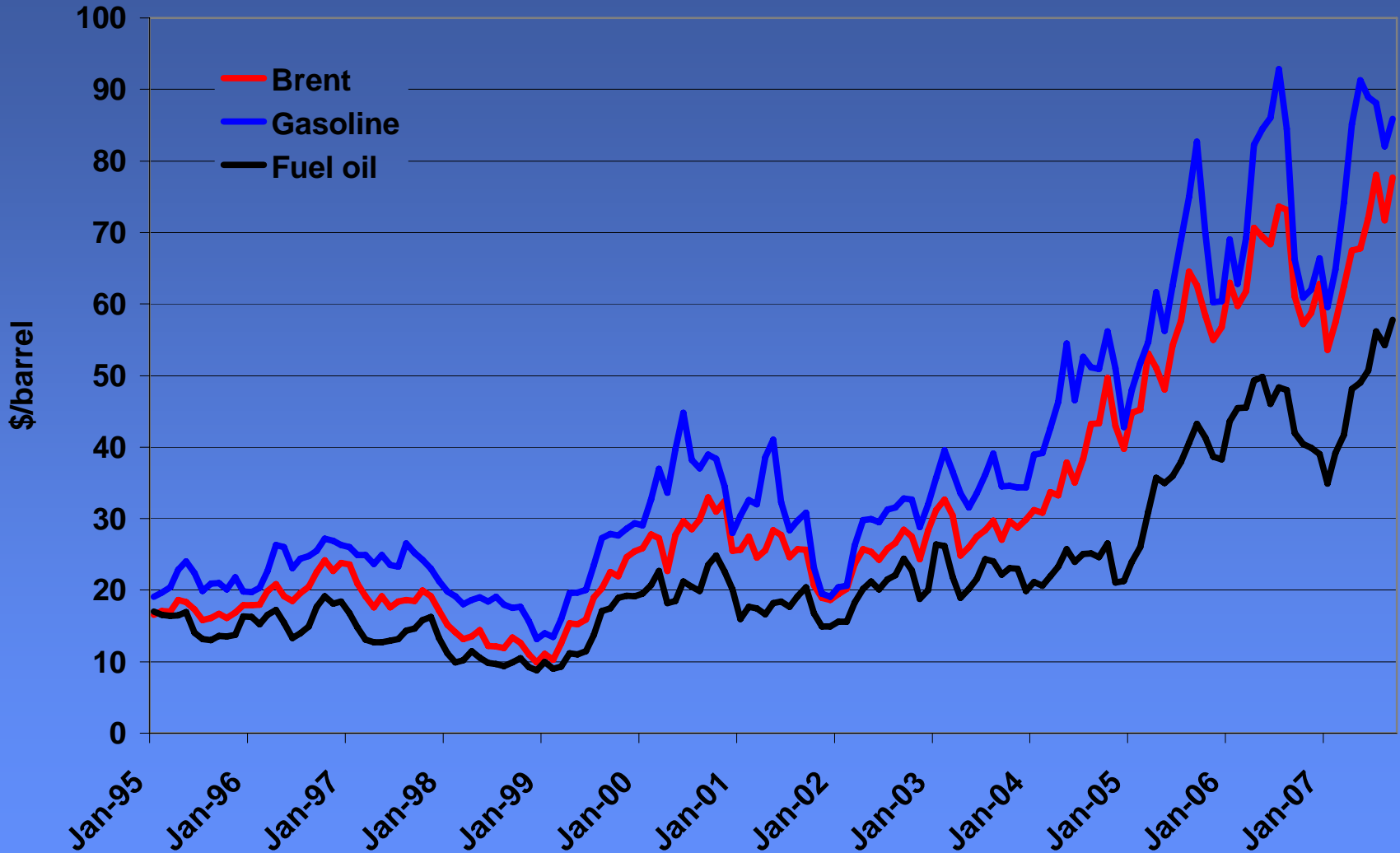


Source: Argus Fundamentals, Nymex

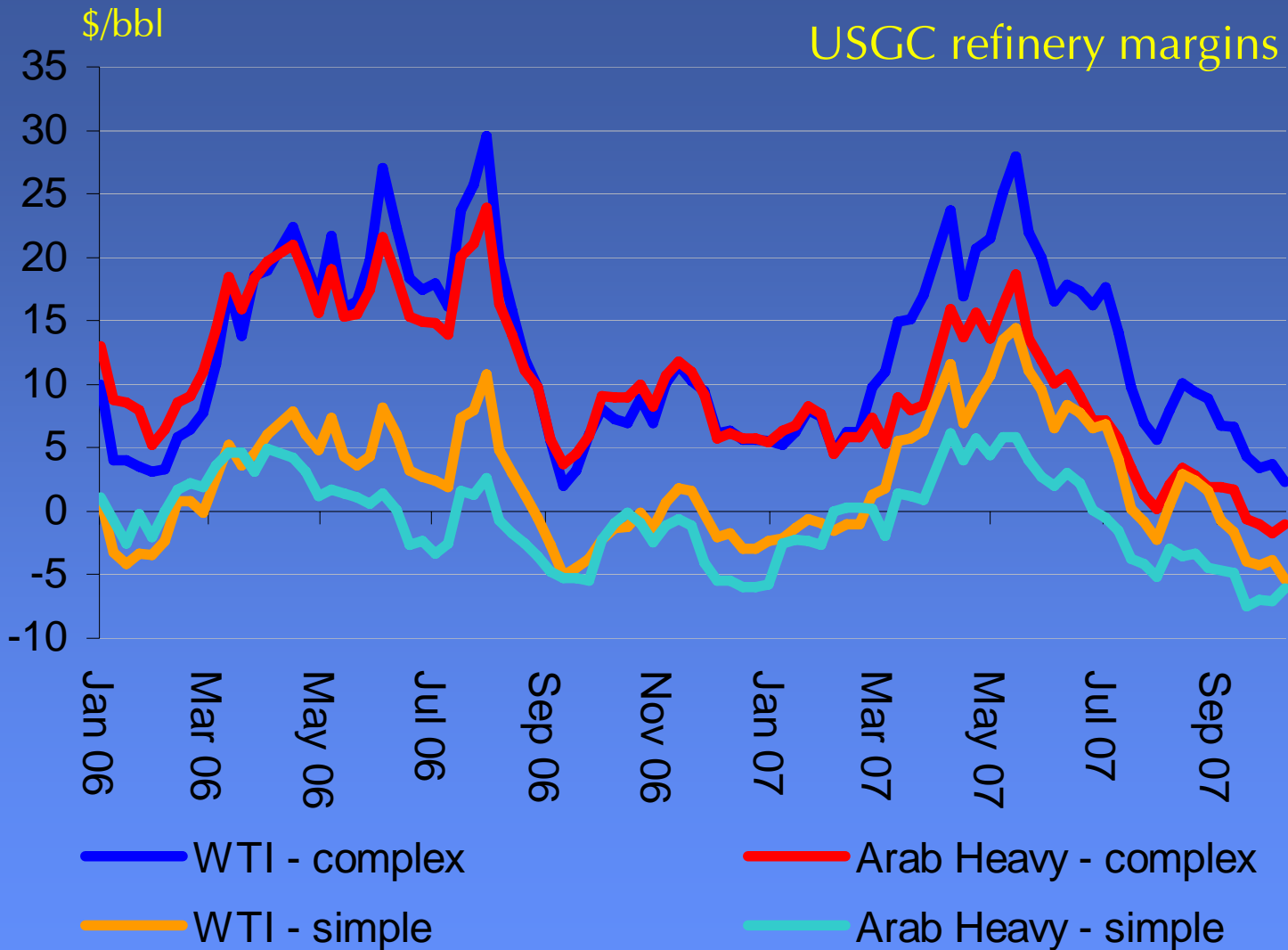
# Fundamentals force prices up



# Crack spreads widen



# Saudi pricing rations crude



Source: Argus Global Markets, CGES

# No equilibrium at \$80/bbl

- Oil market is in permanent disequilibrium
- Refinery upgrading capacity is fully-utilised
- Distilling more crude creates surplus residue
- Residue competes with crude as a feedstock
- Saudi pricing policy rations crude supply...
- ...so prices rise to limit transport fuel demand
- ...or prices fall to clear surplus heating fuel

# The shape of the industry

The basic feature of the petroleum industry ... *is that it is not self-adjusting...*

...a price structure that allows for ups and downs which fail to bring relief from dearth or glut

*“The problem of oil is that there is always too much or too little”*

*Paul Frankel, Essentials of Petroleum, 1946*

# Oil price determination: futures markets or fundamentals?

David Long  
Oxford Petroleum Research Associates  
CGES Oil Price Seminar  
18 October 2007  
[www.oxfordpetroleum.com](http://www.oxfordpetroleum.com)