2008 energy outlook

ASERCA, Mexico City, February 22, 2008

The Pulse of Finance

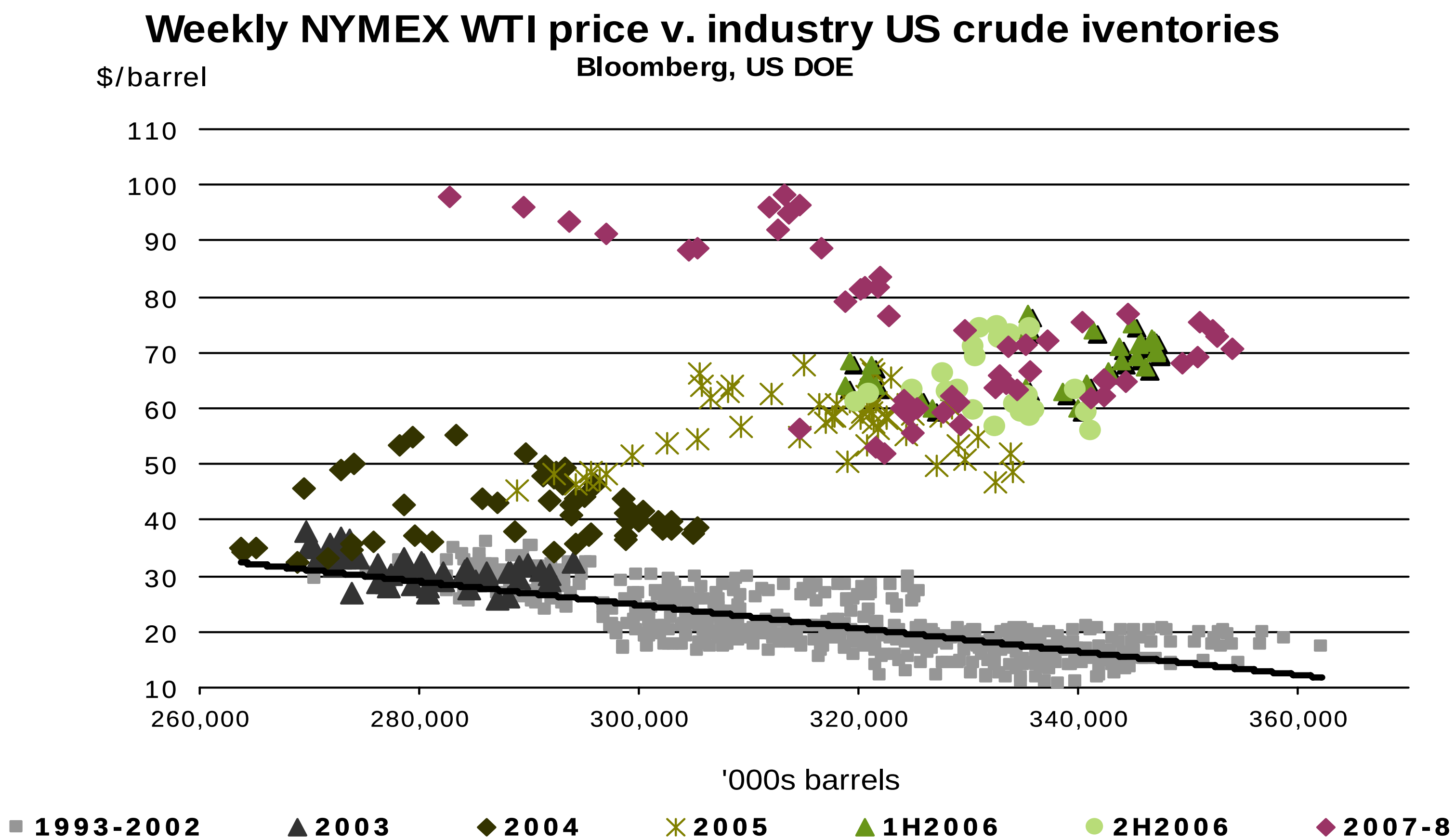
Newedge

2008 front-month WTI price forecast

	1Q	2Q	3Q	4Q	**FY**
2007	58.27	65.02	75.15	90.50	**72.36**
2008	94.5	90	87	76	**86.85**

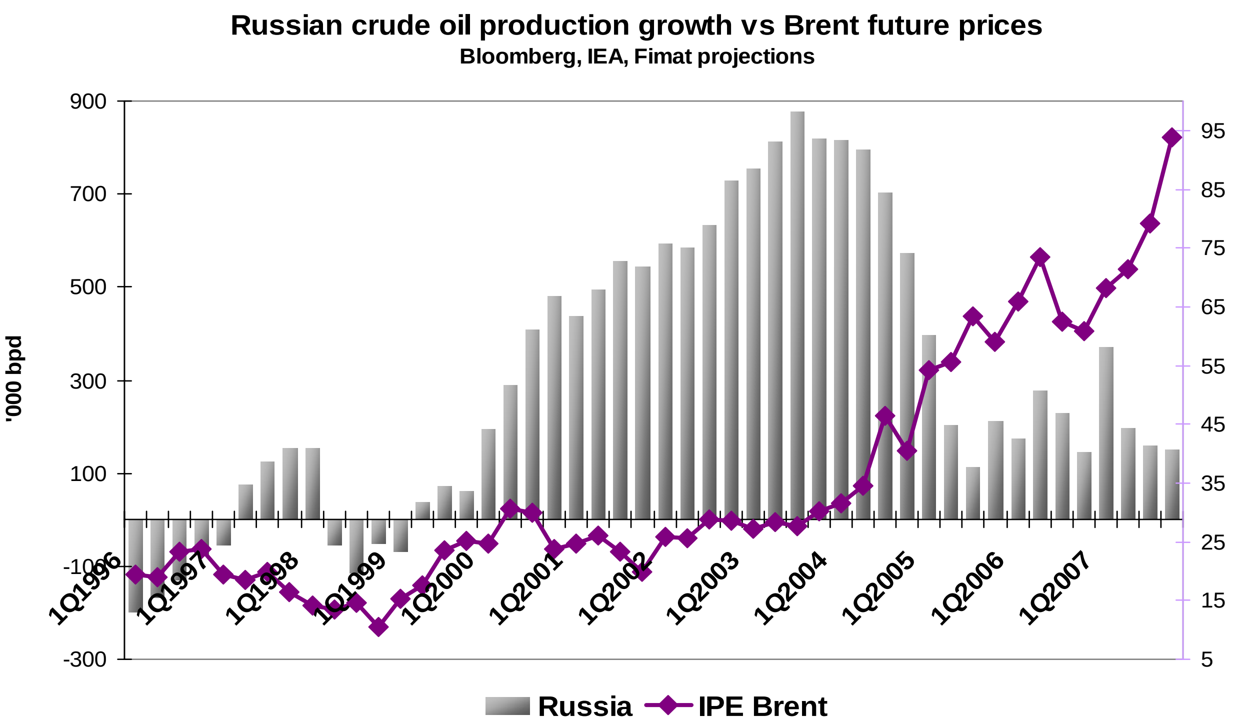
Stocks vs. prices: reading the tea leaves

Getting the fundamentals right and the price wrong: shifting relationships



Oil price forecasts: why they're so often off the mark

Getting fundamentals wrong: markets and politics



Russian supply growth vs. oil prices, 1996-2007: modeling mugged by politics

- Forecasting the present
- "Business as usual"
- The "unforeseen and almost certainly unforeseeable"
- Recessions, wars and other evils
- Political effect of prices
- Fundamental impact of politics

Beyond fundamentals

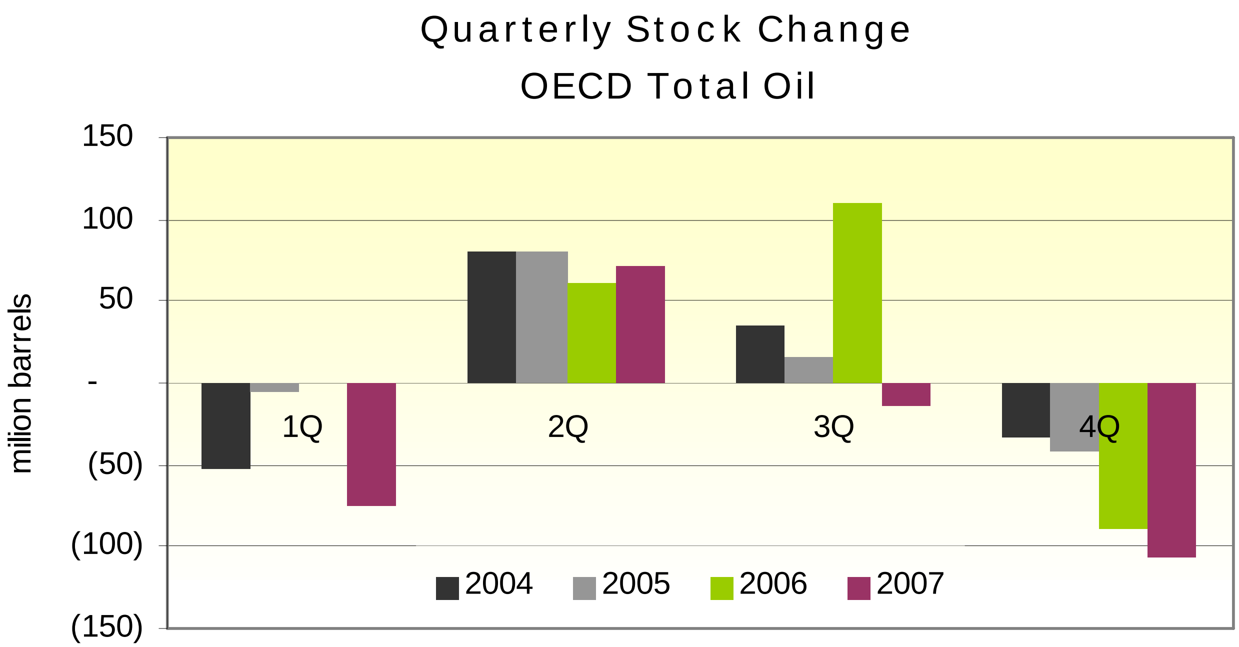
- Capacity constraints
  - Wellhead
  - Transportation
  - Refining
- Cost increases
- Labor shortage
- Geopolitical risk
  - Iran
  - Iraq
  - Nigeria

- Investment climate
  - Resource nationalism
  - Russia – Caspian – Venezuela…
  - NOCs vs. IOCs
  - "Chindia" vs. the west
  - Majors vs. service cos.
- New players
  - Oil as asset class
  - Funds vs. fundamentals
  - Oil as currency hedge?

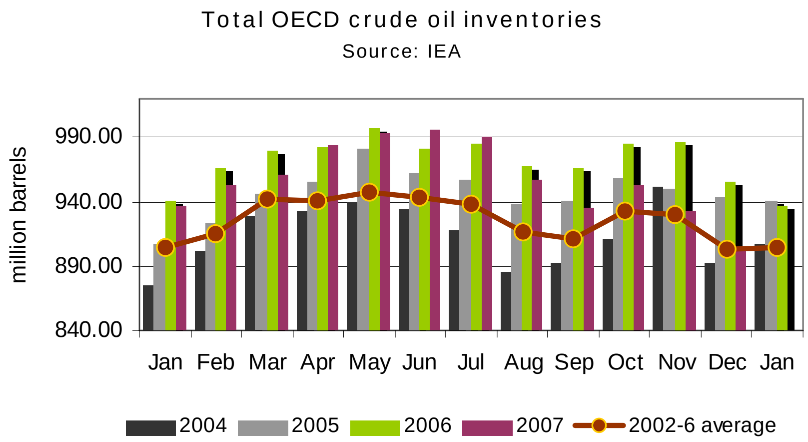
What a difference a year can make…

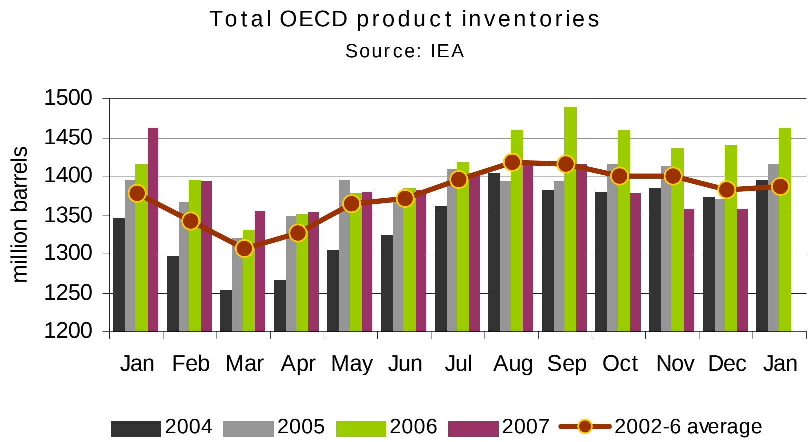
2007	**2008**
Tight oil fundamentals…	**Looser oil fundamentals…**
Demand growth runs ahead of supply	Supply growth runs ahead of demand
Stock draws	Stock builds
Spare capacity wafer thin at best	Spare capacity rebuilding
… ignite geopolitical risk…	**… cool geopolitical risk**
Resource nationalism curtails investment, hampers supply growth	Resource nationalism still going strong but trends diverge
IOCs on the defensive	IOCs more accommodating, getting resigned to reduced role
Petro-arrogance in the axis of oil	Demagogue petro-regimes face confidence crisis
Supply cuts cause big price "bang"	Easing fundamentals erode disruption payoff
Festering grassroots nationalism	Iranian risk off radar
Iran price "premium"	
… and strategic investment value	**--- casting doubt on oil as hedge**
Oil as currency hedge	Currency hedge less effective

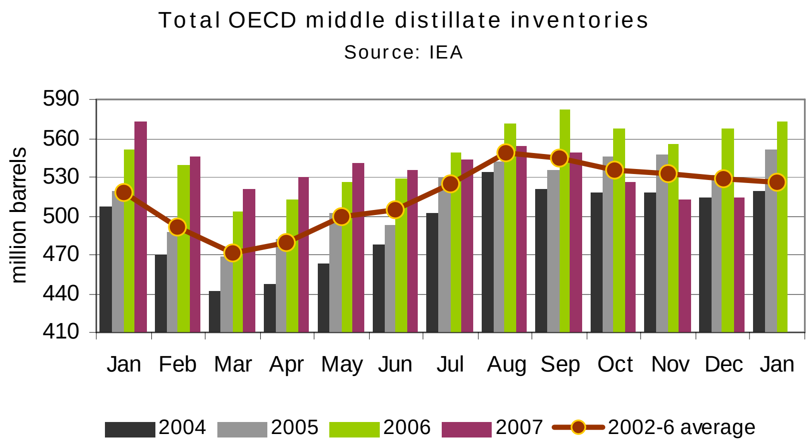
In the rearview mirror: the year of drawing dangerously

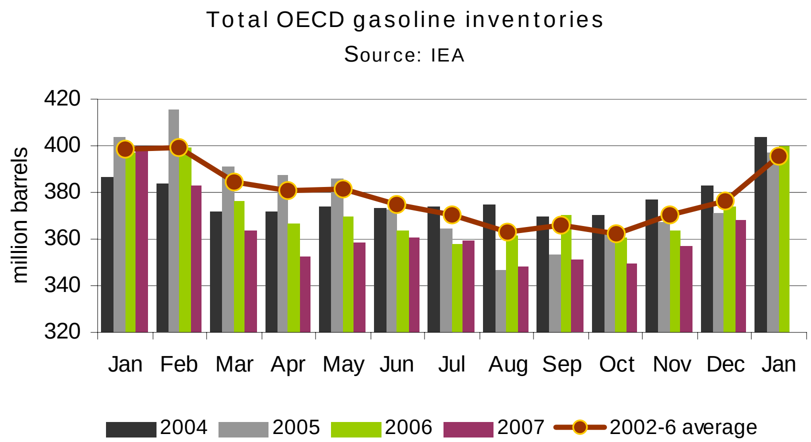


Tightness spanning the oil complex







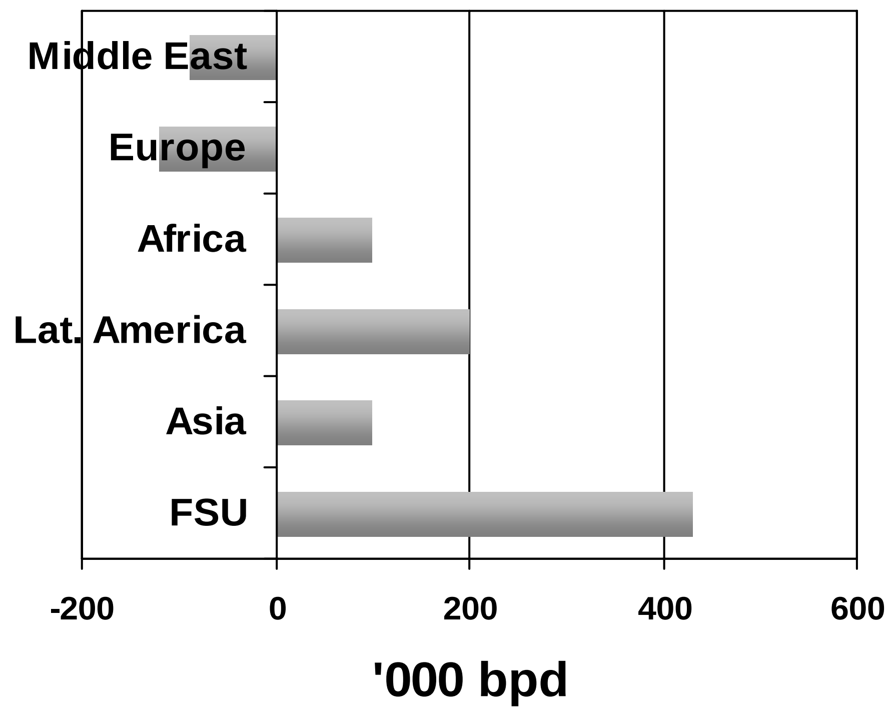


Godot sightings

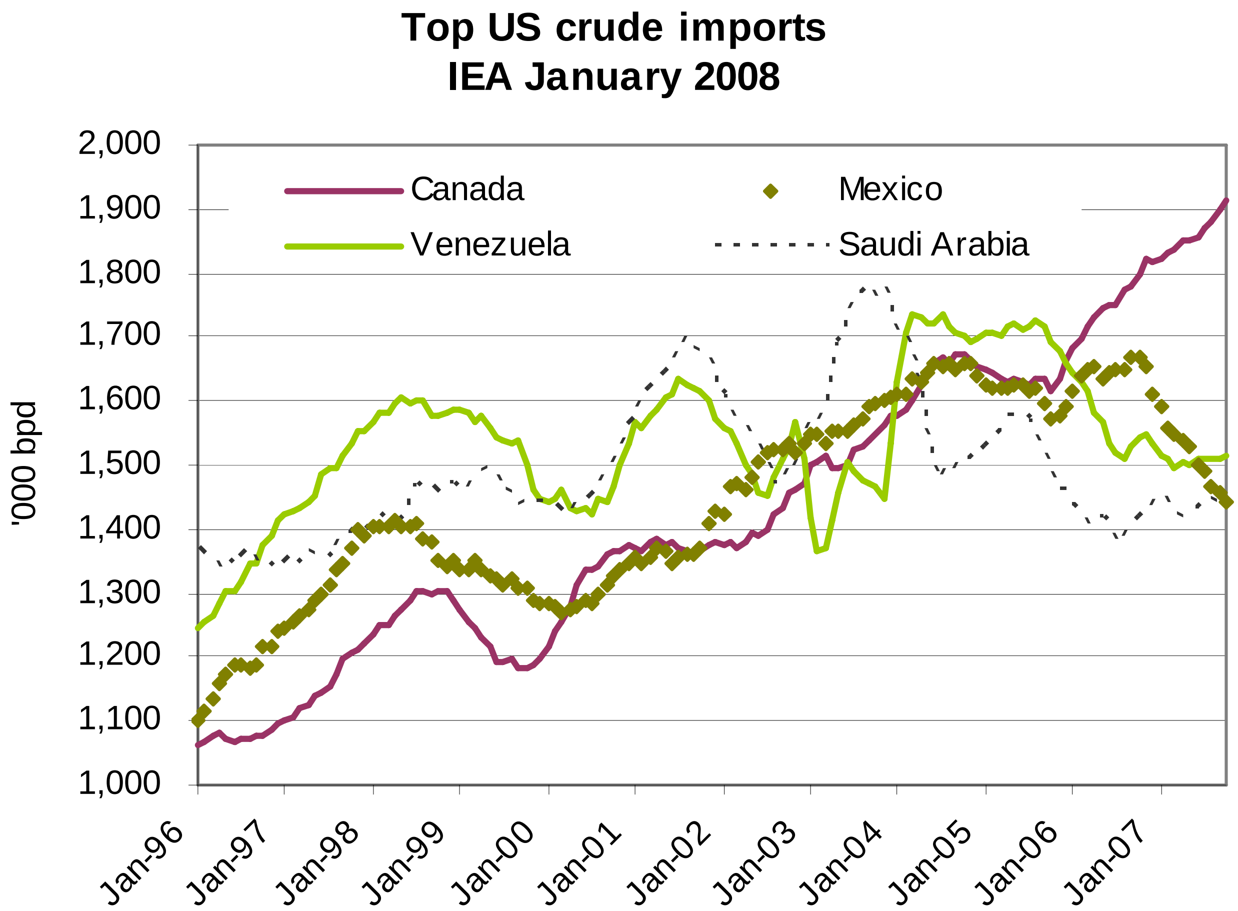
OPEC leads total supply growth rebound to 2.52 million bpd in 2008; non-OPEC continues to inch up

- OPEC +1.9 million bpd
  - Crude +1.4 million bpd
  - NGLs +500,000 bpd
- NON-OPEC +620,000 bpd
  - FSU: +430,000 bpd
  - Asia +100,000 bpd
  - Lat. America +200,000 bpd
  - Africa +100,000 bpd
  - N. Sea -120,000 bpd
  - Middle East -90,000 bp

Non-OPEC supply growth 2008



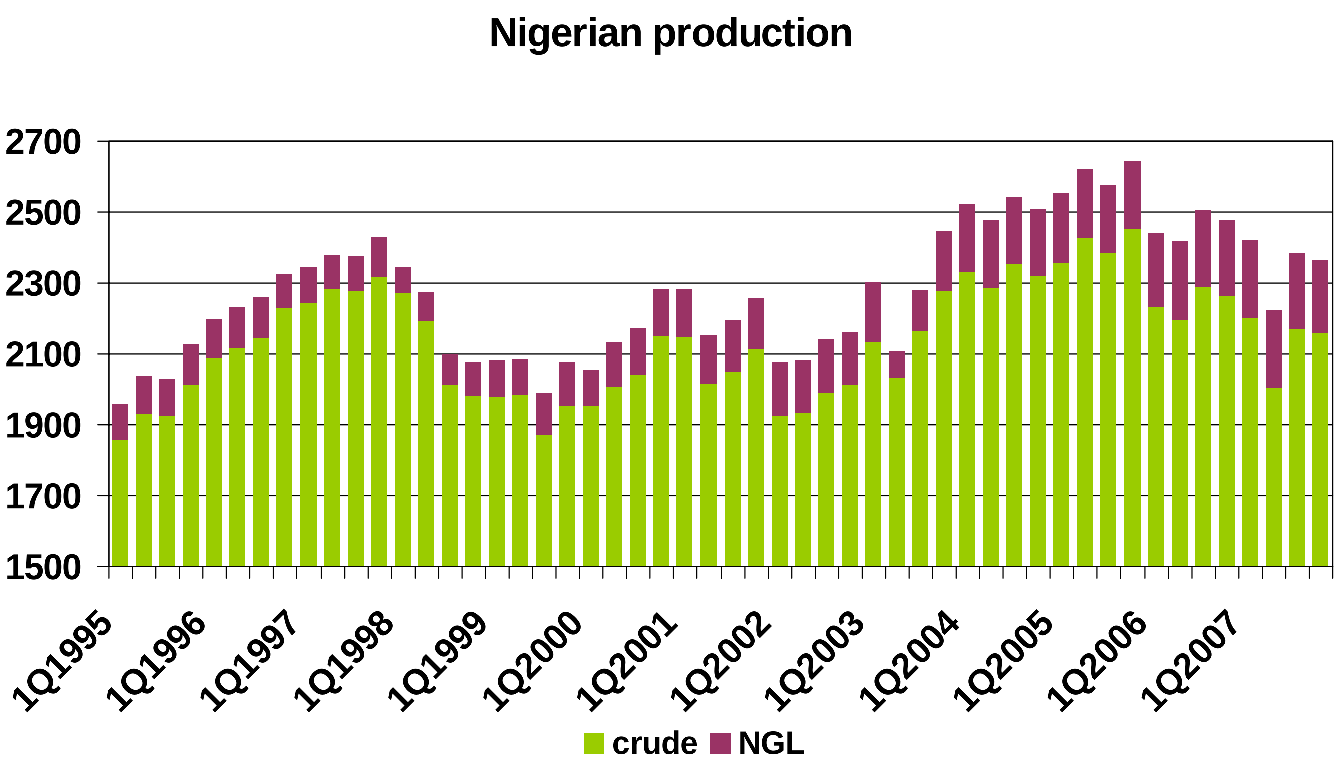
US crude supply: northern exposure



OPEC oil

- Internal fractures deepen…
- … but hawks increasingly marginalized
- Hawks also under dovish pressure both internationally and domestically:
  - Saudi concerns / demand security
  - Accommodating Angola
  - Recovery in Iraq and Nigeria?
  - Domestic pressures in Iran and Venezuela

Grass-root pressures: light at the end of the tunnel?



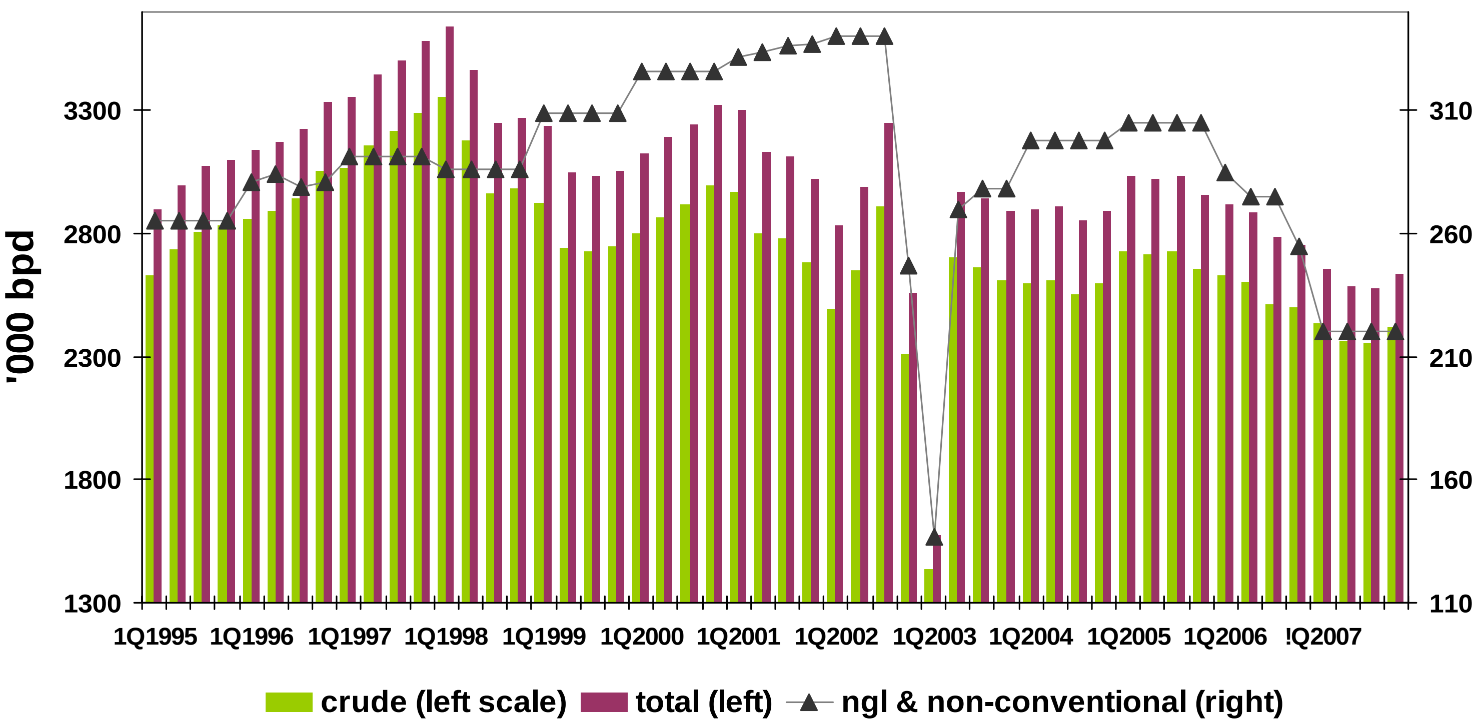
Loosening fundamentals may dampen grassroots claims

Splintering movement:

Asari Dokubu/Tom Ateke/Henry Oka

Addicted to oil

Venezuelan production decline



Iranian wild card

Demand and the R word

2001

- Jet fuel contraction led the OECD demand decline (outside of Asia)
- Terrorism compounded impact of economic decline
- China/non-OECD Asia resilient and insulated
- China driven by domestic demand, infrastructure development
- Mideast hit by low oil price

2008

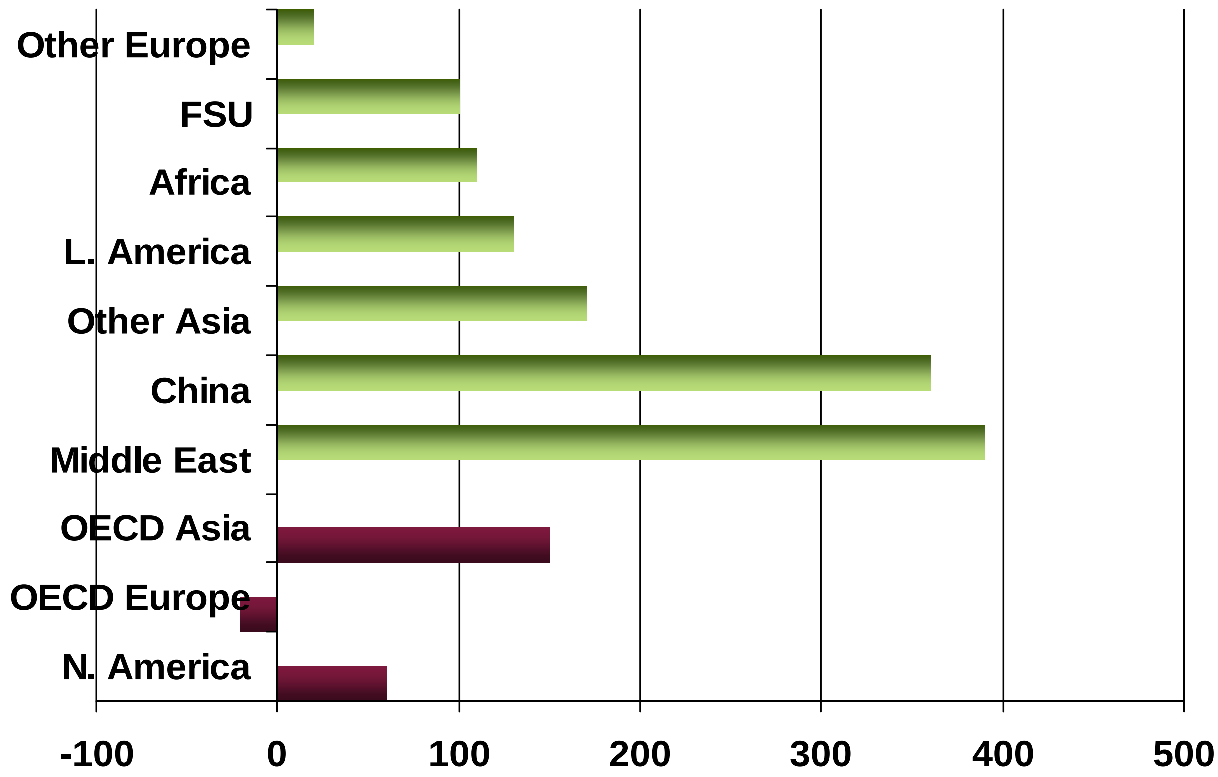
- Airline industry overhaul – more efficient, demand less elastic
- China more exposed to US and global downturn risk
- China industrial overcapacity buildup
- Booming Mideast demand as oil windfall, deftly harnessed, compounds impact of explosive demographic expansion

Demand growth rises East

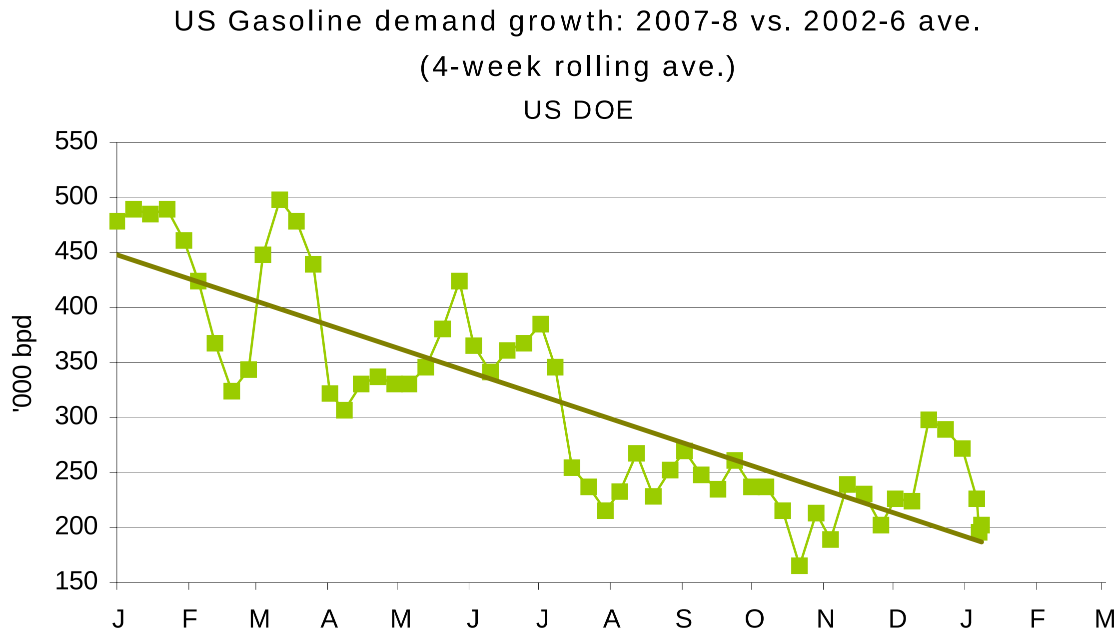
East of Suez continues to dominate global demand growth, up 1.44 million bpd yr/yr

OECD 180,000 bpd

Non-OECD 1.44 million bpd

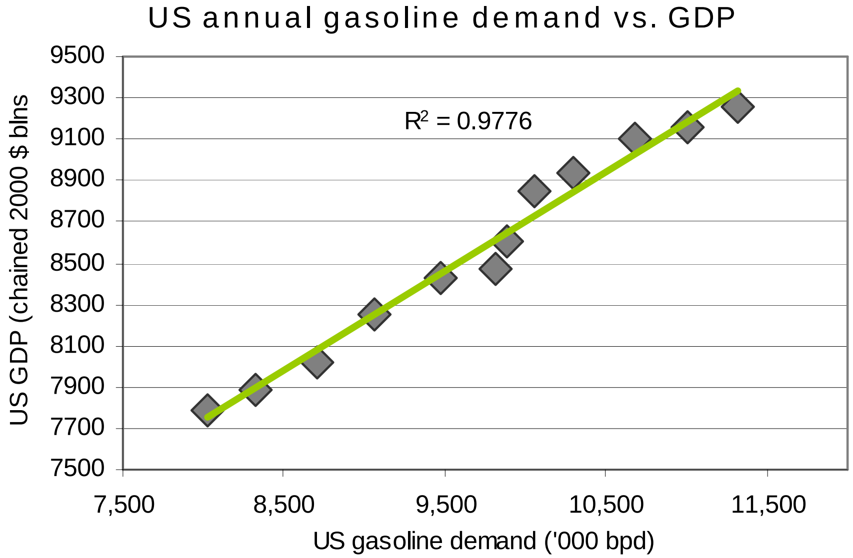


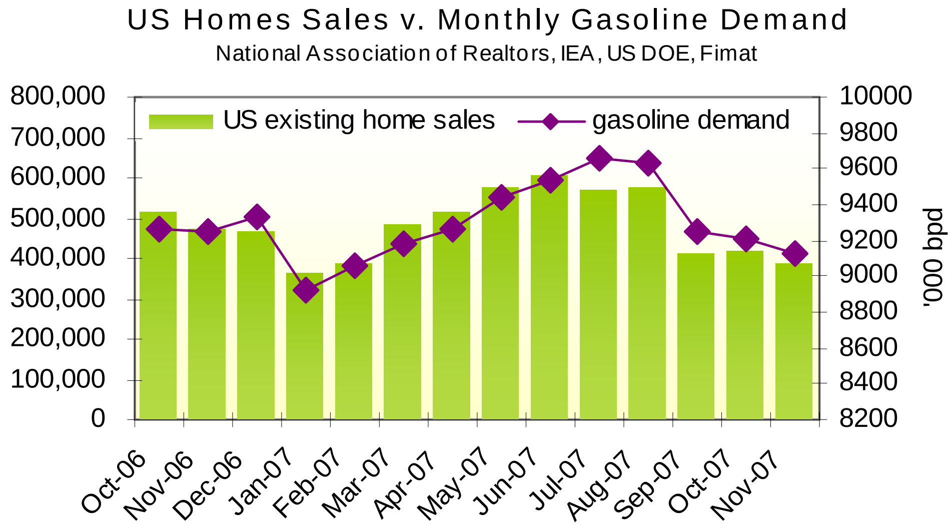
US gasoline demand: the big engine that couldn't any more



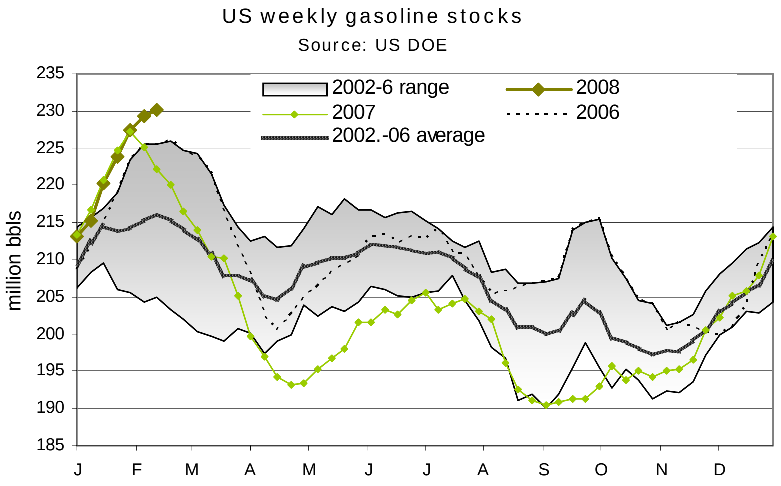
- US demand – the engine of OECD demand growth
- US gasoline – the lion's share of US demand
- But slower economic growth will take a toll on demand

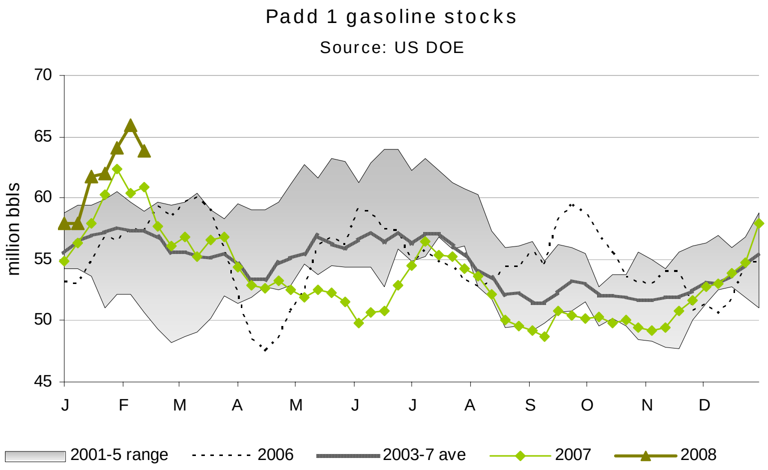
Slower economy to cut US driving demand



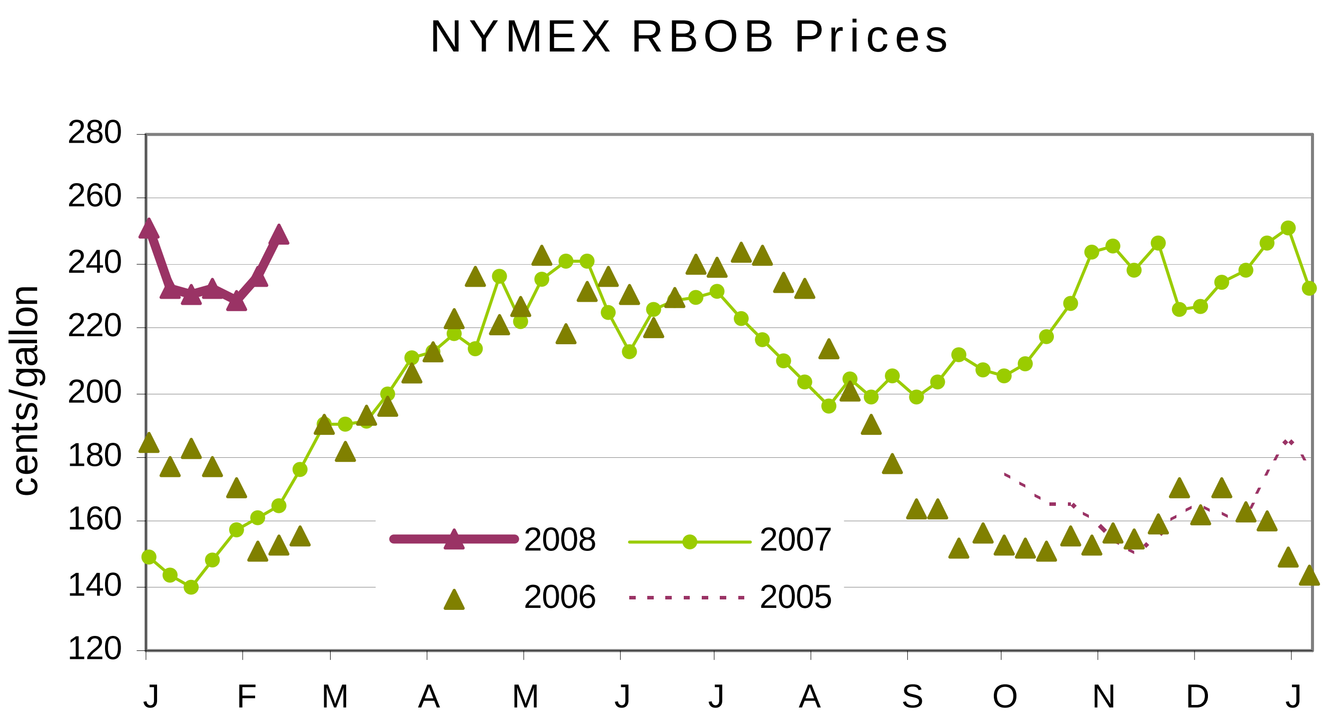


US gasoline stocks: from record lows to record highs

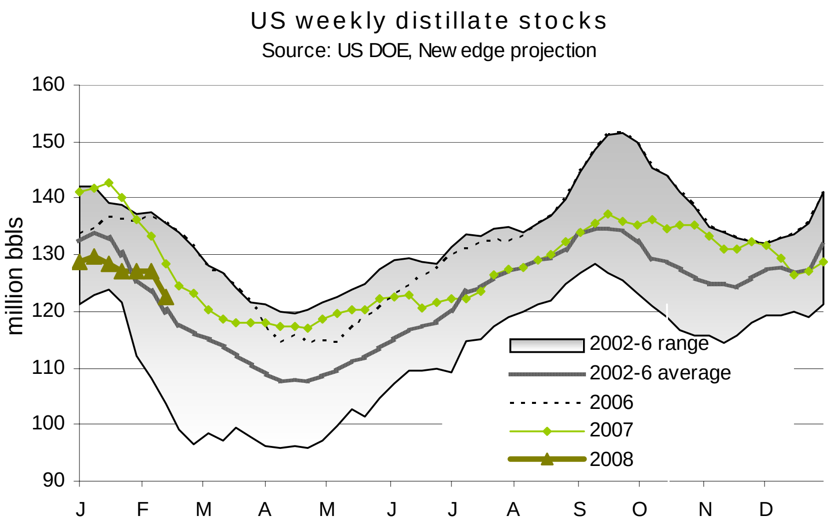


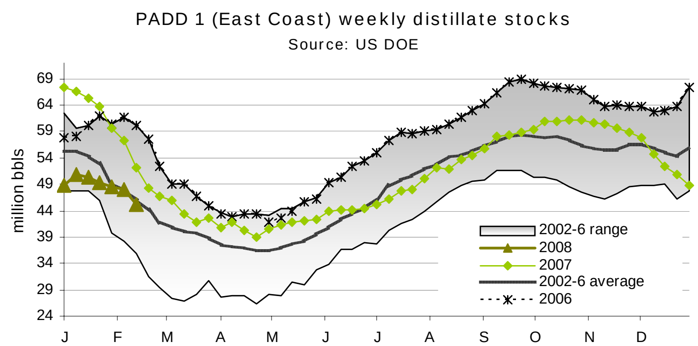


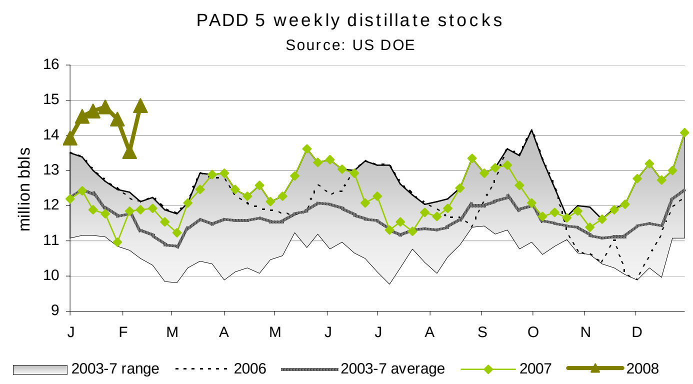
US gasoline prices



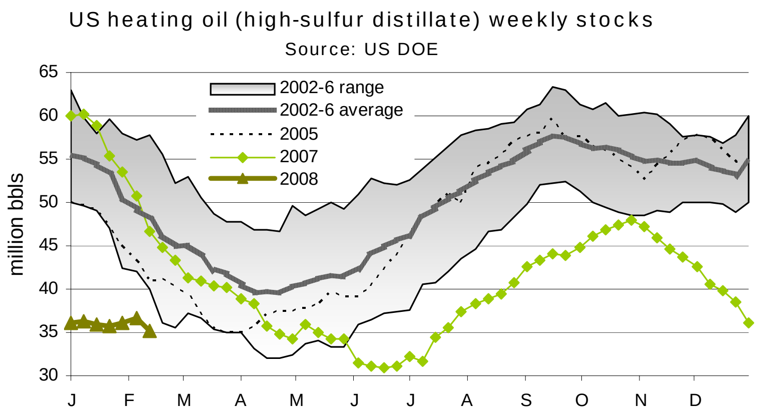
US distillate stocks: a tale of two coasts

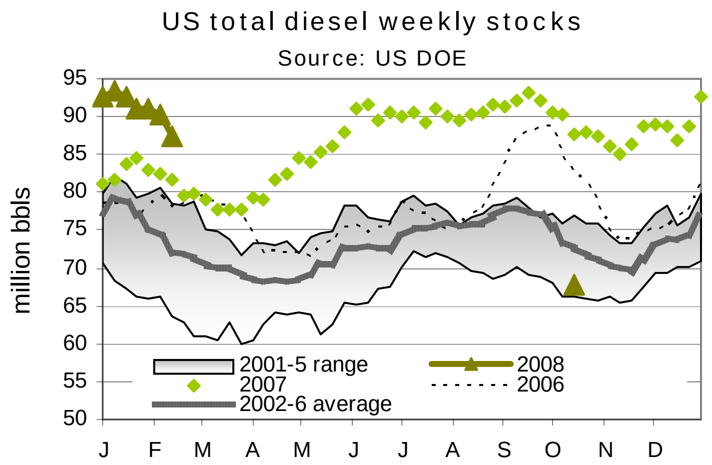






US distillate stocks: heating v. transport





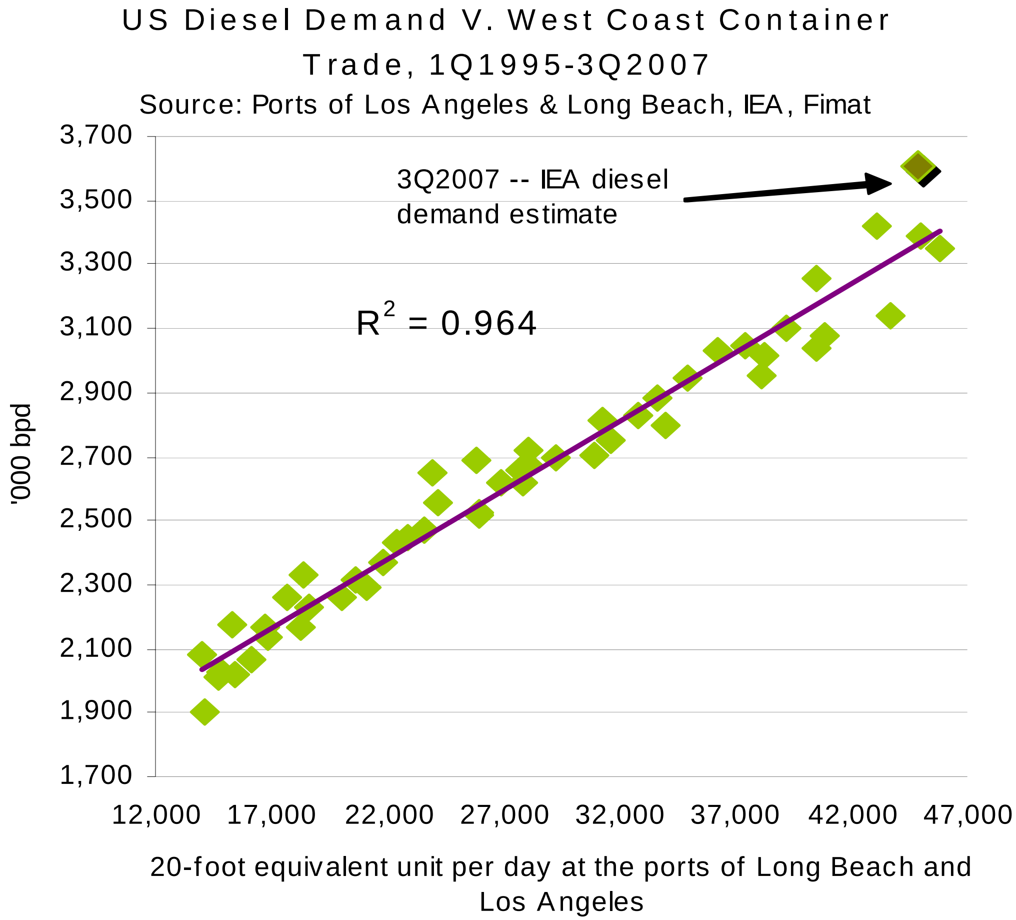
US diesel demand: the little engine that ran out of cash

US demand for diesel had grown faster than for any other product, driven by trucking demand for Chinese imports, but…

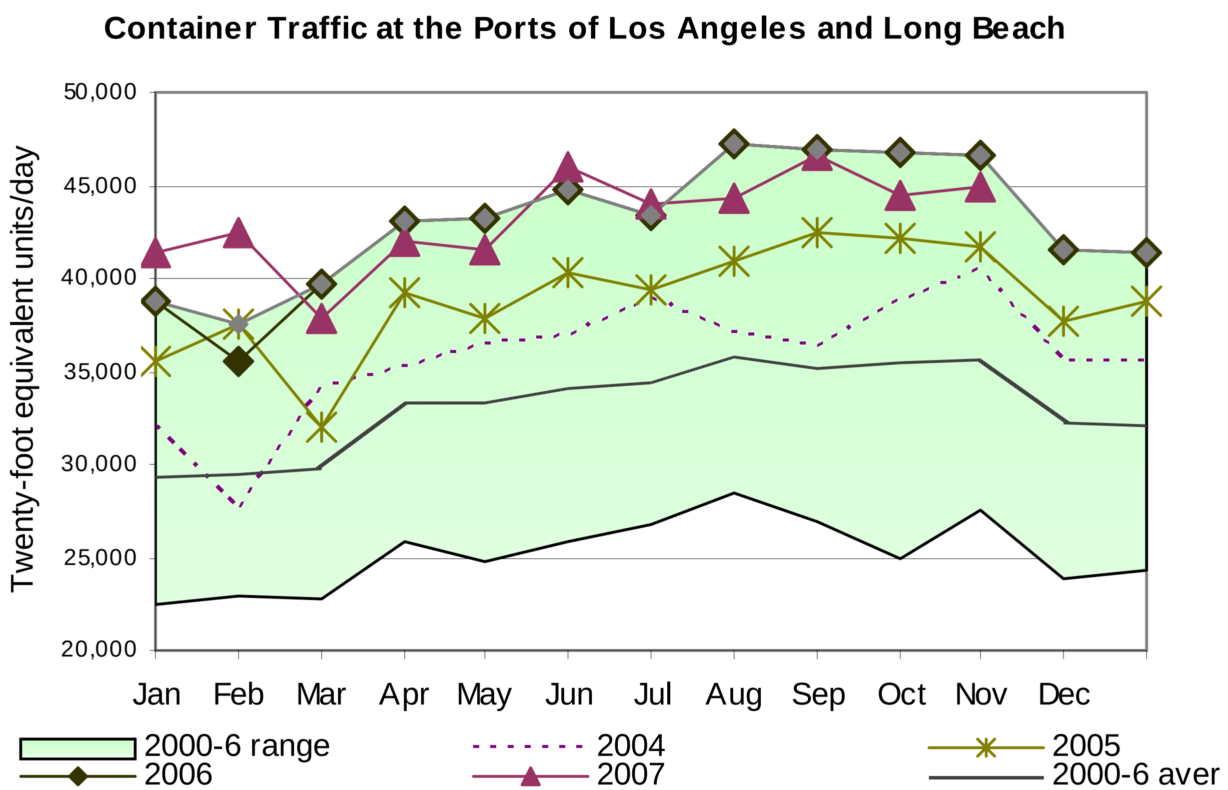
- Currency depreciation and economic slowdown are eroding imports

- Efficiency improvements cut the diesel intensity of imports

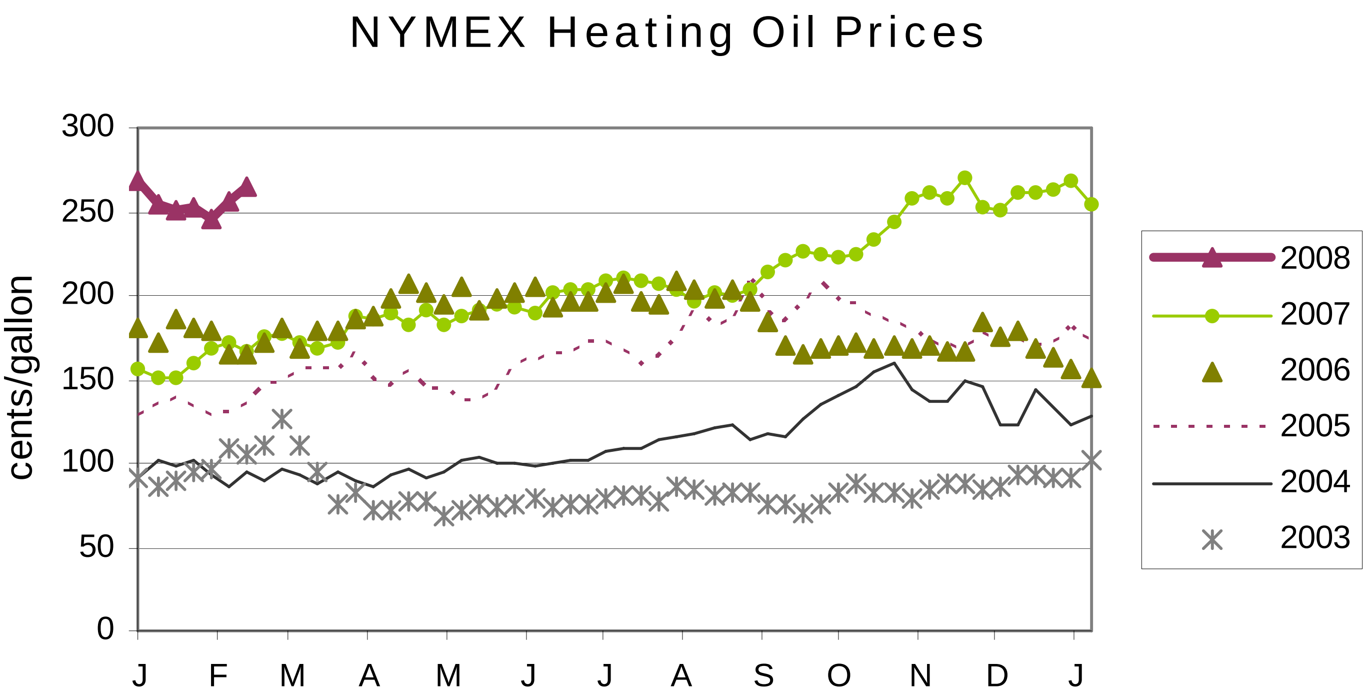
Recent estimates appear overstated



US imports of goods reverse course



US distillate future benchmark prices



Refining chickens coming home to roost

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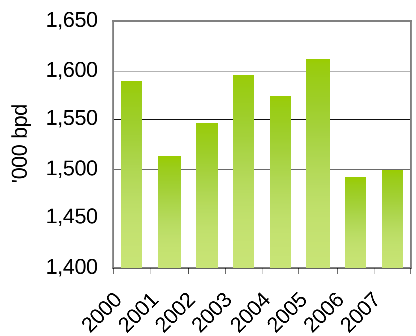
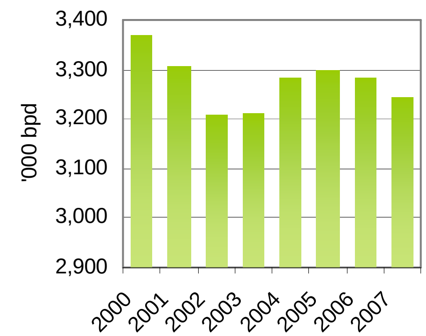
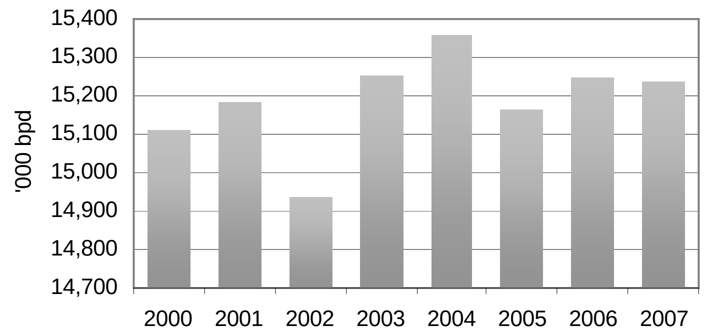


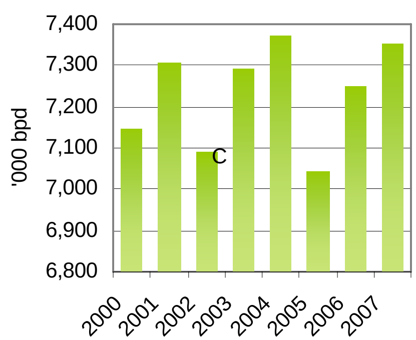
PADD 2 Refinery Crude Runs



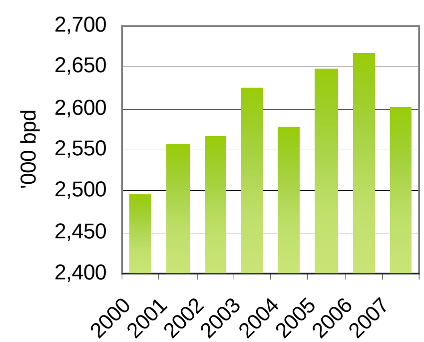
US Average Refinery Crude Runs



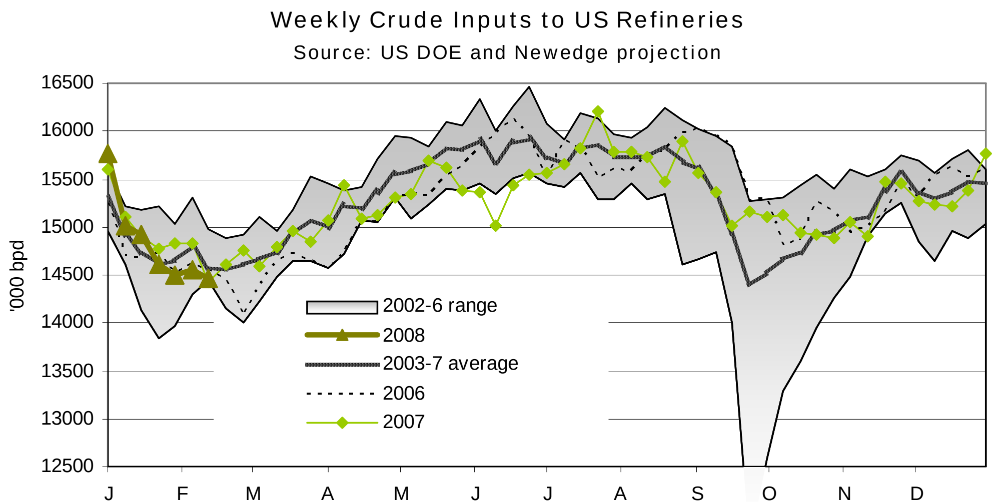
PADD 3 Refinery Crude Runs

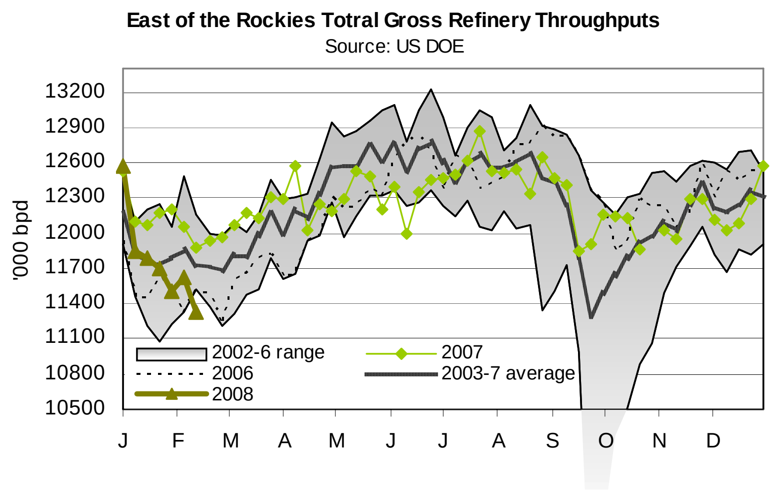


PADD 5 Refinery Crude Runs

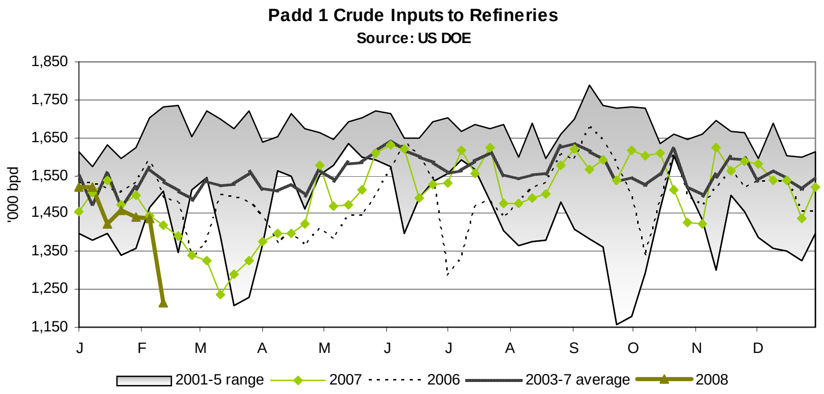


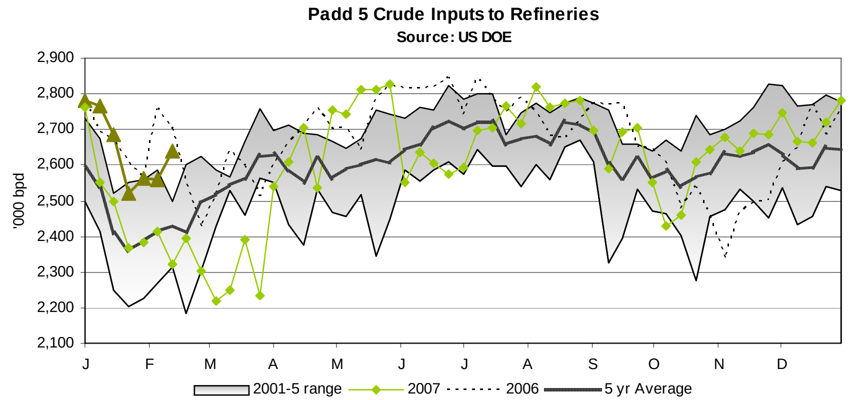
US refinery runs: elusive recovery



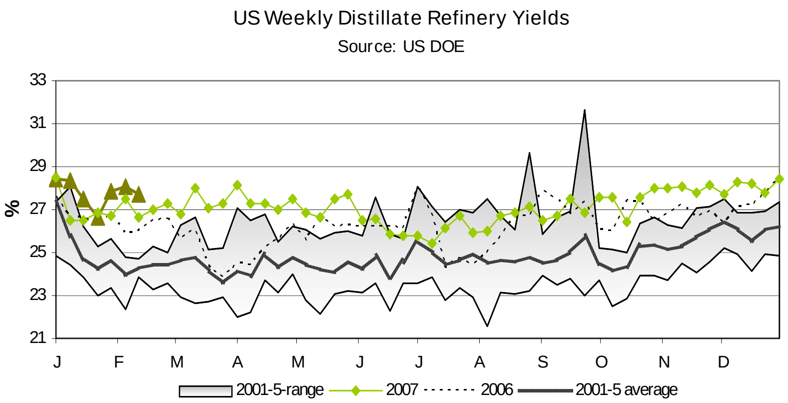


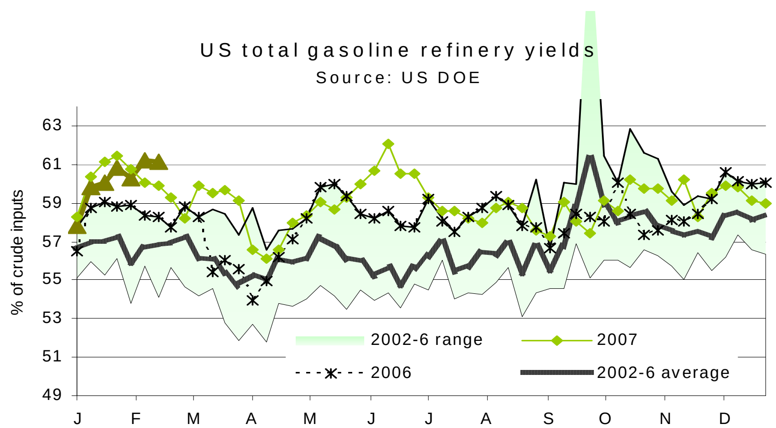
US refining: east v. west



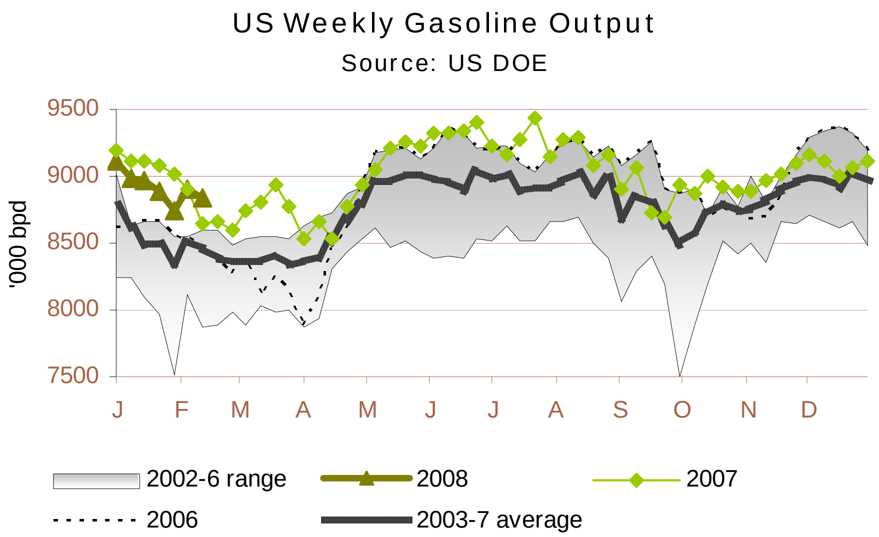


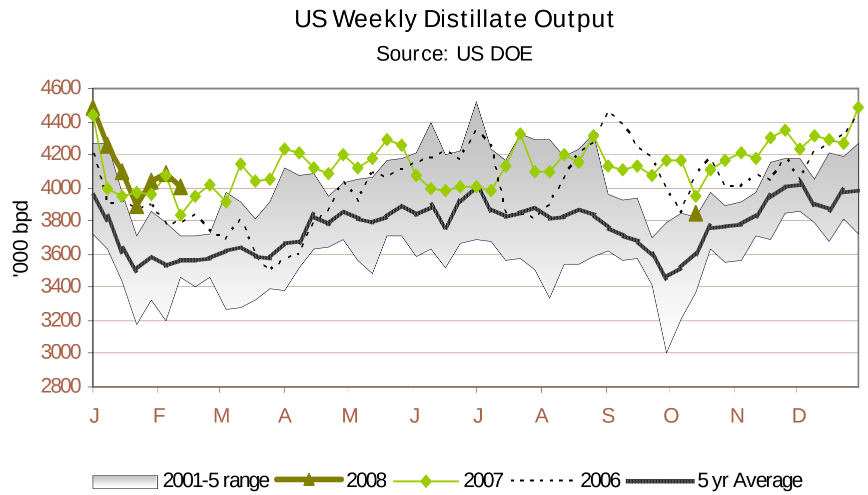
Silver lining: refinery gains on the rise



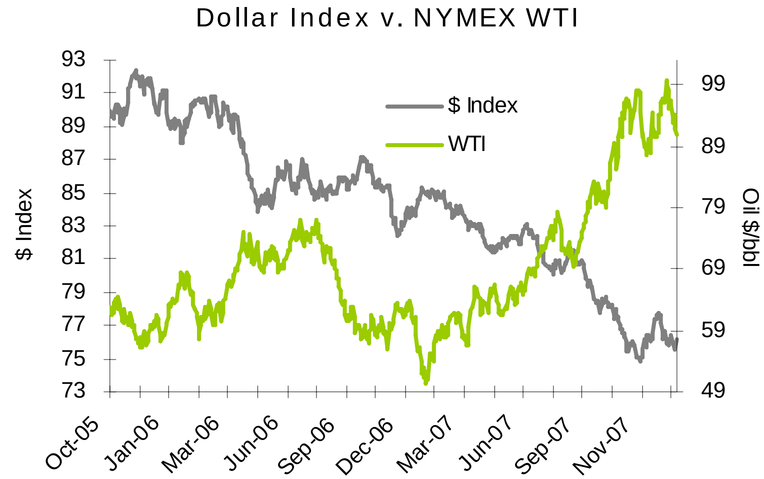


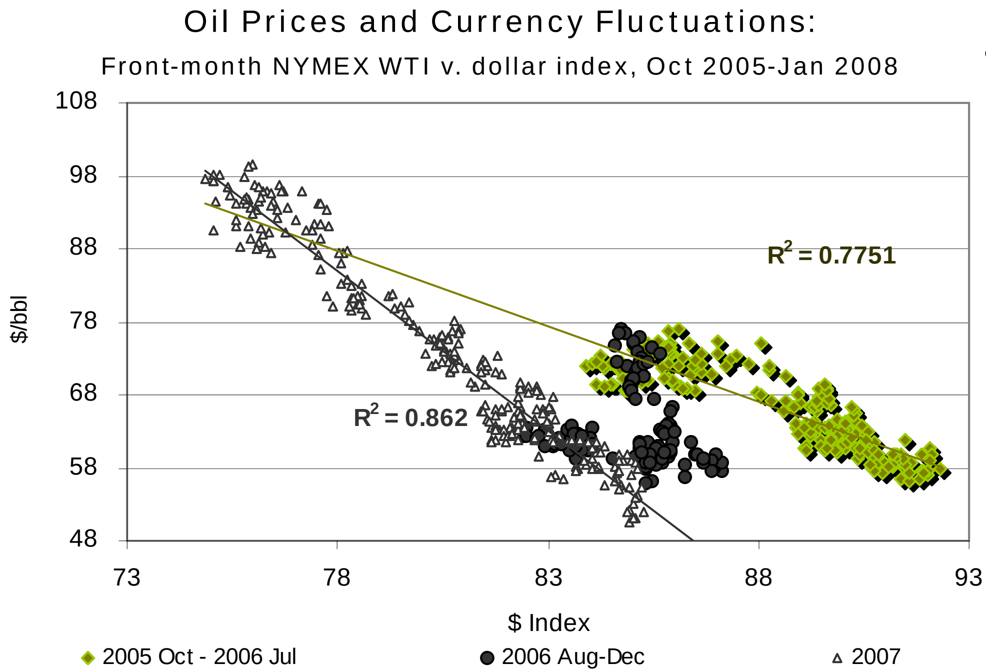
US product output steady despite run cuts



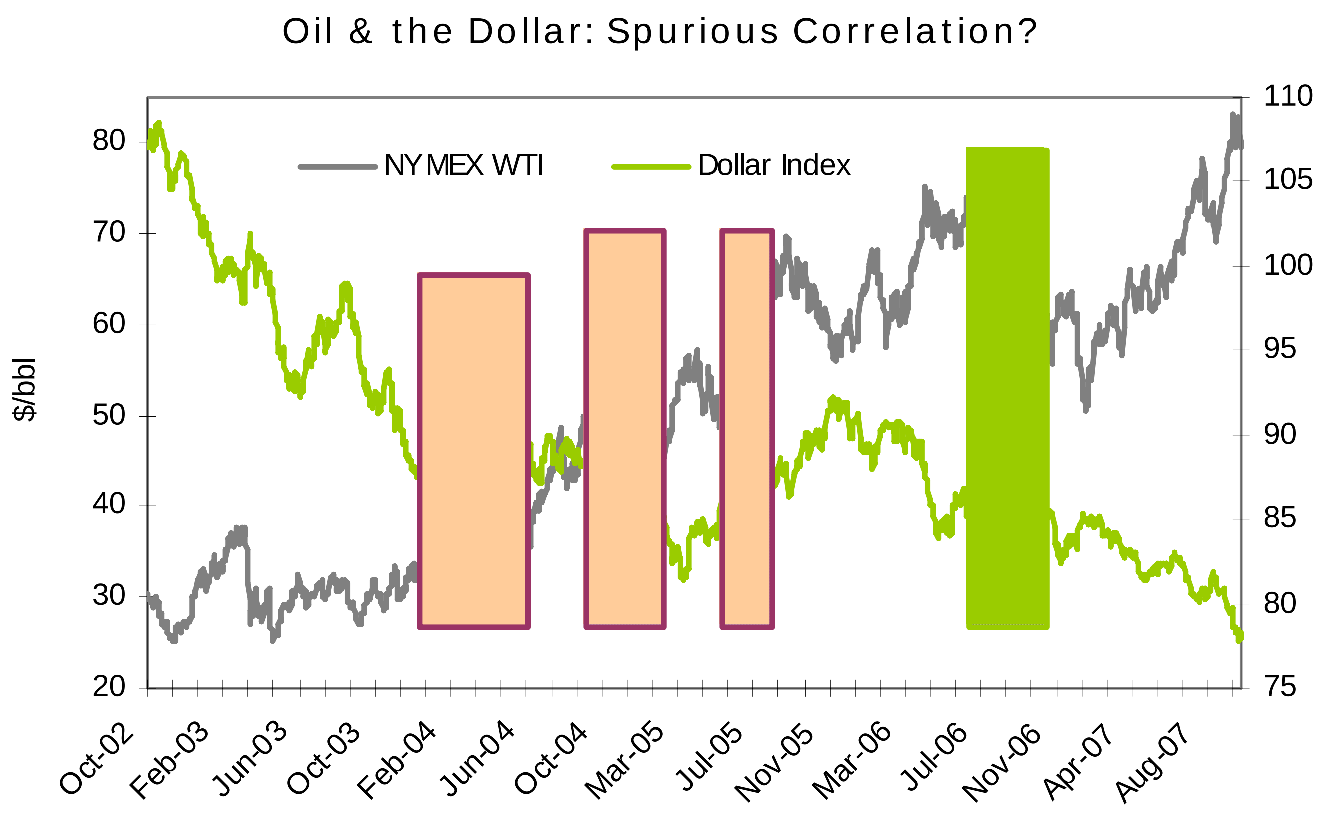


Oil and the dollar: less than meets the eye

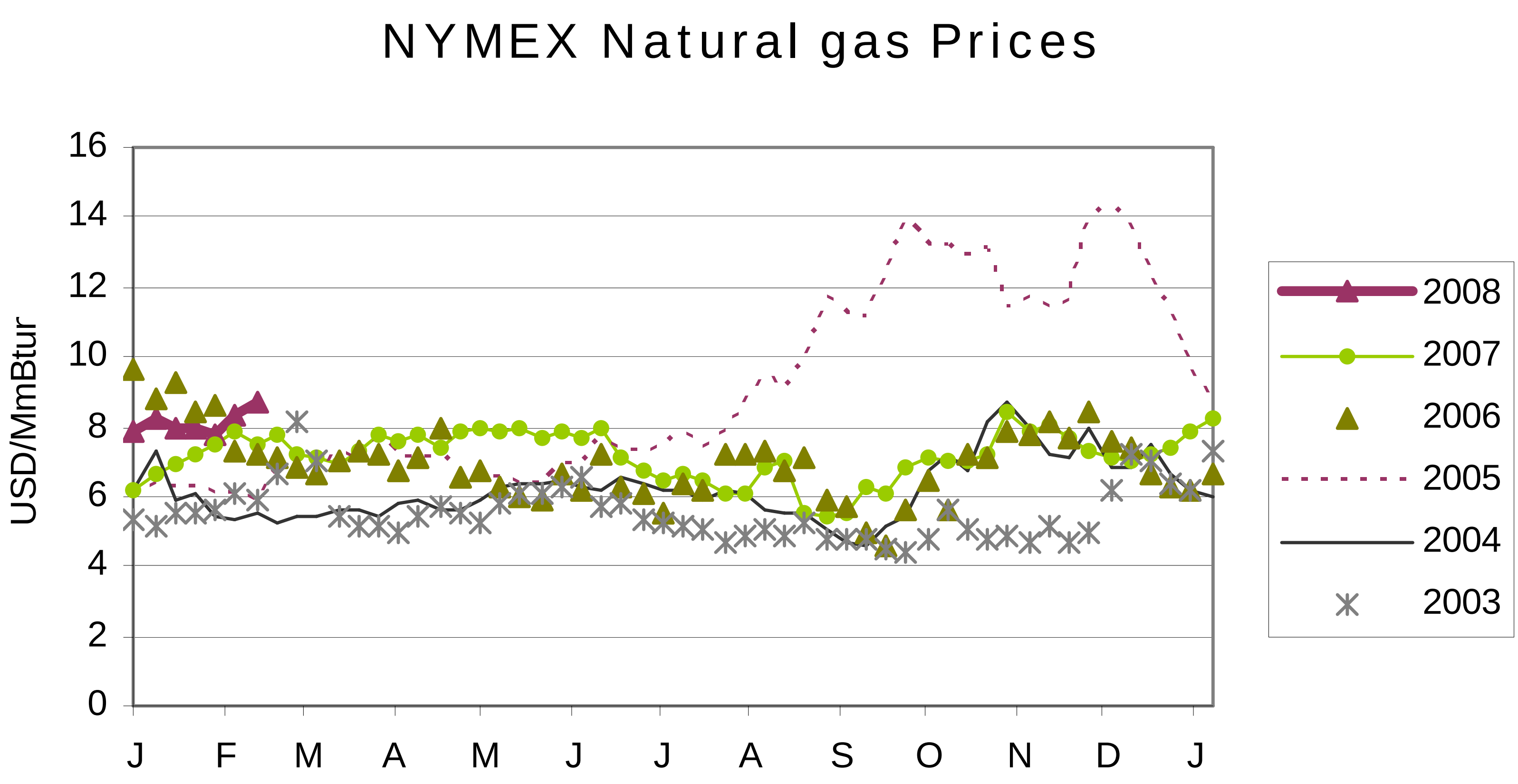




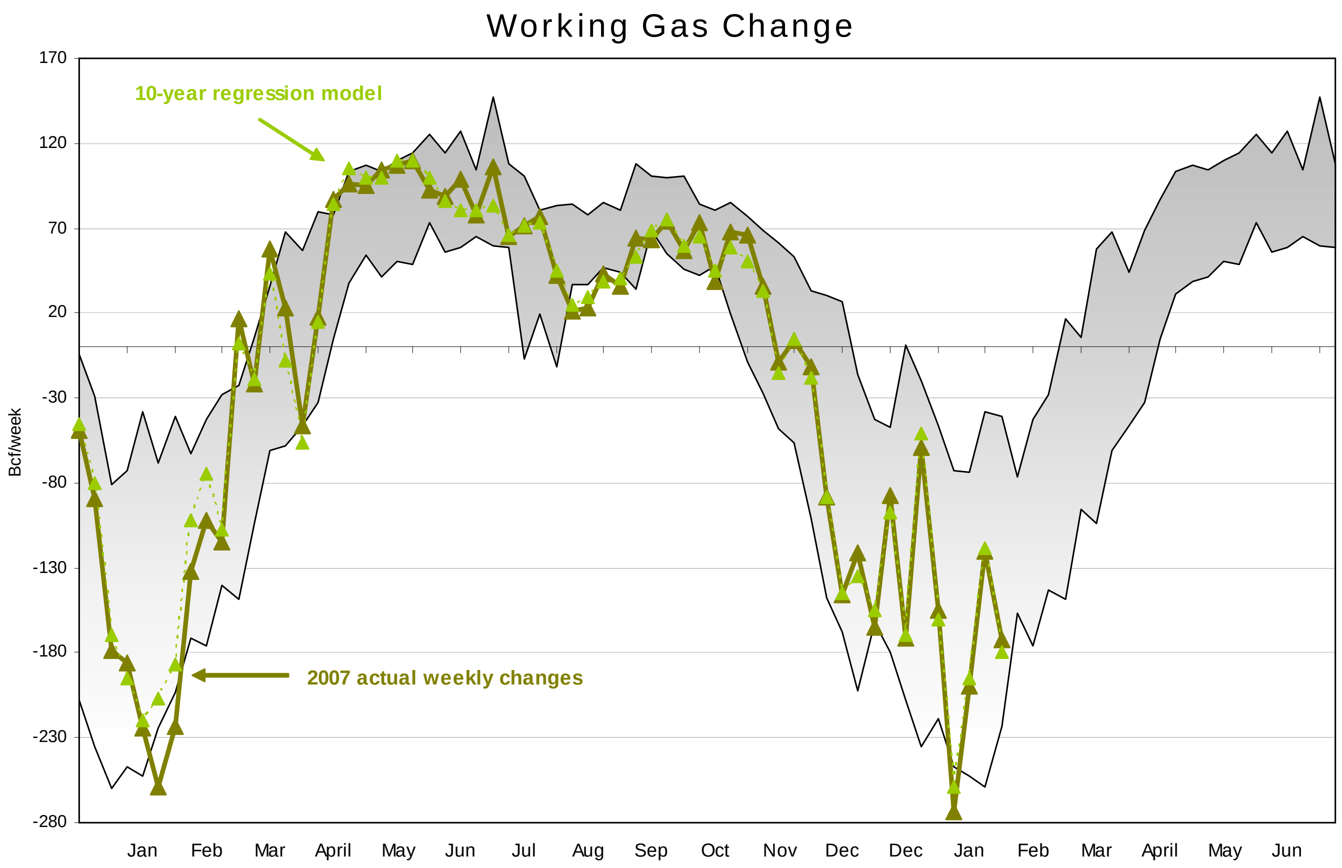
Oil as currency hedge



Sleeping dragon: US natural gas prices



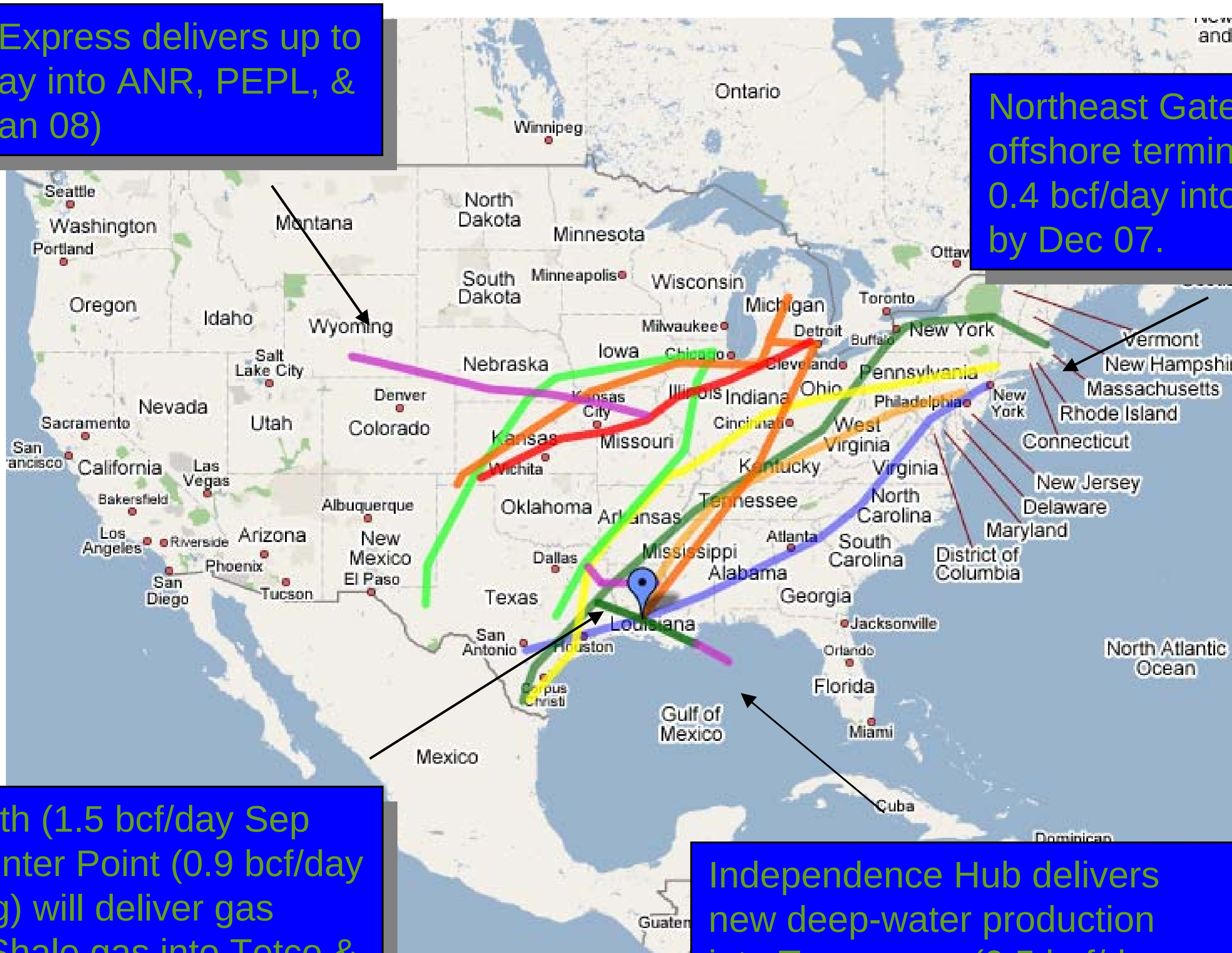
Colder winter weather tightened natural gas inventories



Expanded Pipeline Capacity & New Supply

Rockies Express delivers up to 1.8 bcf/day into ANR, PEPL, & NGPL (Jan 08)

Northeast Gateway LNG offshore terminal will deliver 0.4 bcf/day into New England by Dec 07.



Gulf South (1.5 bcf/day Sep 07) & Center Point (0.9 bcf/day operating) will deliver gas Barnett Shale gas into Tetco & Columbia Gulf.

Independence Hub delivers new deep-water production into Tennessee (0.5 bcf/day, summer 07)

Contagious coal

Coal price rise sets stage for natural gas rally