Fundamental Factors and Oil Prices: Recent Experience and Lessons for the Coming Decade

Jeddah Energy Meeting
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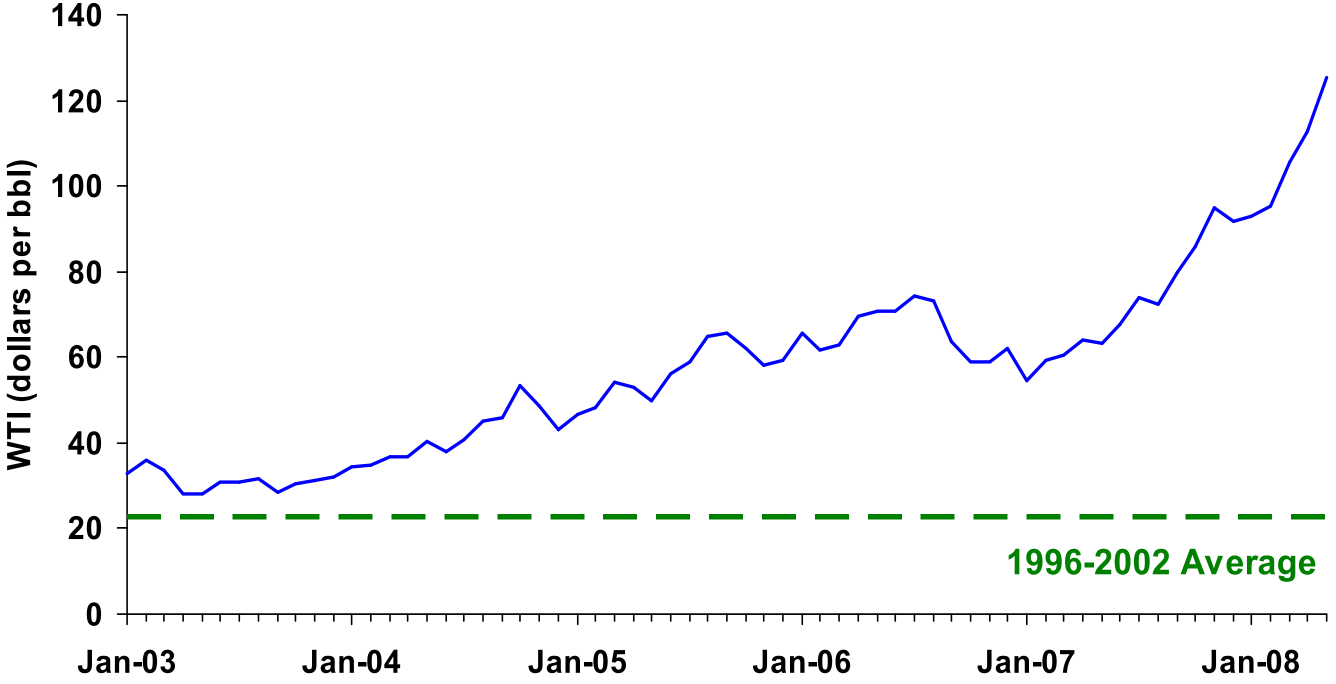
Oil market fundamentals are driving the 5-year run-up in prices.

- World oil markets have become increasingly tight since 2003.
    - Global demand growth, fed by worldwide economic growth, has exceeded non-OPEC supply growth.
    - OPEC and inventories are relied upon to fill the gap, but OPEC production has only risen modestly.
    - Geopolitical uncertainty in oil producing countries contributes to risk of supply disruptions. Low levels of surplus production capacity heighten this risk.
    - Tight markets are more sensitive to non-fundamental factors.
- To balance the market, prices have risen sharply.
- Without a sustained increase in global production capacity, markets are expected to remain very tight.
    - Recent experience with non-OPEC supply suggests that OPEC and the NOCs, who together control the vast majority of currently proved reserves, must take the lead in this effort.

Oil prices have increase by almost 300% since January 2003.

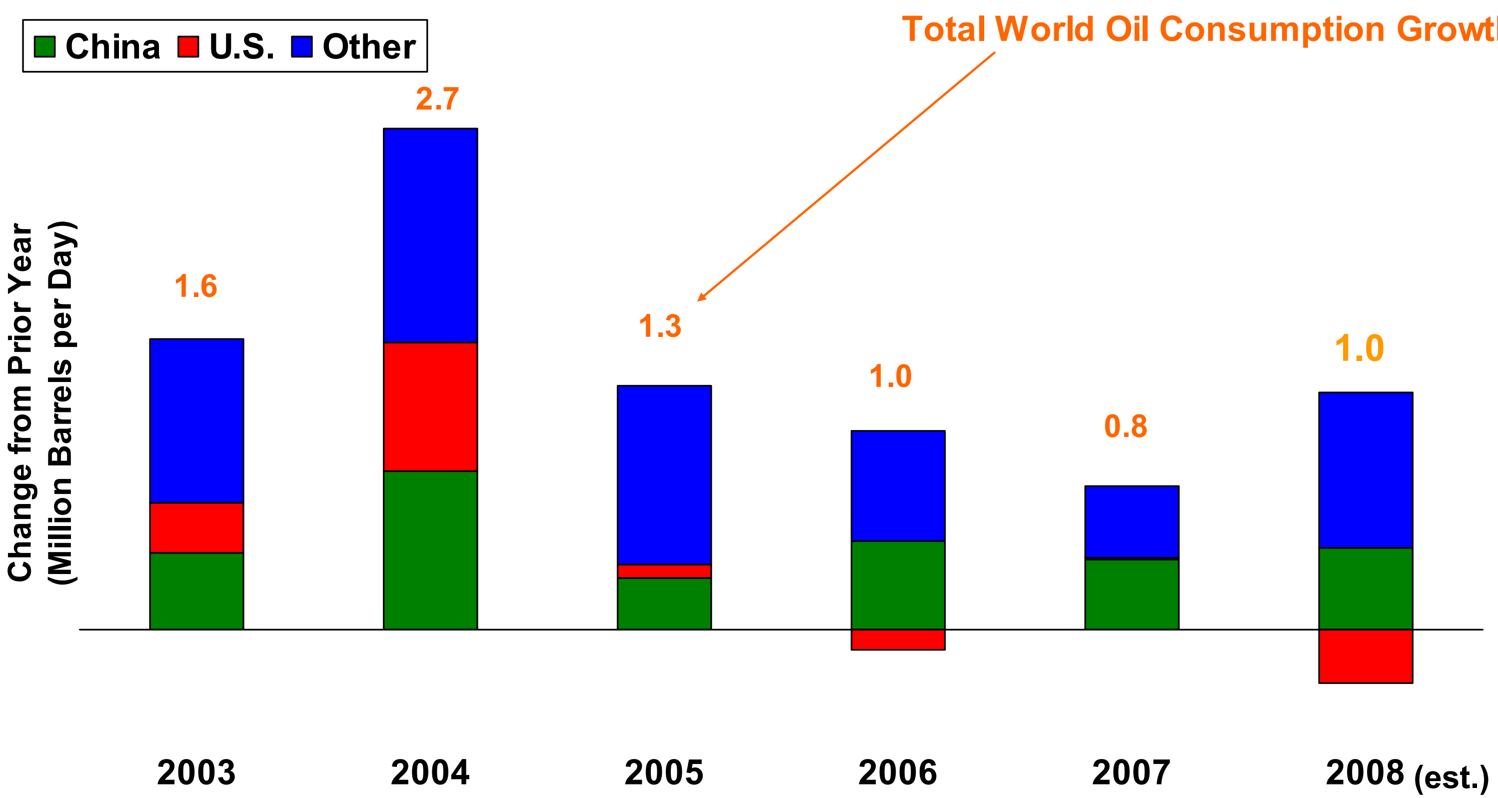
- Prior to 2000, oil prices were relatively stable and well below $30 per barrel.
- Starting in 2003, oil prices began climbing due to inventory tightening, increasing world oil demand, and reduced surplus production capacity.



Source: Energy Information Administration, *Short-Term Energy Outlook June 2008*

Despite higher prices, world oil demand growth is strong…

- Since 2003, world oil consumption has growth has averaged 1.8% per year.
- Non-OECD countries, especially China, India, and the Middle East, represent the largest part of this growth.

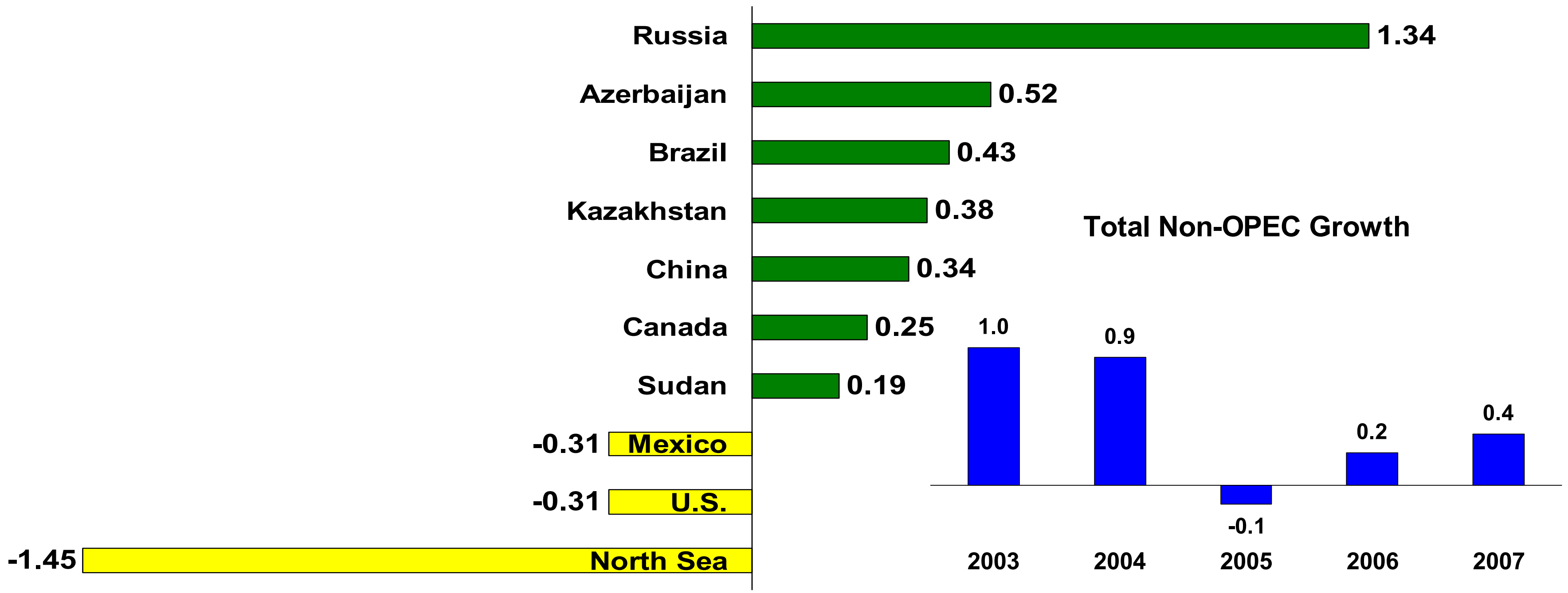


Source: Energy Information Administration, *Short-Term Energy Outlook June 2008*

…while overall non-OPEC supply growth has slowed in recent years.

- In the past three years, non-OPEC supply growth has been well below levels seen just four years ago.
- Russia drove non-OPEC supply growth during the first part of the decade. However, Russian oil production is down year-over-year in 2008.

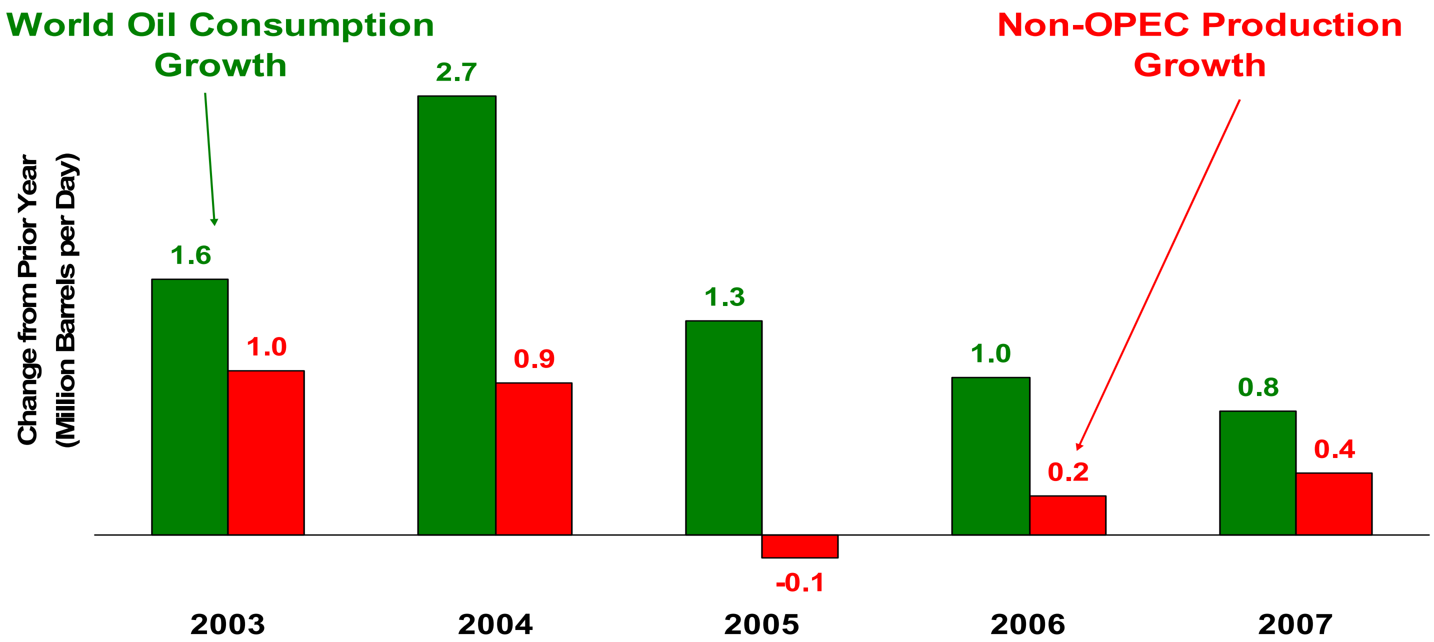
Cumulative Oil Production Change, 2003-2007 (Million Barrels per Day)



Source: Energy Information Administration, *Short-Term Energy Outlook June 2008*

As a result, the world oil market balance has tightened significantly.

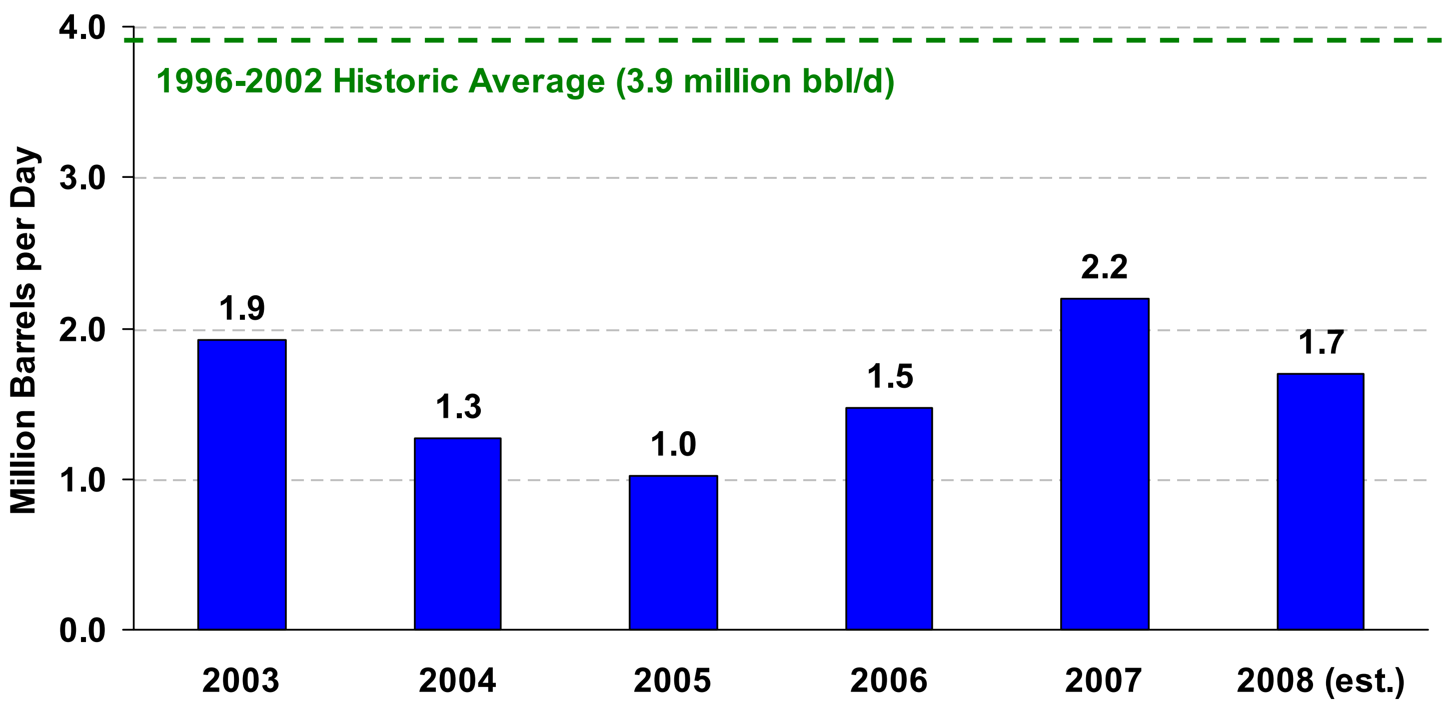
- World oil consumption growth has outpaced non-OPEC supply growth every year since 2003.
- This imbalance increases reliance upon OPEC production and/or inventories to fill the gap.



Source: Energy Information Administration, *Short-Term Energy Outlook June 2008*

World surplus production capacity remains low, leaving world oil markets vulnerable to supply disruptions.

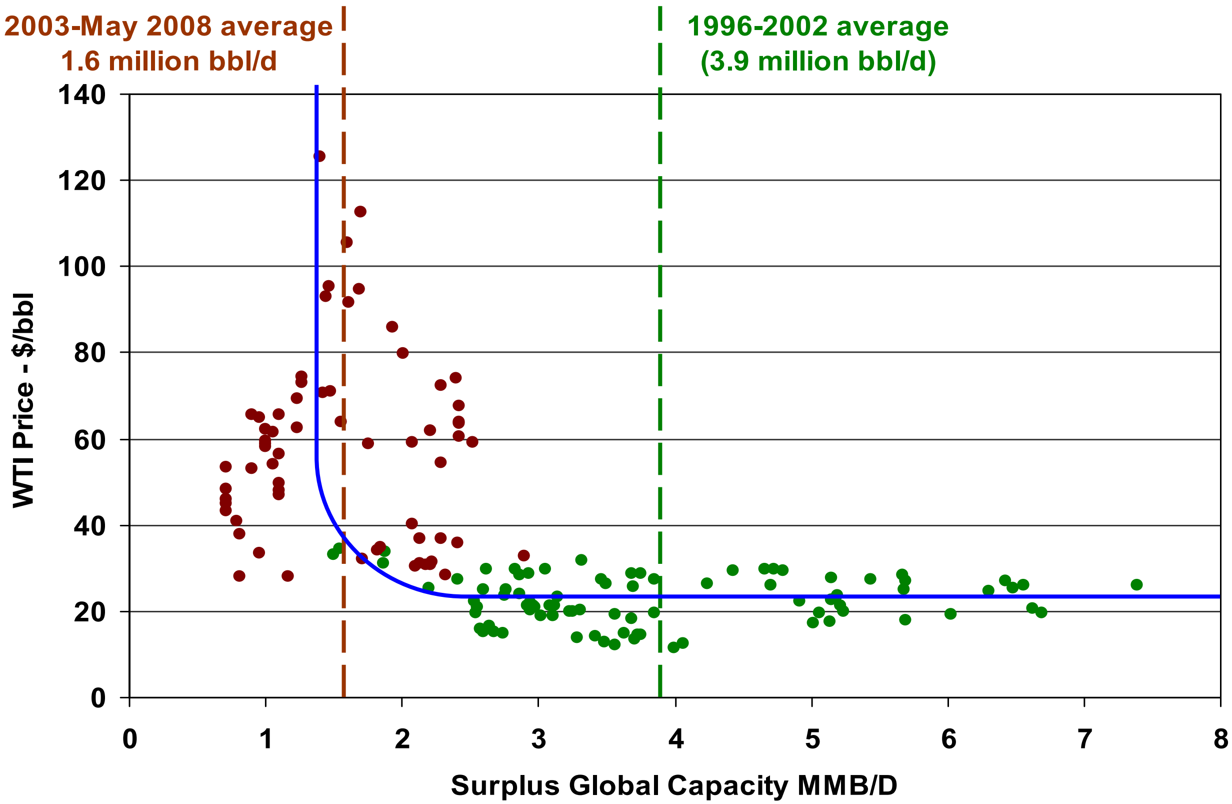
- Current world surplus production capacity is below historic levels.
- In addition, it is highly concentrated in a few countries, with Saudi Arabia holding almost all of this capacity.



Source: Energy Information Administration, *Short-Term Energy Outlook June 2008*

At low levels of spare capacity, oil prices tend to increase dramatically.

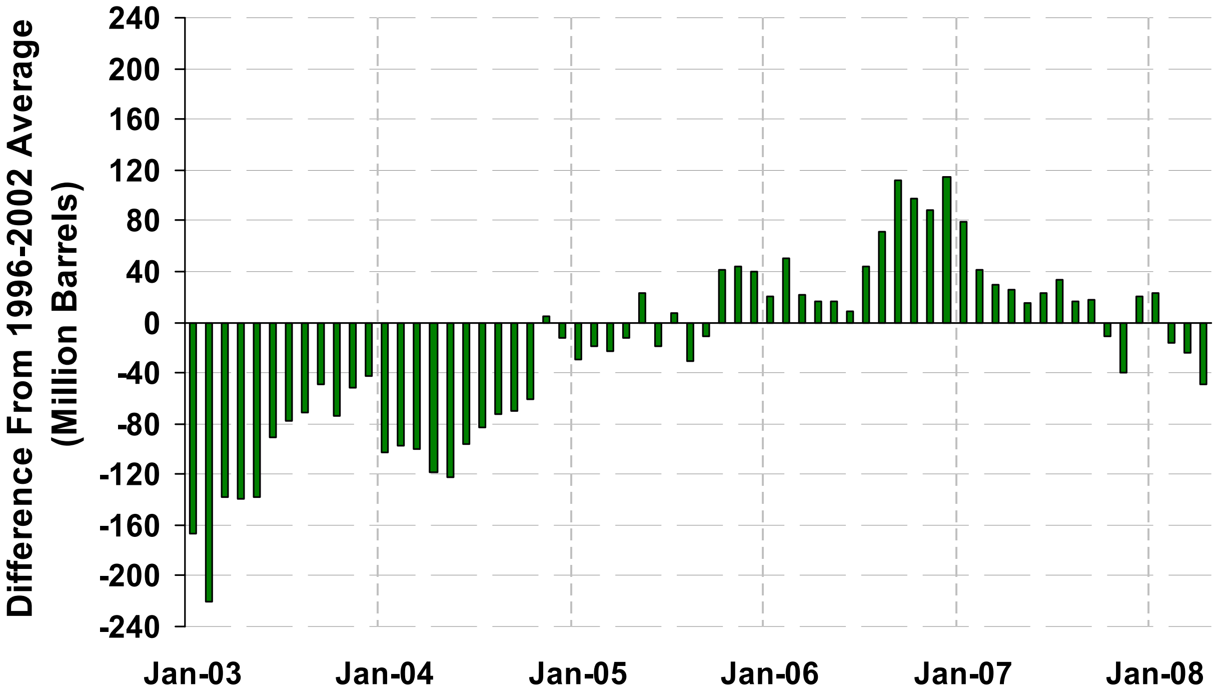
- Prices respond when surplus capacity is low, particularly when geopolitical turmoil or other events such as hurricanes threaten supply.
- Consider the potential for loss of production in any of these countries: Iraq at 2.0 million barrels per day, Iran at 3.8 million barrels per day, Venezuela at 2.4 million barrels per day, Nigeria at 2.3 million barrels per day.



Source: Reuters; EIA

OECD commercial stocks: from record highs to near-normal levels.

- OECD stocks were at record lows in 2003, following the strike in Venezuela.
- Preliminary OECD inventory data for the first part of 2008 shows that OECD stocks have again fallen below levels seen in 1996-2002.
- Since oil use has been growing over time, inventories are even tighter when considered on a "days of supply" basis

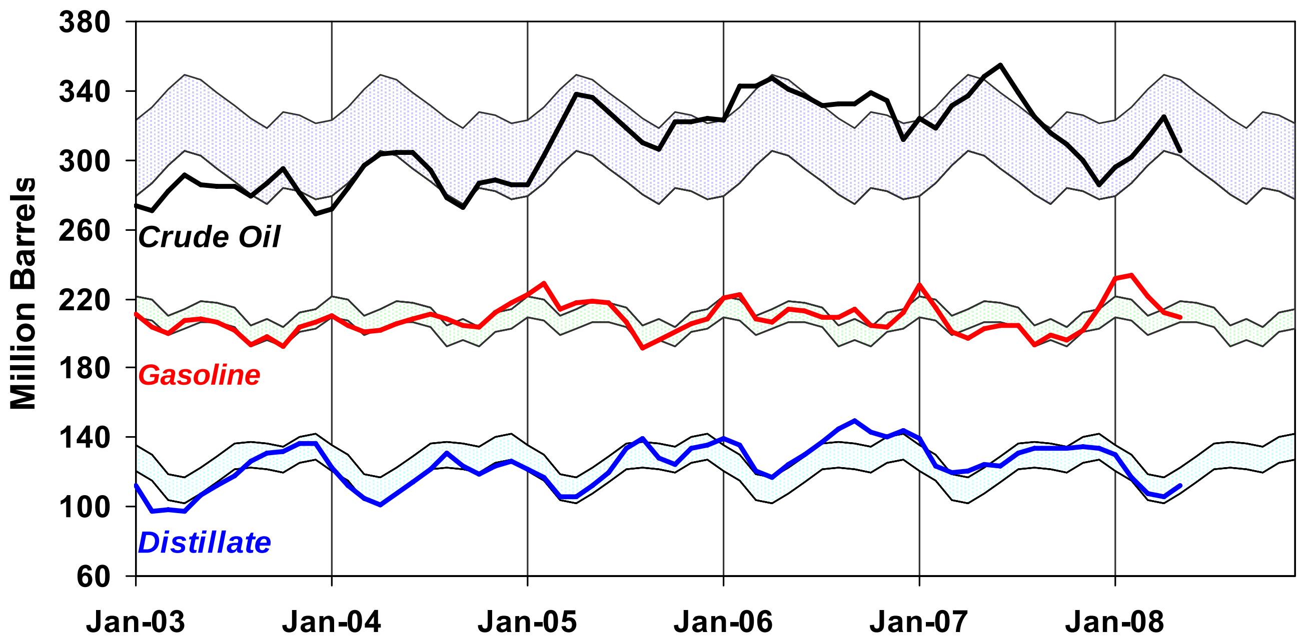


Source: Energy Information Administration, *Short-Term Energy Outlook June 2008;* latest IEA data.

U.S. inventories for crude oil and key petroleum products are all relatively low.

- After remaining relatively high for much of 2006 and the first half of 2007, U.S. crude oil inventories have fallen towards the bottom end of the average range, even as refinery throughputs have been low so far this year.

- Both gasoline and distillate fuel, the 2 major petroleum products in the United States are near the low end of the average range for this time of year.



Source: EIA

*Colored bands represent normal ranges.

The present situation differs dramatically from that in the 1970s, and requires a different strategy by major oil exporters.

- Between 1973 and 1985, OPEC production fell dramatically, squeezed by anemic demand growth and a strong supply response to higher oil prices by non-OPEC producers. As a result, the net call on OPEC fell by 11 million barrels a day over the period.
- In contrast, since 2003, world oil demand has continued to rise, while there has been little supply response from non-OPEC producers. In addition, OPEC production has remained largely flat.
- For these reasons, the market sees a rising call on the key OPEC countries and other major reserve-rich regions. The market needs confidence that supply will be forthcoming.

Change Over 12 Year Periods Following 1973 and 2003
(millions of barrels per day)

	1973–85	2003–15 (est.)
Liquids Demand	+ 3	+ 17?
Non-OPEC Supply	+ 13	+ 4?
Unconventional	≈ 0	+ 4?
OPEC Production	- 14	+ 9???

Source: EIA