Oil prices: to the sky or stabilisation?

Dr Adnan Shihab-Eldin
Acting for the Secretary General

Energy flow in the North
Nordic Energy Conference
Alfred Berg ABN AMRO

30 August 2005
Oslo, Norway
Article 2B: “The Organization shall devise ways and means of ensuring the stabilisation of prices in international oil markets, with a view to eliminating harmful and unnecessary fluctuations.”

Article 2C: “Due regard shall be given at all times to the interests of the producing nations and to the necessity of securing: a steady income to the producing countries; an efficient, regular and economic supply of petroleum to consuming nations; and a fair return on their capital to those investing in the petroleum industry.”

- Interest of producing countries: owners of natural resources
- Interest of consumers & global economy
- Interest of investors: IOCs & NOCs
The price of oil: distinguishing between nominal and real, (US$/b)

Although reaching historical highs in nominal terms, the real value is far below historical highs.
Who gets what from a liter of oil in the G7?

2004

- **USA**: 
  - Crude CIF Price
  - Industry Margin
  - Tax

- **Canada**: 
  - Crude CIF Price
  - Industry Margin
  - Tax

- **Japan**: 
  - Crude CIF Price
  - Industry Margin
  - Tax

- **France**: 
  - Crude CIF Price
  - Industry Margin
  - Tax

- **Germany**: 
  - Crude CIF Price
  - Industry Margin
  - Tax

- **Italy**: 
  - Crude CIF Price
  - Industry Margin
  - Tax

- **United Kingdom**: 
  - Crude CIF Price
  - Industry Margin
  - Tax
Oil taxes & export revenues: who gets what?

Avg 2000-04 and 2004

- G7 Oil Taxes Revenue: 312 Billion US$
- OPEC Oil Export Revenue: 254 Billion US$
Revenues of major international oil companies*

* It includes top five IOCs, namely ExxonMobil, BP, Shell, ChevronTexaco, Total, which constituted ~39% of the total oil companies' revenues in 2003, and 55% of the revenues if the NOCs (>50% state-owned) are excluded.

# 1st half 2005.
Main reasons behind the rise in prices in 2005:

- Continued strength in oil demand led by respectable performance of the world economy
- Increasing market anxiety over capacity tightness with geopolitical tensions: focusing more on downstream with growth in refining capacity lagging behind demand
- Oil production problems due to technical, political & natural reasons
- Continuous bottlenecks at refineries running practically full capacity
- Persistent volatility coupled by activities in Futures market
World economic & oil demand growth

- Strong economic growth in DCs (e.g., China, India): growing faster than the world with increasing share in global GDP
- Globalization process
- Robust oil demand growth (particularly in Asia)
- Capacity adjustment across the supply chain, in particular downstream; conversion refining capacity
Strong growth in Chinese oil demand

China's share in world oil consumption (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>USA</th>
<th>China</th>
<th>Japan</th>
<th>Germany</th>
<th>India</th>
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<tr>
<td>1971</td>
<td>25.7%</td>
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<td>1973</td>
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- China has become the second largest oil consumer.
Strong growth in Chinese oil demand

- Structural change in the economy - growing faster than the rest of the world, fueled by strong growth in oil.
- Long-way to go: in line with rising per capita income levels, low per capita oil demand is yet to approach levels of other countries!
Overloading of Refining Industry

Shrinking Refining Spare Capacity in key refinery regions

Increasing refinery utilization rates in major consuming regions

- Inadequate past investment and increasingly stringent product specifications have resulted in a lack of effective global refining capacity;
- Shrinking Refining Spare Capacity in key refinery regions leading to persistent operational bottlenecks, now running at close 100% in major consuming regions

*/Asia = Japan, South Korea, China, India and Singapore. For some Asian countries May is estimated.
Persistent price volatility

WTI prices vs. US crude commercial oil stocks

Recent observed stocks-price relationship does not fit into historical trend
US stocks doesn't support current higher oil price
Persistent price volatility

- Growing use of oil futures as a form of financial instrument
- NYMEX hit a record high in 2005 surpassing the record in 2004. The average volume of contracts rose in 2005 to 237 million contracts compared to 179 million contracts in 2003
- OPEN interest also shows a higher record in 2005 of 792 million contracts compared to 542 million contracts in 2003

![WTI futures contracts at NYMEX (million bbls)](image)
Persistent price volatility

NYMEX daily oil average volume traded vs. WTI price

R² = 0.8

18 August 2005

NYMEX daily average volume traded vs. WTI price

R² = 0.8
The price of oil: distinguishing between nominal and real

OPEC R. Basket price in real and nominal terms
(Base: 2005 = 100, US$/b)

Nominal  Real*
*/inflation & exchange-rate adjusted.

Despite another significant rise in prices so far this year, no visible impact on economic growth.
OPEC crude oil production, 2002-2005
(based on secondary sources, mb/d)

Note: OPEC production excludes OPEC NGL & non-conventional oil (estimated to be 4.2mb/d in 2005).
* / As of August 2005, OPEC production is assumed to be at July level of 30.2 mb/d.
OECD commercial oil stocks

In fact, without prompt OPEC actions, it is hard to imagine what the market would be today!
While growth in non-OPEC supply up to 2003 were exceeding that of demand, since then had been significantly below demand growth.

Non-OPEC supply is expected to increase as a result of the start-up of new projects particularly in deepwater in Latin America, West Africa, GOM and Asia.

Russia is expected to increase, but at much lower rates.
With currently observed slowing pace of Russian oil supply growth (e.g., policy measures, change in required technology), indications points to production levels to oscillate around 9.5-10.5 mb/d towards the end of the decade.
## World oil demand & supply balance (mb/d)

<table>
<thead>
<tr>
<th></th>
<th>1Q05</th>
<th>2Q05</th>
<th>3Q05</th>
<th>4Q05</th>
<th>2005</th>
<th>05/04</th>
<th>1Q06</th>
<th>2Q06</th>
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<td>83.6</td>
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<td>85.7</td>
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<td>Non-OPEC (b)</td>
<td>83.9</td>
<td>84.6</td>
<td>84.7</td>
<td>85.7</td>
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<td>51.2</td>
<td>52.7</td>
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<td>OPEC NGL (c)</td>
<td>50.3</td>
<td>50.5</td>
<td>50.3</td>
<td>50.9</td>
<td>50.5</td>
<td>0.7</td>
<td>4.4</td>
<td>4.5</td>
<td>4.6</td>
<td>4.7</td>
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<td>a-(b+c)</td>
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<td><strong>Balance (d)</strong></td>
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<td><strong>Seasonal stock chg.: ('00-'04)</strong></td>
<td>-0.7</td>
<td>0.9</td>
<td>0.3</td>
<td>-0.6</td>
<td>-0.7</td>
<td>0.9</td>
<td>0.3</td>
<td>-0.6</td>
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<td><strong>Stock change (e)</strong></td>
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<td>OECD SPR</td>
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<td>Oil in Water</td>
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<td>Remaining to Balance (d-e)</td>
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</table>
Note: OPEC production as of 2005 reflects estimated required OPEC volumes.

*End 05 production is based on estimated required OPEC volumes.

Note: Net capacity increase for Iraq is expected to be 0.5 - 1.0 mb/d by 2010.
Expected cumulative growth in OPEC capacity, non-OPEC supply and refinery capacity

mb/d
Growth in world oil supply versus demand and refinery capacity

- Non-OPEC
- OPEC
- OPEC Capacity
- Demand
- Refinery Capacity
### Oil Demand Outlook, mb/d

<table>
<thead>
<tr>
<th>Reference</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
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<tr>
<td>OECD</td>
<td>50.7</td>
<td>52.0</td>
<td>53.0</td>
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<td>DCs</td>
<td>33.8</td>
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<td>51.3</td>
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<td>Transition economies</td>
<td>5.3</td>
<td>5.6</td>
<td>5.9</td>
<td>6.1</td>
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<td>Total World</td>
<td>89.9</td>
<td>96.8</td>
<td>104.0</td>
<td>111.3</td>
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<td>High scenario</td>
<td>90.8</td>
<td>99.1</td>
<td>108.0</td>
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<td>Low scenario</td>
<td>88.7</td>
<td>93.4</td>
<td>97.6</td>
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</table>

- "Dynamics-as-usual": observed patterns, no new strong policy drives
- **Oil demand increases** by an average of **1.5 mb/d annually**
- Four-fifths of the increase in demand of **28 mb/d over the period 2005–2025** comes from developing countries
- **Transportation** continues to be the dominant source of growth (~60%)
- Many **uncertainties**: GDP, technology, policy – **substantial downside risks**
- **Issue of security of demand**
M.East OPEC contribution to world oil trade is expected to increase from ~30% to ~40% in 2025.
A Prospective Depletion Curve for the World's Conventional and Non-Conventional Oil to 2075

- **3400 bn barrels recoverable resource**
  - Undiscovered
  - Reserves growth
  - Remaining reserves
  - Cumulative production

- **650 bn barrels** (10% of 7 Gb OIP) recoverable

- Conventional
  - further nc improved recovery

- Non-Conventional (current recoverable)
  - Addition
World oil supply: cumulative production & reserve growth

Numerous possibilities

Extent of IOC involvement varies, from large to little or none

Combination/partnership — IOCs + NOCs

Agreements

Fair and workable
Open and transparent
Incentives for investor
Assurances for owner
Commitment to long-term

Many uncertainties, which can be costly

Increasing attention on downstream
Uncertainties: pose a challenge to investment levels!

Drivers of uncertainties over future supply and demand growth and future scale of investment that will be required:

- The world economy
- Energy policies impacting supply/demand
- Technology developments
- Oil price path
Downstream challenges

- Significant investment requirements (> $130 billion over the next decade)
- Increasing demand for lighter products
- Limited flexibility

Average Global Crude Slate

<table>
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<tr>
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<tbody>
<tr>
<td>API</td>
<td>33.36</td>
<td>33.12</td>
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<tr>
<td>% SULPHUR</td>
<td>1.17</td>
<td>1.27</td>
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</table>

Light products: *Gasoline, Jet Kerosene and Distillate
Lag in investment will allow capacity build up only as of 2007
Continued cooperation & genuine dialogue: underlying consensus on handling major issues of mutual concern for the benefit of all.

- International Energy Forum; International Energy Agency;
- EU-OPEC Energy Dialogue; Euro-Mediterranean Dialogue;
- EU-Gulf Cooperation Council; Asian Oil and Gas Ministers Round Table; Non-OPEC at OPEC Conferences; OPEC & Non-OPEC experts meetings …

Recalling the active role of Norway: contributions towards market stability efforts & enhancing producer-consumer dialogue, technology & environment

Effective engagement on all interrelated issues:
- Security of supply and demand
- Price stability
- Energy policies
- Multilateral issues
- Technology (e.g., cleaner oil technologies, CO2 capture combined with EOR)
Thank you