Short - Term Outlook for the World Oil Market and Oil Price

Supplement to the "Short-term Energy Supply and Demand Outlook"

Presented at the 376th Regular Meeting of Research Briefings

- 1. Background of recent crude oil price hikes
- 2. Prospects for supply and demand fundamentals
- 3. Crude oil price scenarios

December 24, 2002

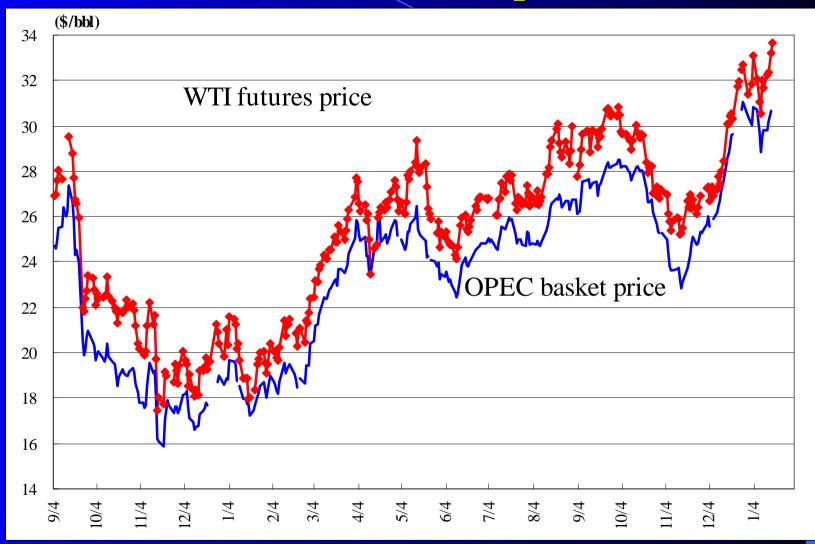
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Conclusions

- Geopolitical factors dominate the crude oil price trend in the near future.
- Supply-demand fundamentals may soften from 2Q/2003 onward.
- Crude oil (WTI) price trend in 2003 differs greatly according to scenarios of Iraq conflicts and other issues:
 - "Stabilization Scenario": \$24 25 (annual average, the same applicable below)
 - "Stalemate Scenario": \$28 29
 - "Conflict Spillover Scenario": \$34 35
- Wide fluctuation and high volatility inevitable.

1. Background of Recent Crude Oil Price Hikes

Crude Oil Prices after September 11th



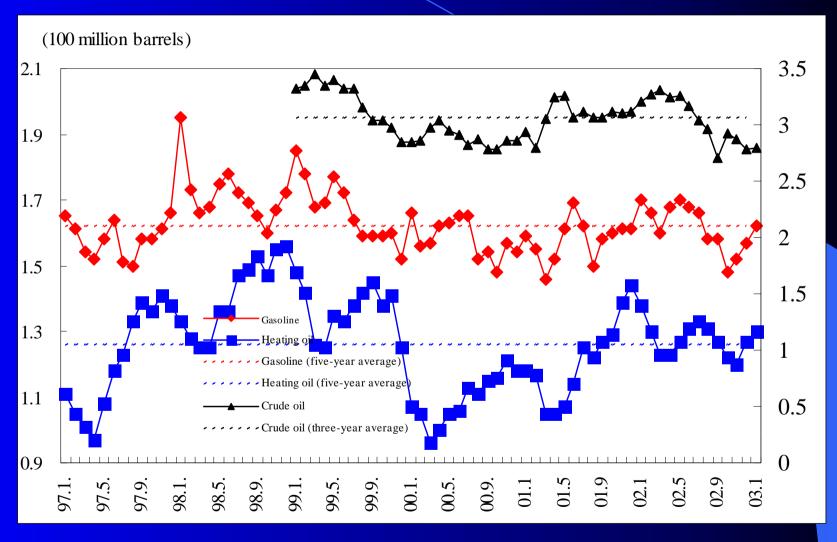
Intensifying Tensions over Iraqi Situation (Developments concerning WMD Inspections)

- Nov. 8, Resolution 1441 unanimously adopted by the UN Security Council:
 - To provide Iraq with a "final opportunity."
 - Unconditional, unrestricted inspections, including of the Presidential Palace.
 - Breaches and non-compliance to the resolution lead to "serious consequences."
- Nov. 13, Iraq expressed its willingness to accept the resolution.
- Nov. 28, UN inspection team entered Iraq.
- Dec. 7, Iraqis submitted their "WMD development report" to the UN.
- Dec. 20, U.S. denounced the Iraqi report as containing grave breaches of the resolution.
- Jan. 27, 2003, Deadline for reporting of inspection results.
- → On "finding" Iraqi non-compliance and breaches, the U.S. may initiate military action (enhancing military capability in the Gulf).

General Strike in Venezuela and Its Impacts

- In early December, the workers of Venezuela's state-run PDVSA initiated a general strike.
- Venezuela's oil output fell to below a million B/D from the pre-strike level (some 2.6 million B/D).
- It remains uncertain what kind of situation will develop after the strike and political stabilization.
 - Venezuela is the fourth largest crud oil supplier to the U.S. market.
 - It is heavy crude oil supplier to the Gulf market with a share of nearly 40%.
 - Venezuela (short-haul supply) vs Middle East (Long-haul supply)
 - The U.S. market (inventory level) immediately suffers a sense of tightening.
 - The U.S. market (NYMEX) takes lead in determining the world's crude oil price.

Trends of US Oil Stocks (Private Stocks)



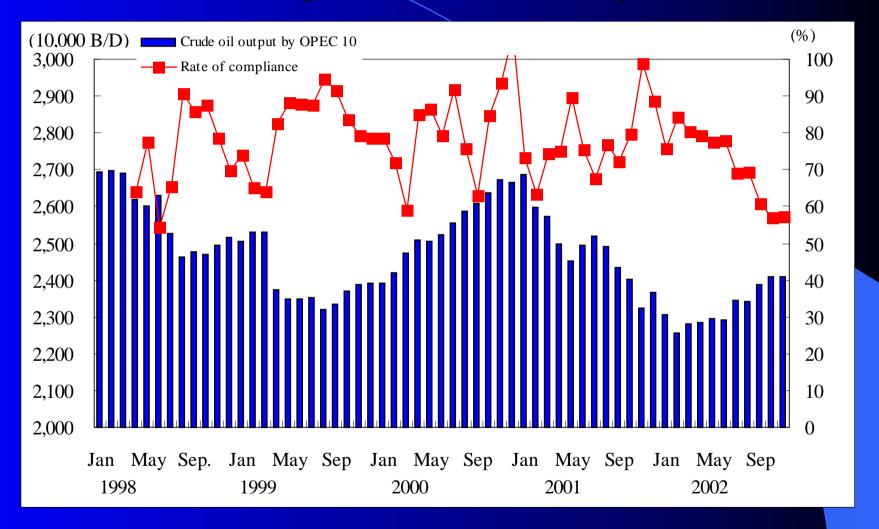
Decisions Taken at the 122nd OPEC General Meeting

- As of November 2002, crude oil production by OPEC-10 except Iraq exceeded the existing quotas (21.70 million B/D) by about 2.40 million B/D (quota adherence below 60%).
- From the beginning of 2003, production quotas for OPEC-10 except Iraq will be increased by 1.30 million B/D to 23.00 million B/D.
- Concurrently, in the hope of encouraging compliance to the new quota, restraints on overproduction are called for.
 (The Saudis will notify customers of stepping up of supply cuts.)

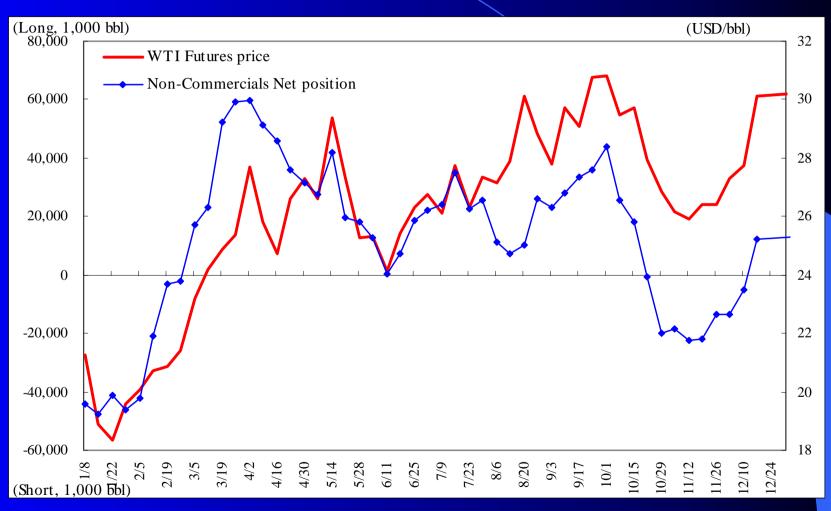
Aims:

- To re-establish "credibility of OPEC" with raised quotas + restraints on overproduction.
- To create "room" for production-quota adjustments for the next low-demand season (2003/2Q).

Production Adjustment Records by OPEC 10

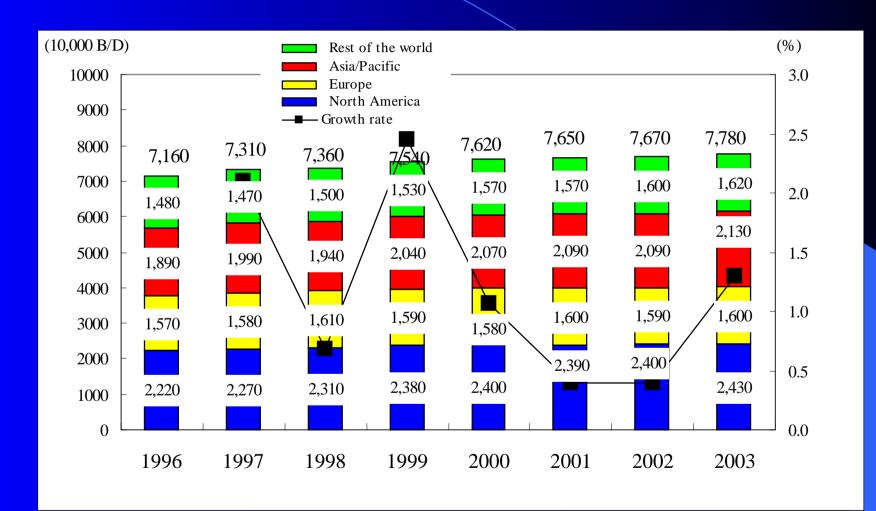


Trading of Non-Commercials and WTI Futures Price (2002)

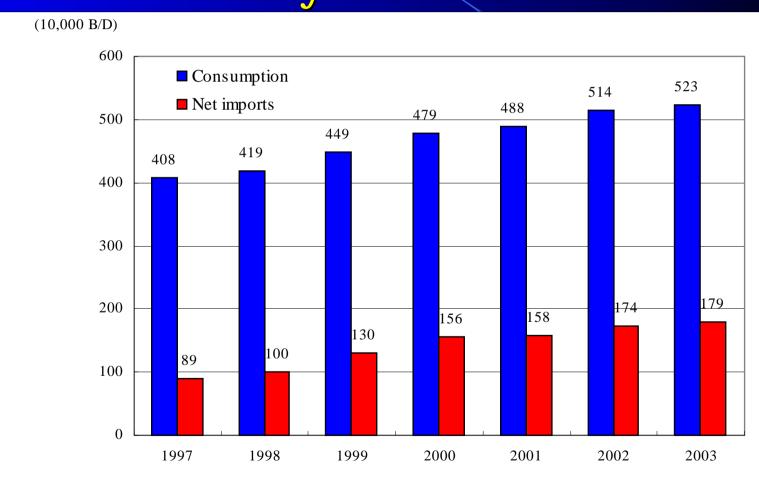


2. Prospects for Supply and Demand Fundamentals

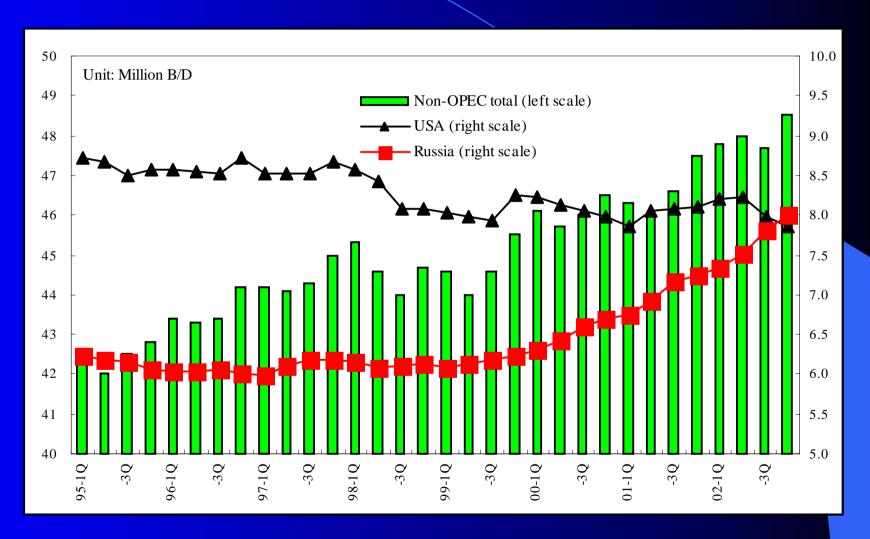
World's Oil Demand Outlook in the Short Term



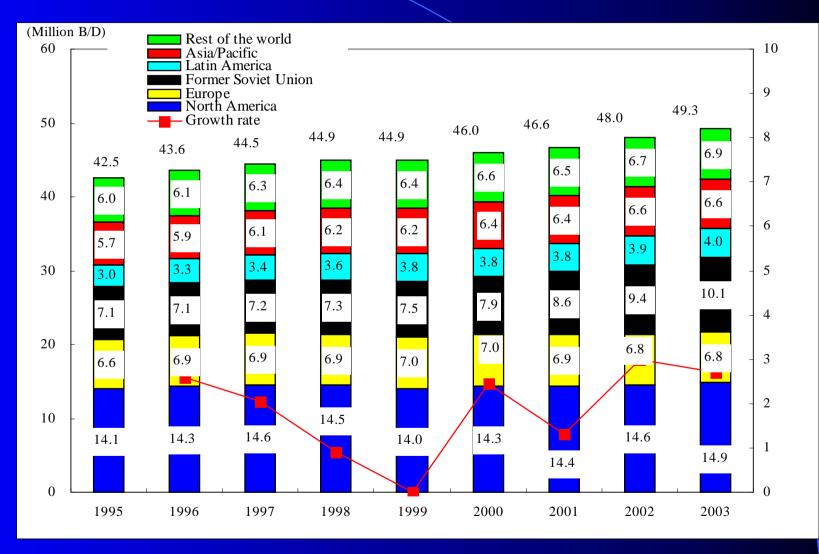
Chinese Oil Demand & Import Trends As a Key Element



Non-OPEC Oil Production Trends



Non-OPEC Oil Production Outlook



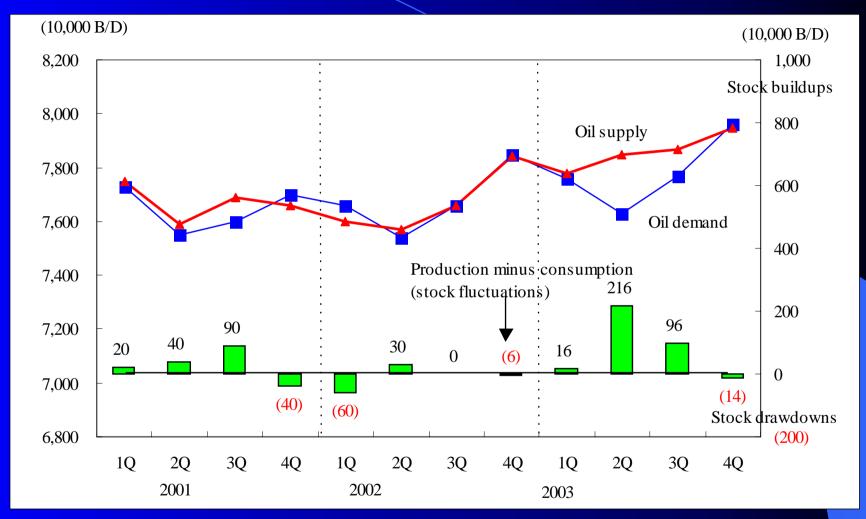
OPEC Production after the General Meeting

- For Iraq, political factors will determine its output in the near future.
- For the remaining OPEC-10 (excluding "Venezuela factor"), there are three possibilities:
 - (1) Heading for output increases overall as a result of raised production quotas.
 - (2) Actual output begins to decline to the level of new production quotas.
 - (3) Continuing to supply as much as needed on market, with production little changed from present levels (Compliance rate to the new production quotas will improve).
- (1) and (2) less likely.

Basic Problems Surrounding OPEC Production Adjustment

- **Extremely low oil price in 1998 1999 was the key factor for OPEC's successful concerted production cuts.**
- Since 2001, however, OPEC has faced new challenges: demand stagnation, rising non – OPEC production, and lower call on OPEC oil.
- The pursuit of market (price) stabilization lead to loss of market share, and fears for "free ride" by non-OPEC.
- Difficulties in strengthen production cuts under the existing massive excess capacity and prospects for growing production capacities.
- Significant output increases under present conditions can cause serious oversupplies in the next low-demand season.
- Incomplete information and difficulties in micro-management.

Short-term Outlook for Oil Supply and Demand Balance



(Note) Iraqi production assumed at a million B/D for 1Q / 2003 and 1.8 million B/D afterward; OPEC production quotas assumed at 23 million B/D, with the compliance rate put at 80%.

3. Crude Oil Price Scenarios

Three Scenarios of Consequence of Military Attacks on Iraq

(1) Iraq Stabilization Scenario

- Military objective (to get Saddam out) is achieved promptly. A stable regime is put in place.
- Very little impact on international oil market (similar to Gulf crisis?)
- Crude oil price begins to slump sharply in the second half of 2003.

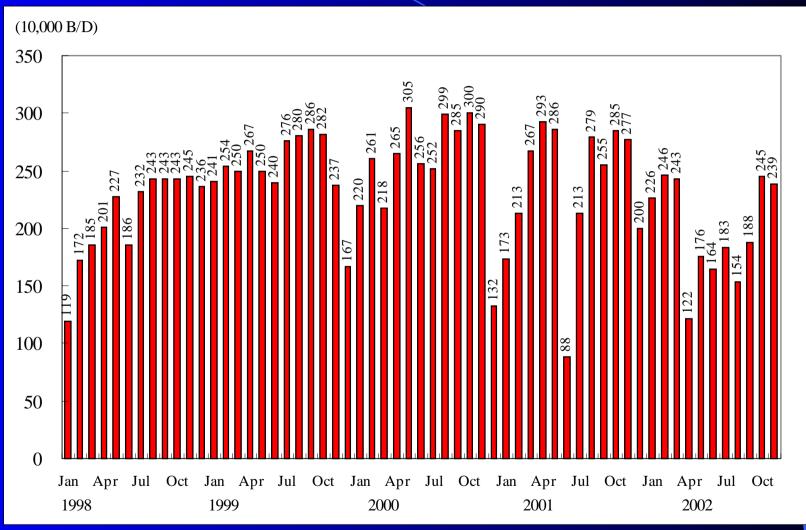
• (2) Iraq Stalemate Scenario

- The overthrow of the present regime, if successful, destabilizes Iraq (with the presence of Shias in the south and Kurds in the north, the present mainstay becoming powerless). Intervention from neighboring areas and escalation of instability.
- Nervousness increases on international oil market also.
- Crude oil price stays high (at around \$30) during the first half. Though falling later, it remains highly volatile.

• (3) Middle East Conflict Spillover Scenario

- Iraq counter-attacks Israel, making the Middle East unstable at a stroke.
 Even the moderates of the Mideast producers begin to use oil as a weapon.
- Crude oil price skyrockets, reaching more than \$40 in the short-term.

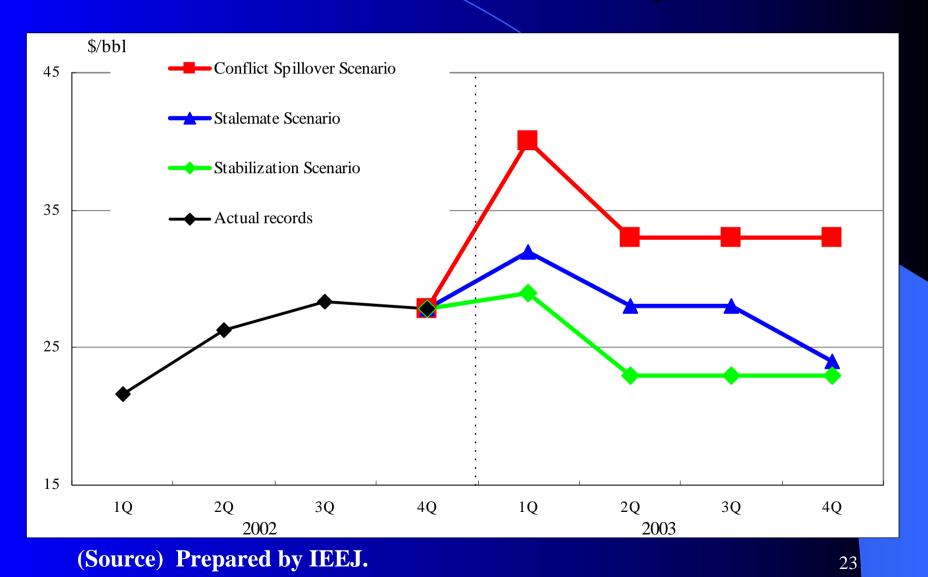
Iraqi Oil Production Trend



Excess Production Capacity of OPEC

	Crude oil production capacity	'02/11 output	Excess capacity	Overproduction above quotas	Current production quotas
	(1,000 B/D)	(1,000 B/D)	(1,000 B/D)	(1,000 B/D)	(1,000 B/D)
	(A)	(B)	(A) -(B)	(B) - (C)	(C)
Algeria	1,100	960	140	270	690
Indonesia	1,180	1,120	60	-10	1,130
Iran	3,900	3,480	420	290	3,190
Iraq	2,800	2,390	410		
Kuwait	2,150	1,870	280	130	1,740
Libya	1,450	1,340	110	180	1,160
Nigeria	2,200	1,990	210	200	1,790
Qatar	750	700	50	140	560
Saudi Arabia	9,500	7,970	1,530	920	7,050
UAE	2,500	2,010	490	120	1,890
Venezuela	2,750	2,660	90	160	2,500
Total	30,280	26,490	3,790	2,400	21,700
OPEC (excluding Iraq)	27,480	24,100	3,380		21,700

Crude Oil Price Trends by Scenario



What Will Crude Oil Price Be From Now On?

- Instability factors, notably Iraq and Venezuela problems, surface as the driver of the international market for the present and the near future.
- Production trends of OPEC-10 form the key element in supply and demand from now on.
- From 2Q/2003 onward, the fundamentals may soften.
- However, it is market psychology that actually drives the market.
- Moreover, the strong likelihood is that geopolitical (unstable) factors can drive psychology.
- Depending on the future developments of the Iraqi situation, market/price scenarios give quite different pictures (ranging from around \$20 to over \$30 in the second half of 2003).
- Crude oil prices likely unstable by interaction of the "market psychology," "fundamentals" and "Iraq situation," etc., continuing high volatility appears inevitable.