Crude Oil and Product Price Outlook: Rising to the Challenge

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Northeast Asia Petroleum Forum

September 21, 2005

1. Introduction

- 2. Factors that drive market change
- **3. Change in price structure**
- 4. Other factors influencing the oil industry
- **5. Long term price forecast**
- 6. Strategy to cope with current challenges
- 7. Conclusion



1. Introduction





1. Introduction

We are in the peak period of global economic growth .

Global Economic Growth Outlook

2004 2005(E) 2006(E) S. Korea 4.6 4.5 5.3 China 9.5 8.8 8.5 2.7 2.0 Japan 2.8 US 4.2 3.4 3.1 Euroland 1.7 1.1 1.7 Russia 7.2 5.6 5.0 Taiwan 5.7 4.5 5.0 India 8.2 6.3 6.7 Canada 2.9 2.7 2.9 Brazil 4.9 3.9 4.1 World 4.7 3.9 3.9

Source : Goldman Sachs Economics Research, Aug.17, 2005

8 Real GDP Growth, % pa 6 1970-2000 Average, 3.3% 5 4 3 4 2 4 1 4 0 5 1 5 <tr



World Economic Growth Trend

2. Factors that drive the market changes

Multiple factors are moving the market changes with complexity.

Strong Global Economic Momentum

(Especially in China & India)

Bullish Deferred Price & Higher E&P Cost

Increased Uncertainty regarding Secure Supplies

Depletion of Non-OPEC Production

Continued Flow of Investment Money

Tougher Environmental Regulation

Significant Market Change and High Volatility in Price



3. Changes in Price Structure

On top of change in crude oil price in extensive scale, other significant changes in the price structure is prevailing.



3. Changes in Price Structure

In addition to spike in price, volatility in crude price and price differential has increased.



Volatility of NYMEX WTI Price

Sweet/Sour Crude Spread (Murban/AH)





6

3. Changes in Price Structure

Differential trend between grade and sulphur content also shows significant change.



Gasoil - HSFO Price Spread

Gasoil(0.05%) –Gasoil(0.5%)





4. Other Factors influencing the Oil Industry 4-1) Environmental Regulation (Kyoto Protocol) Change in business Crisis Opportunity environment - Constraints on Business - Introduction of new policy by - Improvements in Process and the government Activity reduction of cost through development of technology - New Barrier in Trading Activity - Development of new - Modification in structure of - Strengthening the current technology and establishment existing Market position through acquisition of of a new market new technology - Create new business - Establishment of sustainable - Consumer's boycotting of - Increase in preference for Ecoproduct management system friendly enterprises - Faltering of Company's image



4. Other Factors influencing the Oil Industry

4-2) Supply and Demand

China, the decisive country in influencing the supply/demand balance, will have to depend on imports in the near term considering the gap between expansion of the refining capacity and rapid demand growth.

India will play the role of net exporter by acclerating the establishment of new facilities which exceed its demand growth.

Overall, the shortfall of product is predicted to continue due to global economic growth and limited refining capacity. Refining margins are likely to remain relatively healthy in the near term.





4. Other Factors influencing the Oil Industry

4-2) Supply and Demand – Especially China



4.0

3.0





Non-OECD less China, Oil Demand











Change Y-o-Y — Year Av. Demand



- * Non-OECD less China
- : +0.7 mmb/d (+2.6%)
- * China : +0.6 mmb/d (+9.0%)



5. Long Term Price Forecast

Long Term Price Forecast by analysts – Strong Price to be continued. **WTI Price Forecast** 100.00 90.00 80.00 70.00 60.00 50.00 40.00 30.00 20.00 10.00 2002 2003 2004 2005Q1 2005Q2 2005Q3 2005Q4 2005 2006 2008 2009 2010 2012 2015 2020 2007 → PIRA ('05.8.31)



6-1. Expand upgrading Capacity and Facility

Korea's Refining Capacity is about 2,735MB with limited Upgrading units.



6-1. Expand upgrading Capacity and Facility

Due to changes in demand patterns, the differential between simple and Cracking Margin is widening significantly





6-2) Energy Business Diversification

Korea's Petroleum Market has entered a phase where demand has slowed and the market has become saturated.

It is time to diversify those segments of the business landscape offering high growth potential.

Considering the changes in the economy and environmental regulation, it is imperative to diversify the main business domain into Petrochemical, Gas, Power generation/distribution and Fuel Cell which are Eco-friendly and technologically sophisticated energy sources.

This issues should be thoroughly reviewed as a long term project .



6-3) Diversify the Crude import source

To alleviate the factors influencing the price risk, we should break away from purchasing crude from specific territory and vigorously examine the possibility of importing new grades and sources of feedstocks.

Crude from the Caspian, West Africa, Sakhalin and Canadian Oil Sands where out is expected to rise, should be reviewed as alternative energy sources.

Northeast Asian Countries should cooperate on energy policy or devise other methods such as co-freight, utilizing long-distance pipeline to reduce the transportation costs and address potential energy security threats.



6-4) Expand the E & P project

Three nations import about 24% of the global crude import volume; hence, crude cost becomes a crucial factor in charting the future economic growth of importing nations.

Importing countries and corporation must extend the search for independent sources of energy.

GS Caltex's efforts have been successful to date in finding sweet crude from 4 wells in Cambodia block A. The Company is presently examining the economical feasibility of commercial production .



6-5) Diversification of sales outlets and strengthening of business alliances among the neighboring countries

The intra-trade between countries that have entered into the FTA has become more critical The coalition among the neighboring countries can enhance mutual optimization.

China has already proven itself as our largest energy market. The business relationship with Japan should be strengthened further especially in technology and finance.

It is imperative to reduce crude cost to keep the economic growth and demand. Considering the dependency in import, 3 nations should try to eliminate extra cost as well as "Asia Premium" to lower the crude import cost and achieve competitiveness.





Living in front of the flood of change

Accurate analysis of current phenomena

Adequate selection of and concentration on effective strategies

Create distinguished quality and competitiveness thru active implementation





Thank you !

