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**Asian Premium of Crude Oil
and Importance on Preparation
of Oil Market**

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Good afternoon ladies and gentlemen. Today, I would like to make a presentation on “Asian Premium of Crude Oil and Importance on Preparation of Oil Market”

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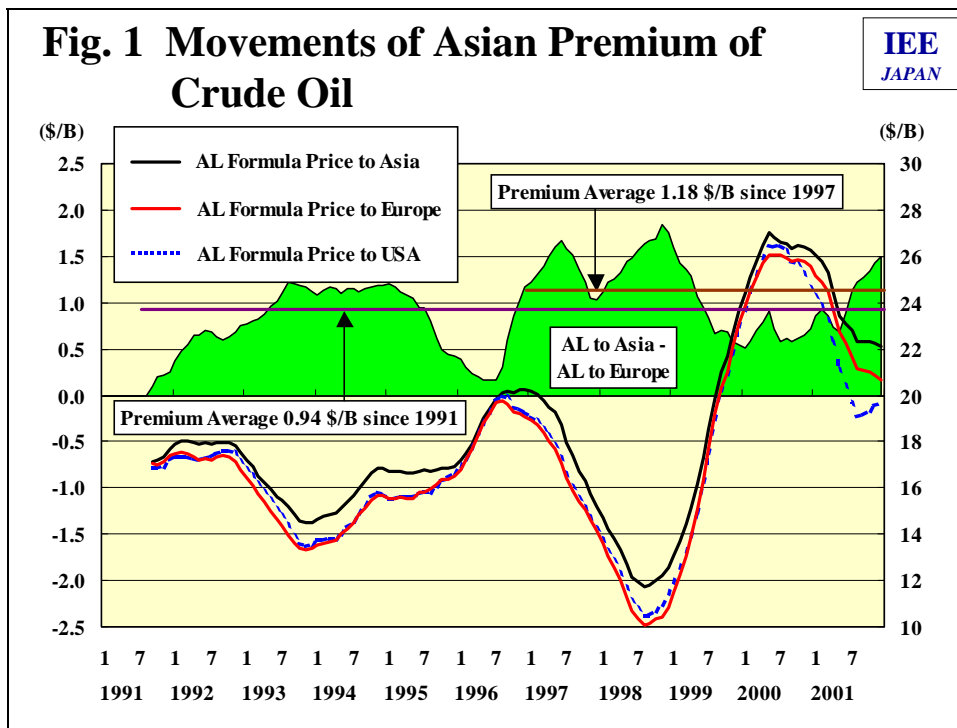
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Crude oil prices for Asia remained higher than those of Europe and U.S. Such a problem caused by high crude prices over the long period, so-called Asian premium, cannot be overlooked, when taking into account the adverse impact it will have on the international competitiveness of the Asian economy and society as a whole.

The purpose of this report is to examine several concrete proposals aimed at reducing the Asian premium and to consider medium- and long-term objectives to be achieved by producing and consuming countries.

My presentation is composed of six topics shown in this Slide. Today, because my presentation time limited to about 15 minutes, I would like to omit to talk these topics in detail here.

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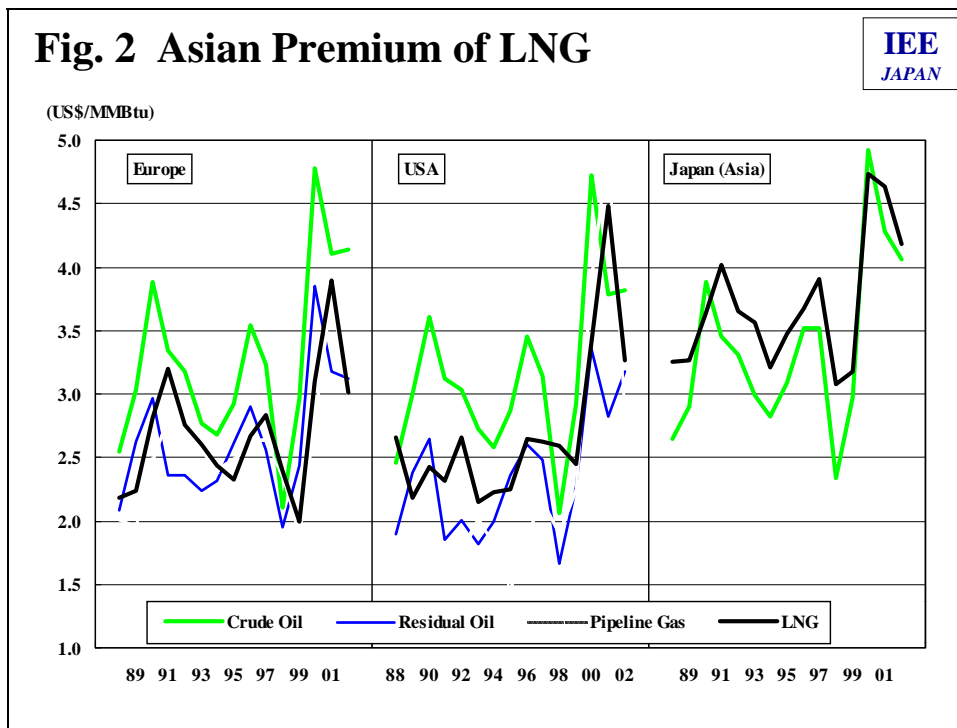
I would like to talk about “the Existence of Asian Premium and Its Impact” as the first topic of this presentation.

Saudi Arabia and other Middle East producing countries are marketing their respective crude oils to the three major markets, with their prices determined in reference to different markers.

Formula prices of AL crude for Asia have been higher than those for Europe or U.S. by \$1 ~ 1.5 / barrel over ten years from 1992, as shown in this slide. This premium is not a temporary one and should be taken up as an important problem as it has an adverse impact on the economic competitiveness of the countries involved.

Since energy prices are established in reference to crude oil prices in Asia, the issue of higher prices is not only limited to oil but also applies to all other energy sources. In fact, Asian LNG import prices are determined by a formula, with Japan’s average crude oil import price as the marker.

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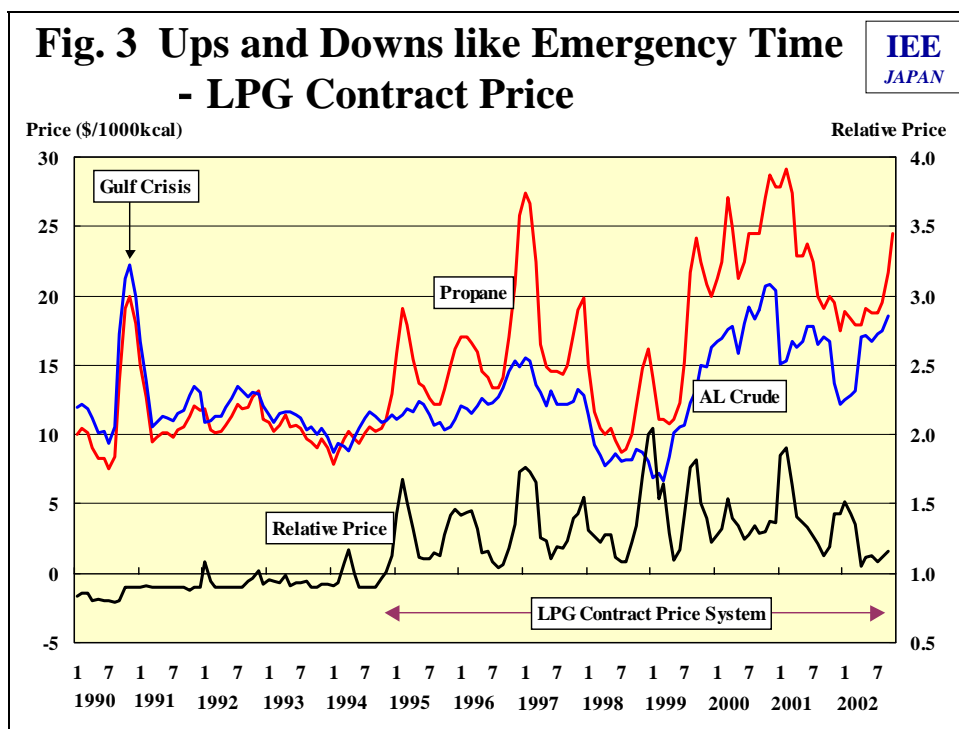


In addition, the price setting of LNG has been quite different between Asia and Europe or US. In Asia where LNG is the main stream of gas trading, they have traditionally set the price at the level of crude oil calorific equivalent.

On the other hand, in Europe and US where the pipeline supply has been the main stream, the price of pipeline gas has been set at or lower than the level of residual oil calorific equivalent and the price of LNG has been set at the same level.

From the viewpoints of international competitiveness of energy cost, the fact LNG price for Asia is set at a level of crude oil calorific equivalent plus environmental premium is major obstacle if the utilization expansion of LNG is anticipated in Asia.

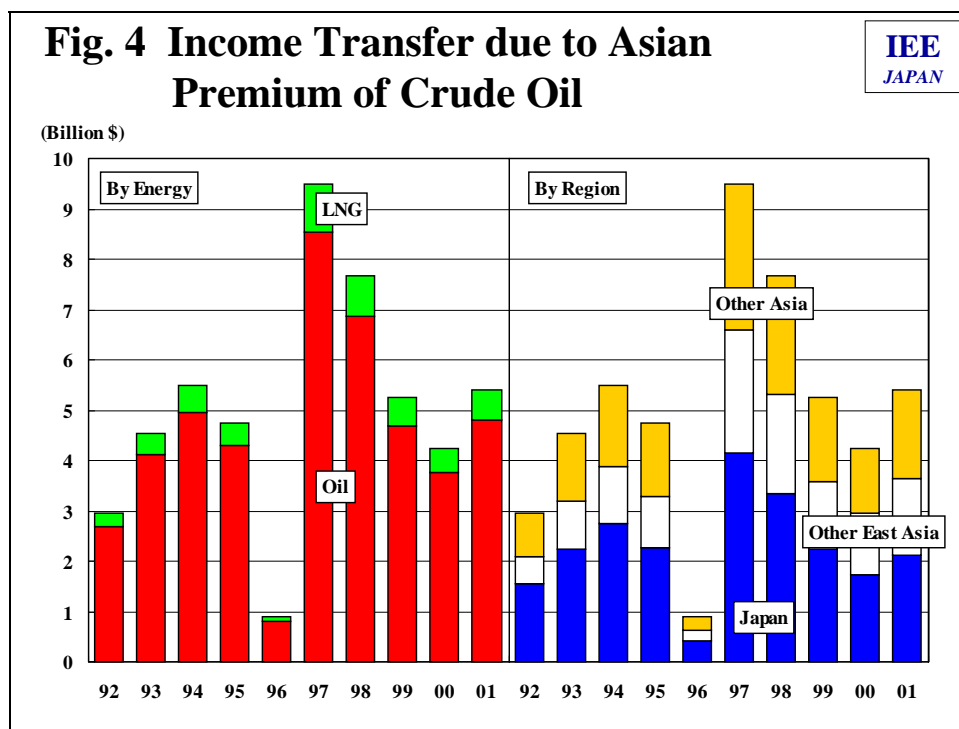
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This Slide shows skyrocketing up and down of LPG prices which were started from the beginning of 1995 when Saudi Arabia adopted the contract price system of LPG. The seasonal changes in LPG prices in the ordinary time fluctuated abnormally similar to those in the emergency time such as the Gulf crisis.

I would like to point out that if the relation between sellers and buyers shift to one side strongly, one-way price requirement is also possible to happen like the LPG case. If oil for Asia will have this kind of pricing, the impact on economy would be quite severe. So I think it is quite important for Asian countries to prepare preventive measures.

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This Slide shows the income transfer caused by Asian premium of oil. Oil imports by Asian countries as a whole totaled 15 million B/D in 2000.

Assuming that crude prices for Asia are higher than those for other markets by \$1 ~ 1.5/barrel, this means there was an income transfer totaling \$5 ~ 8 billion from consuming countries to producing countries.

It should be noted that Asian consuming countries have shouldered the burden of such a high extra cost as shown above over the past decade.

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Asia Premium Having Large influences to International Competitiveness in Economy

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- **Additional income transfer of 5 to 10 billions \$ from Asian consuming countries to oil producing countries**
- **Worsening refinery margin since 1999—recently expanded to minus value of about 1\$/B**
 - # reducing refinery margin due to demand slowdown and surplus refining capacity since 1997
 - # minus refinery margin due to higher crude oil price since 1999
 - # lowering refinery operation in Singapore, Korea and so on
- **Asia Premium is not limited to oil but exposed on whole energies**
 - # Price of other energies such as LNG is raised through crude oil price
 - # LNG has an original problem for Asian premium
 - # LPG contract price showing ups and downs like emergency time – one-way force by producing countries

Furthermore, judging from the netback value of AL in the Singapore market, AL for Asia has experienced such a higher formula price that the refining margins become negative to around minus \$1/barrel since 1999.

If this situation is common to all consuming countries in Asia, either consuming countries or oil industries in Asia should not keep quiet at the existence of the higher formula prices of crude, causing economic losses like this.

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Production Decrease in Dubai, Marker Crude for Asia and the Points at Issue

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- **Production decrease to 150,000 B/D in 2002 from 420,000 B/D in 1987**
 - # **Steadily decreased Entering 1990s and accelerated since 1995**
 - # **Crude destination was limited to Asia since 1991**
 - # **Rapid decrease in spot trading, Special buyers by bidding**
- **Dubai price formation completely losing reliability**
 - # **Low liquidity and transparency in spot price formation**
 - # **Assessment of Dubai price using Brent price and spread between Brent and Dubai**
 - # **Quotation price by Platt's considering spot and future**
 - # **problem of intentional price manipulation using defects of physical trading**

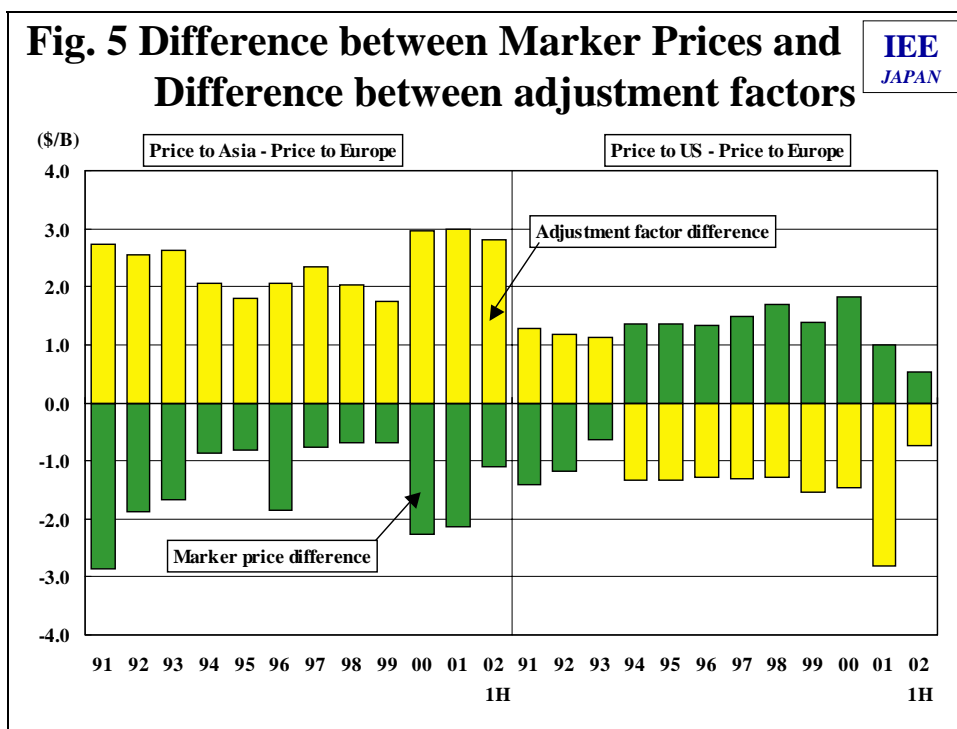
Next, I would like to discuss about “Dubai Production Decrease and Necessity of Marker Crude Change”.

Production of Dubai was more than 400,000 b/d in the latter half of the 1980s, but began decreasing in the 1990s to drop to the current level of merely 170,000 b/d. It takes some difficulties to determine the price of Dubai on spot trading at present because of the decline in Dubai production.

In reality, the spot price of Dubai is determined by Platt's assessment, in consideration of the price of Brent and the spread between Brent and Dubai prices, based on the spread trading on the forward market.

Both sellers and buyers of Middle Eastern crude are now reaching the limit of tolerance. Japanese and East Asian oil companies are set to begin negotiations with Middle Eastern producing countries to change the marker for Asia.

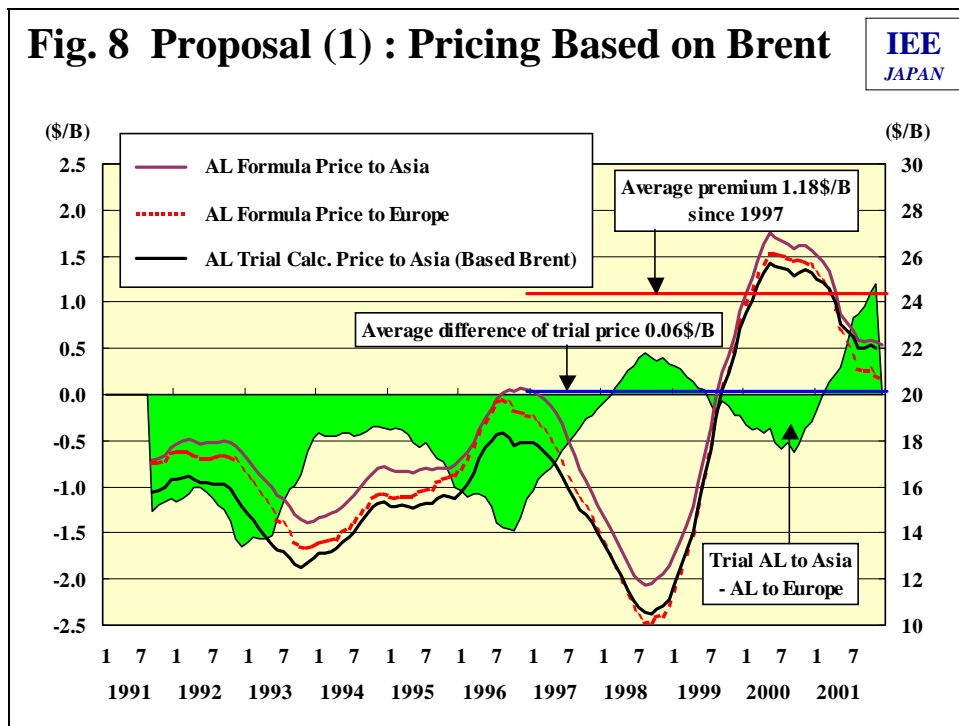
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The foremost primary factor for the higher formula price to Asia is the rapid diminishing gap between the spot prices of Brent and Dubai, as shown in this Slide. The adjustment factors instituted by oil producer could not always follow the marker price changes in the market.

When pricing Dubai whose destination was limited to Asia because of oil demand increase in Asia and production decrease of Dubai, the transportation cost between the Middle East and Singapore is the only factor to be considered. This is one of the structural factors leading to relatively higher crude oil prices for Asia.

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Next, I would like to talk about “Change of Pricing for Asia and Reduction of Premium” as a short-term measure.

The first proposal aimed at reducing the Asian premium of oil is to adopt IPE Brent as the marker for Asia. Since importance is attached to Asia’s international competitiveness vis-à-vis Europe and U.S., it is essential to place crude price at the same level.

Newly estimated formula prices for Asia are obviously lower than the current formula prices for Asia as shown this Slide. The differentials between the estimated prices for Asia and the current formula prices for Europe are reduced to average +\$0.06/barrel after 1997. The refinery margin is also improved in 3 years since 1999. This can be proposed as one of the effective methods of reducing the premium.

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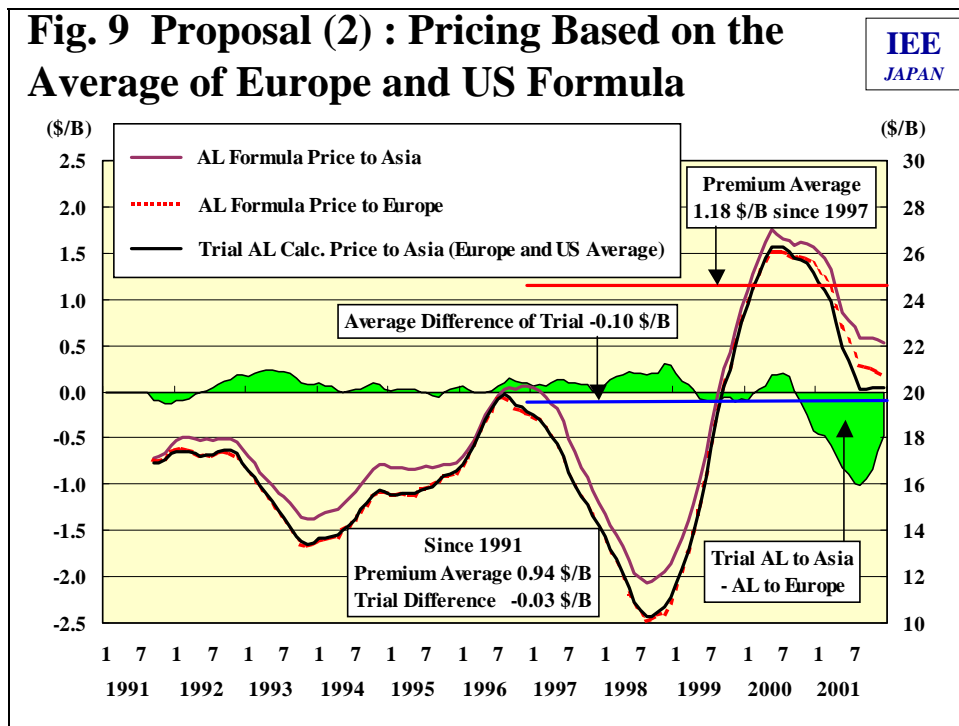
<p>Problems in Pricing Proposal (1)</p> <ul style="list-style-type: none">• Price formation not reflecting oil supply-demand in Asia<ul style="list-style-type: none"># Brent price is formed with reflecting oil supply-demand in Europe# Easy to be influenced by special problems in US oil supply-demand# Not always consistent with oil supply-demand environments in Asia• Problems of price manipulation due to production decrease in Brent<ul style="list-style-type: none"># The existence of price manipulation such as notorious squeeze# Twin market relation between physical spot / forward and IPE future	
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Nevertheless, this method is not without problems. First, Brent prices are determined by supply and demand of oil in Europe and they are not necessarily in conformity with supply and demand in Asia.

Second, Brent crude is not entirely free from artificial pricing, since it is, for example, subjected to notorious squeeze. When selecting a marker crude, careful studies of these problems should be made.

Of course, it is important to be remembered that there is no perfect marker.

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The second proposal aimed at reducing the Asian premium of oil is a method of determining the price for Asia by using the average of the current formula prices for Europe and U.S. Under this method, prices of AL crude determined daily at the timing of shipment from Saudi Arabia for Europe and U.S. are averaged monthly and the average of both is used to determine the price for Asia.

The differentials between the estimated prices for Asia and the current formula prices for Europe are reduced to average $-\$0.10/\text{barrel}$ after 1997. The refinery margin is also improved. This can also be proposed as one of the effective methods of reducing the premium.

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Problems in Pricing Proposal (2)

- **Price formation not reflecting oil supply-demand in Asia**
 - # Brent price is formed with reflecting oil supply-demand in Europe
 - # WTI price is formed with reflecting oil supply-demand in US
 - Easy to be influenced by US special problems such as pipeline
 - # Not always consistent with oil supply-demand environments in Asia

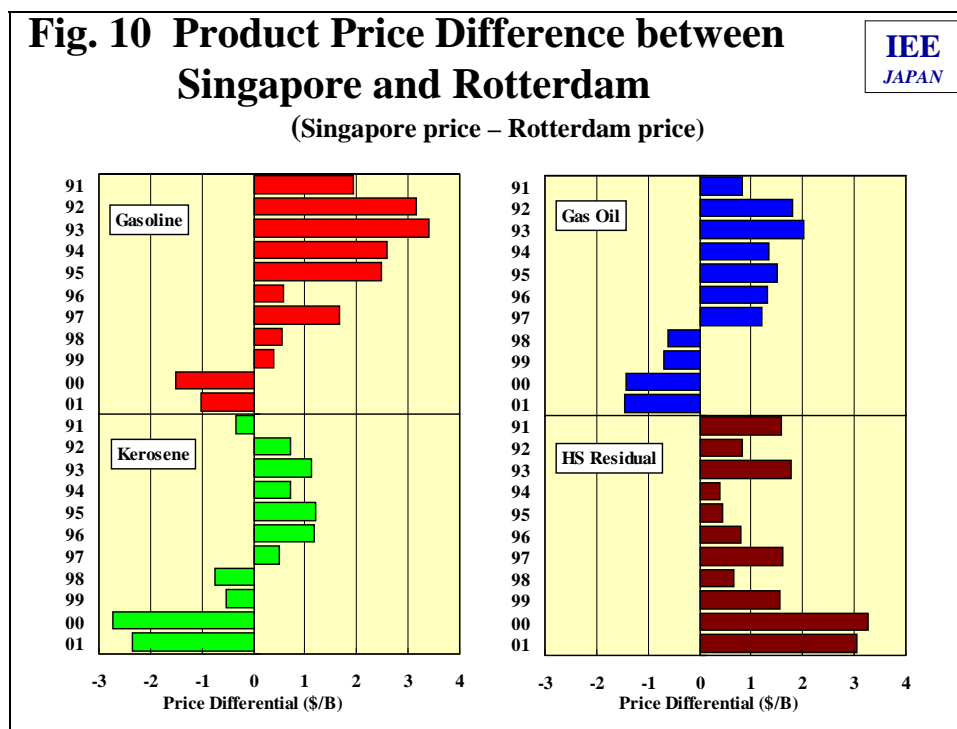
- **Complicated price formation not based on marker**
 - # Monthly average of formula prices is required by type of crude
 - # Apprehension to Complicated method not based on common marker
 - # Difficult to check suitability of price setting

This method, however, is not also flaw less. First, the pricing reflects the current oil supply and demand in Europe and U. S. and hence is not necessarily in conformity with supply and demand in Asia.

Second, the method is problematical in that it is necessary to compute averages of formula prices for Europe and those for U.S. for each crude oil, leading to complicated calculations due to the absence of the common marker crude.

However, the determination of prices is not delayed considerably, compared with the current method of computing the average of Dubai and Oman crude prices.

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Next, I would like to talk about “Importance of Oil Product Market Preparation in Asia and Unity among Asian Consuming Countries”.

The oil product market in Singapore is the only market in Asia, which is engaged in active international trading at present. Prices of all products in Singapore were relatively higher than those in Rotterdam until 1997, as shown in this Slide.

After 1998, however, price differentials for white products such as gasoline, kerosene and gas oil narrowed, thus making prices in Singapore lower than those in Rotterdam. After all, the market in Singapore is obviously making an entirely different movement from Europe or U.S.

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<p>Importance of Oil Market Preparation in Asia</p> <ul style="list-style-type: none">• Oil market not prepared in Northeast Asia, large consuming area<ul style="list-style-type: none"># Large consuming area with oil demand of 12 millions B/D which is a similar size to Europe/US# Oil market is not prepared in the center of large consuming area# Singapore market is a just intermediate position for northeast Asia# Necessary to send information signals reflecting energy competitive relations in large consuming area• Required conditions for preparation of oil product market in Asia<ul style="list-style-type: none"># Streamlining and expansion of oil product trades within Asian region# Deregulation and privatization of oil industries in Asian Consuming Countries# Unification for quality standard of oil products in Asia	<p>IEE JAPAN</p>
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One of the basic and important measures will be to establish an international oil market in the Northeast Asia centering on Japan, the Republic of Korea, Taiwan and China. Singapore is only a transit market for Northeast Asia, that is large consuming area.

The power to balance and adjust Asian oil product market through the global link is believed essential so as to curb the producing countries' one-way move to press consuming countries to accept their crude prices.

To achieve this objective, it is important to streamline and strengthen Asian oil product market, by revitalizing its international oil product trading activities through the deregulation of each Asian country's domestic oil market and so on. Moreover, it is necessary to improve the liquidity and the transparency of the market by introducing new systems such as the futures market that has been well developed and matured in Europe and U.S.

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Unity among Consuming Countries and Negotiations with Oil Producing Countries

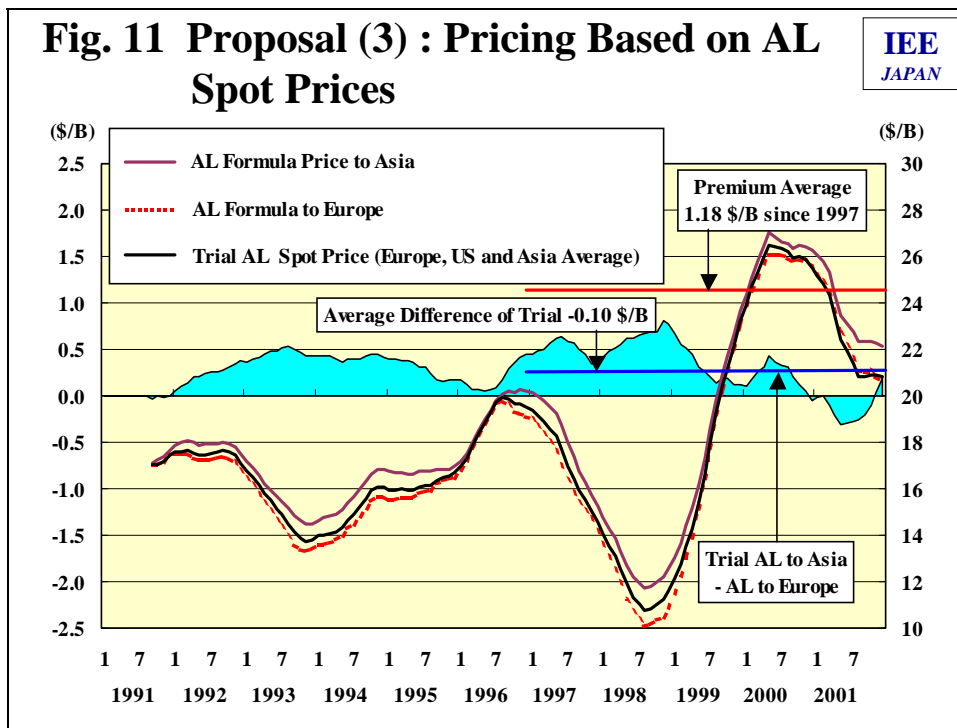
- **Unity among Asian consuming countries**
 - # Important to make a common perception among Asian consuming countries and to unite in various stages such as policy, government and private sector
 - # Deliberation on response measures through ASEAN+3 meeting
 - # Necessary to intensify negotiation power through unity among consuming countries

- **Negotiation with oil producing countries**
 - # Important to have opinion exchanges with oil producing countries through dialogues between producers and consumers such as IEF
 - # Important to have an energy dialogue between East-West Asian countries whose interdependent relations will be tight in the long-term

The voice of Asia will be absolutely essential in the dialogue between producing and consuming countries in the future. It is necessary for Asian consuming countries to be united at various stages of political parties, governmental bodies and private sectors in order to strengthen their bargaining power vis-à-vis the producing countries.

In this connection, it is worthy of special mention that Asian consuming countries acted in concert, raising their voices against the Asian premium.

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Next, I would like to discuss about “Spot trading of Middle East Crude and Elimination of Asian Premium” as a medium-term or long-term measure.

The third proposal is to encourage spot trading of AL crude, thus establishing spot prices of the crude, and use them as the common marker. For example, when Saudi Arabia delivers one million barrels of AL daily on the spot market, it is believed certain to establish crude oil prices as the global standard.

The differentials between the estimated prices for Asia and the current formula prices for Europe are reduced to average +\$0.33/barrel after 1997. The refinery margin is also improved.

If spot trading of Middle Eastern crude is realized and prices of AL are established as the marker, the Asian premium of crude oil can be eliminated in principle. Therefore, this measure is the fundamental solution to the problem on Asian premium of oil.

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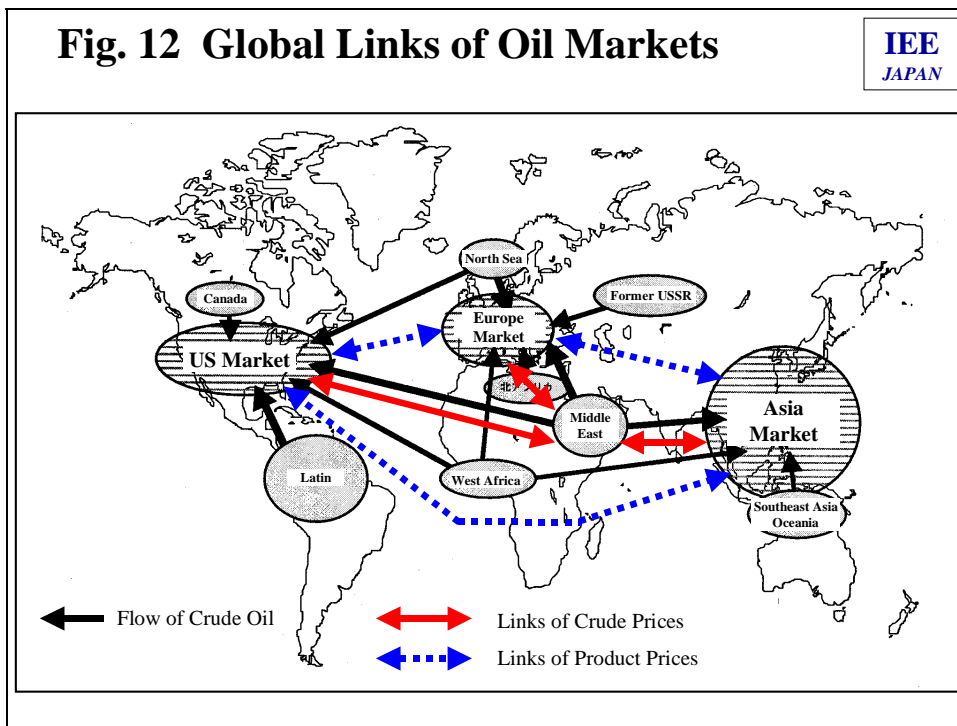
<p>Problems in Pricing Proposal (3)</p> <ul style="list-style-type: none">• Negative attitude of oil producing countries to spot trading<ul style="list-style-type: none"># Not hope to repeat price collapse of crude oil in 1986# Spiral price drops due to the guarantee of refining margin in netback selling# Restriction of destination change and Inhibition of spot trading# Can not expect change of this attitude in the short-term• Changes in oil supply-demand environment after 15 years passed<ul style="list-style-type: none"># Reduction of surplus crude oil production capacities from 1986# Small possibility of one-way price drop even if starting spot trading of ME crudes# Difficult to make a price stabilization using marginal crudes	<p>IEE JAPAN</p>
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The most controversial aspect of this method, however, is that producing countries, which had a bitter experience in spot trading in 1986 when crude prices collapsed, will be reluctant to accept it.

Saudi Arabia, in particular, which was caught in a downward spiral of crude prices caused by the netback sales, prohibited crude oil sales on a spot basis and strictly limited destinations of crude oil exports to maintain the current formula pricing.

Under such circumstances, the possibility of Saudi Arabia's accepting such spot trading is extremely slim in the short-term.

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Finally, I would like to discuss about “Global Links of Oil Market and Stabilization of Crude Oil Price” as a conclusion.

It is important to form a global link in respect of oil product prices in a tie up with Rotterdam in Europe and Gulf in U.S. When the market functions of the global link become powerful, with Asia incorporated in it, producing countries will inevitably come to play within that framework.

It is also important from medium- and long-term perspectives to realize the spot trading of Middle Eastern crude and to improve and expand the crude oil market. When the producing countries’ market is improved and expanded by spot and futures trading of Middle Eastern crude, it can be expected that the Middle Eastern crude market will function as the very center of the global crude oil market, instead of the marginal Brent and WTI crude markets.


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<p>Spot Trading of Middle East Crudes and Stabilization of Crude Oil Price</p> <ul style="list-style-type: none">• Factors affecting violent fluctuations of crude prices<ul style="list-style-type: none"># Too high OPEC price band and production controls# Weakened supply cushions such as insufficient refining capacities and low level of oil inventory# Overshooting reactions in future market and bottlenecks in spot market# Reflection of marginal supply-demand by marginal price marker• Formation of marker price by spot trading of ME crudes<ul style="list-style-type: none"># ME crudes are the mainstream reflecting global supply-demand balance# Without direct interventions, spot trading is consistent with production controls# Stabilization of crude prices is serious subject also for oil producers	<p>IEE JAPAN</p>
<p>Some room to suggest the adoption of spot trading to oil producers from the viewpoint of stabilization of crude prices?</p>	

When this crude oil market function is linked with the global oil product market function, thus establishing a mutually affecting relationship between crude oil and oil products on a global basis, we can expect to have a large adjustment function, through which the violent fluctuations of crude prices, a grave problem since 1996 due to a weakened supply cushions, can be eased on a global basis.

This is essentially a subject matter of establishing a reasonable world system from medium- and long-term perspectives, with both producing and consuming countries endeavoring to strengthen a global market function.

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<p>Middle and Long-term Subjects aiming at Reducing Asian Premium</p> <ul style="list-style-type: none">• Preparation of oil product markets in northeast Asia and Asia<ul style="list-style-type: none"># Streamlining and expansion of oil markets in various consuming areas# Formation of the linkages of oil markets between Asia and Europe/US• Developments of alternative crudes except ME crudes<ul style="list-style-type: none"># Procurement of increasing crude oils in the West of Suez such as West African crudes# Developments of neighboring oil resources such as Sakhalin and east Siberia# Developments of liquid fuels (GTL) from coal and natural gas• Further reinforcement of flexibilities in consuming areas<ul style="list-style-type: none"># Flexible combinations of crude oil processing and oil product import/ export# Reinforcement of flexibilities in fuel selection in consumer sides	
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In order to reduce Asian premium, Asia should challenge three middle- and long-term subjects, as shown in this Slide. The first is to prepare oil product markets in Asia, especially in Northeast Asia. The second is to develop alternative crudes except Middle East crudes. And the third is to reinforce flexibility in consuming areas moreover.

In the absence of keen competition among a variety of crude oil supply sources in Asia, it cannot be expected that the issue of the Asian premium is solved within a framework of oil alone.

It is necessary to have competitive relations with alternative energy sources having abundant reserves such as coal and natural gas enter the same arena with oil. It is also important for Asian consuming countries to have a fuel switching capability on the demand side in such a manner that Asia can take advantage of its position as a large-scale consuming area in the world.

Thank you very much for your kind attentions.