Why Oil Trading & Paper Markets Are Different in Asia Pacific

The Asia Pacific region is now recognised as the major growth area for energy demand taking centre stage for oil, gas and electric power investment. However, Asia Pacific has vastly inadequate local crude oil production relative to its expanding needs and will need increased imports from outside the region, particularly from Middle Eastern producers. Coupled with governmental policy changes encouraging deregulation, privatisation and foreign investment, the future appears bright; yet risks prevail. Deregulated markets bring with them competitive risks. Thus, energy risk management rises in importance in such a changing market environment, as **PETER C. FUSARO** explains.

IN ASIA PACIFIC, the one overriding concern has always been security of oil supply rather than price risk. In this environment, the use of energy risk management tools, particularly on futures exchanges, has repeatedly failed. Risk avoidance rather than risk management has been the operative word in Asian oil markets. That is about to change due to the twin engines of deregulation and privatisation driving competition. The 'business as usual' approach is no longer enough as a sharp increase in oil dependence and price volatility fuels greater uncertainty and risk. And deregulation and globalisation of energy markets are bringing with them the need for active management of market risks as the markets become more price sensitive with the rapid dissemination of price and market information.

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Oil futures trading has moved forward from the exchange-traded instruments of the 1980s and mid 1990s to the over-the-counter (OTC) markets of today, particularly in the Asia Pacific region where no viable futures contracts exist to manage large volumes of oil price risk. However, financial instruments do not exist in a vacuum. They are based on what is occurring in the physical energy markets.

Energy markets are some of the most volatile commodity markets in the world caused by dramatic changes in physical markets which are influenced by unpredictable weather patterns, political events and dramatic swings in supply-demand balances. These factors lead to tremendous price swings in short time periods. Thus, energy commodities are quite conducive to the use of price risk management tools. However, the innate conservatism of the energy industry in Asia has demonstrated a reluctant and slow acceptance of the risk management tools of the financial markets. This process of market acceptance is now underscored by the deliberate and yet incremental development of energy derivatives in the Asia Pacific region. The financial revolution that overtook Atlantic basin oil markets during the 1980s is still just getting underway in Asia, even though Asia Pacific oil prices continue to be inordinately influenced by Atlantic basin-orientated financial instruments for energy i.e. Brent and WTI.

It has taken longer than expected for the energy derivatives market to develop in the Asia Pacific region, and the energy derivatives markets in Asia have followed a different path from the more mature markets of London and New York. With no viable energy futures contracts, the OTC ener-

gy derivatives markets leapfrogged energy futures market developments in the Pacific Rim with many OTC derivatives agreements created to meet growing market needs. And while the OTC markets can sometimes evolve into futures contracts (such as 15-day Brent did in Europe) the OTC swaps and options markets tend to function like a quasi-futures market. These markets are unregulated, global, and both short and long-term, and are influencing prices beyond their notional value, i.e. they are influencing price formation in the physical markets.

The change in the energy commodity markets is being brought about by underlying developments in the physical markets in the Asia Pacific, including new and planned refinery projects, growing petrochemical capacity, rising electric power needs, development of a natural gas infrastructure (particularly for LNG), and a movement away from a high degree of government regulation of the energy sector in many countries. Capital flows to Asia in the coming decades will be substantial as greenfield energy projects proliferate. But this move towards deregulation will follow an Asian model and will not be a rapid transition to open markets but a gradual process. In effect, a controlled deregulation process is underway. Moreover, Asia's role continues to rise in importance in world energy markets so that risk management imperatives will be more pronounced in the years ahead, for it will be increasingly necessary for both oil producers and refiners to use these instruments.

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During this decade, continued economic growth for the Asia Pacific countries will bring pressure on regional oil and gas markets, particularly with a reduction or at best, a plateauing of oil production. The Asia Pacific energy markets are heavily dependent on hydrocarbons including roughly 50% coal use, 30% oil usage, 10% natural gas use, with nuclear and hydro constituting the remaining 10% (on an oil equivalent basis). Gas usage, except for LNG, is relatively new in the region and will require more investment in a pipeline infrastructure and distribution facilities, but it is sure to rise. Asia Pacific consumes roughly 25% of world oil demand, 45% of coal and 10% of natural gas demand. Growing oil import dependency will lead to more price volatility and supply instability

While coal is the region's most abundant energy resource and dominant primary fuel, it is oil and gas demand growth that will rise substantially creating entailing new financial risks. There is the possibility of coal commoditisation in the Asia Pacific region as a global coal trading emerges.

Oil Markets

The importance of the Asia Pacific in terms of world oil demand and refining cannot be understated. Since 1985, Asia has accounted for over 70% of total world oil demand growth. Asia Pacific has already surpassed Europe and will soon eclipse North America as the primary region of world oil demand. The Asia Pacific continues to be the most dynamic oil market in the world with demand projected to increase to 25.4 million b/d in 2005, reaching 29.4 million b/d in 2010. Most of this increased consumption will be sourced from the Middle East from where presently over 70% of the supply comes. It is estimated that 80% of Persian Gulf oil production will be exported to China, India, Japan, South Korea, Taiwan and Southeast Asia by the year 2010. Growing commercial ties between the Gulf producers and Asian consumers seem inevitable. Changing markets and oil trade patterns presage rising price volatility.

This increased dependency on oil points to an era of continued price volatility and the growing need for more risk management instruments to be developed and utilised in the Asian markets. China turned into a net oil importer during 1993 and its needs continue to grow. Additionally Indonesia, an OPEC member and current oil exporter seems to be slipping towards an importer.

Several other factors are creating change in the Asian energy markets. These include changing petroleum product specification standards because of more stringent environmental laws, a movement to just-in-time oil inventories now popular in US oil markets, and the entry of new competitors into the markets. These changes will add to increase price volatility in the coming years as government protection is removed in the energy markets. Petroleum storage requirements for refiners and traders are another area affected by deregulation. Rising product demand and tightening fuel quality standards driven by rising environmental awareness will create the need for managing energy price risk more actively over the next several years.

While many derivatives players continue to eye China as their next market for growth, commodity exchanges will take time to develop there. Occasionally, opportunities for using risk management tools are quite evident. China remains a wild card in Asian energy markets since its demographics can change supply and demand needs very significantly on its road to economic development and industrialisation. Moreover, the longer-term derivative markets should develop with the use of commodity indexed loans to oil, used to finance large projects in oil and gas exploration and production, refining and electric power generation.

Another source of growing energy supply to the Asia Pacific is the emerging Russian Far East as a new source of hydrocarbons. The resource base of the Russian Far East is primarily the area of Sakhalin Island, including the offshore areas of the Sea of Okhotsk and the Yakutia producing area of the Russian Siberia. Discoveries of oil and gas are also expected on the shelf of the Bering Sea. These areas will supply some oil but mostly natural gas. This new supply of the Russian Far East oil and gas programme is beginning to ramp up today.

Tanker trade will also be significantly impacted by rising demand for crude oil and petroleum products' imports from outside Asia Pacific. This factor will shift the use of vessels for the Arab Gulf to the West, to the Far East to meet rising needs for very large crude carriers (VLCCs). This change will bring a rise in world scale time charter rates, and perhaps a rise in hedging activity for tanker rates another nascent paper market for trading.

Asian Market Characteristics

The Asian markets are evolving quite differently on the paper side from the US or Europe. For the Asian paper markets, it seems that many smaller markets for both crude oil and petroleum products will develop rather than one crude oil marker, such as Brent or WTI, or singular benchmark petroleum products. At present, Malaysian Tapis Oman and Dubai are OTC price markers for crude oil but other paper markets for crude oils should emerge for various Indonesian, Australian, Chinese, Vietnamese and Alaskan crudes. And proposals have been made to develop a basket of crude oils as a viable forward or futures market contract.

The petroleum products markets are already following the path of regional paper market development with active markets for open spec naphtha in North East Asia, and markets for jet fuel, gasoil, high sulphur and low sulphur fuel oils. In fact, the development of a paper market for LSWR, the low sulphur Indonesian fuel oil that is mostly used in the Japanese electric power market, is indicative of this change and trades one to three months forward. The wide variety of petroleum product swaps in Asia is similar to the European market experience as there are many different petroleum product swaps markets in Europe but only one successful energy product futures contract, which is the gasoil on the IPE.

One continually active paper market is for jet fuel. Far Eastern airlines such as Cathay Pacific, Singapore Airlines, and Malaysia Airlines already use derivatives to hedge their jet fuel exposure. These deals vary from one quarter to 18 months forward. The jet fuel derivatives market is influencing forward prices for jet fuel in the physical markets and has been active and well established for several years.

Part of the reason for this evolutionary process in Asia is that OTC contracts are more flexible than futures contracts and can be developed more quickly. They are also not subject to regulatory approvals that are required for exchange-traded futures contracts. At present, the Asian markets are also more interested in the 'plain vanilla' swaps rather than more exotic instruments and structures.

Another significant difference in the evolution of Asian paper markets is that unlike longer dated instruments in Europe and North America, much of the business is shorter-term, i.e. less than one year although some three year deals are written, mostly for gasoil.

Also, the proliferation of State owned oil companies and State owned utilities inhibits competition at the present time. But the status quo is changing. The privatisation and deregulation of these energy markets that will be coming in the next few years should hasten the development of more paper trading in Asia. At present, many of the paper market makers are said to be chasing the same business, but this is true of many immature markets, such as the electricity trading business in the US.

Recent financial disasters have focused more interest in hedging, the use of energy risk management tools, and the need for companies to hedge. Senior management is now asking the right questions, such as what is the natural hedge position of the company or is the company long or short in the market? Should we hedge? These essential questions go to the heart of why energy companies must use price protection programmes, for risk is much more complex than just management of price risk and risk monitoring is now becoming a corporate fiduciary responsibility for senior energy executives.

Energy hedging is still just getting started with small amounts of oil hedged. Typically commodities can trade daily volumes on futures exchanges at a factor of six to 20 times the physical market. The Pacific Rim, with its tremendous need of oil, gas and power, is just beginning to develop the financial trading structure needed to manage energy price risk.

New financial risks need to be intelligently managed. Consequently, risk management, once considered a peripheral concept, has now become a key management tool. Having this capability allows growth opportunities by enhancing company competitiveness and supporting financial objectives. Risk management, when employed effectively, reduces market risks, increases wholesale and retail competitiveness, protects and enhances margins, and stabilises earnings.

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In the Asia Pacific markets, there is actually now less uncertainty than previously and countries are making their deregulation plans quite visible. But market, credit and operational risks are still pervasive. Most importantly, a company's risk tolerance must be identified particularly since oil, gas and power are among the most volatile commodities traded.

Conclusion

Security of oil and gas supplies remains of greatest importance in Asia Pacific. This continues to dominate Asian risk management strategies which still focus on short-term trading and hedging. This is, in effect, a supply balancing system. However, rising oil demand in the region coupled with increased price volatility and followed by the rise of a global LNG market will begin to change that type of thinking as more sophisticated hedging and a longer-term orientation begin to change management thinking.

The Asia Pacific derivatives markets are evolving in a different manner to London and New York, with a proliferation of many different OTC financial instruments for many different products. Asia Pacific's energy derivative sector will become more established over time as oil demand continues to increase and greater competition enters the oil markets in this region. New uses for energy derivatives will be to drive project finance through forward oil and gas sales, commodity-indexed loans and synthetic oil fields thus supply the vast capital needs of the industry through securitisation ■

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