

## ASIA PACIFIC REFINING MARGINS OUTLOOK

The Group has a one-third interest in Singapore Refining Company Pte Ltd ("SRC") which has a nameplate or designed refining capacity of 285,000 barrels per day (bpd). This translates to a crude processing capacity of 95,000 bpd for SPC. Given its refining interest, SPC has significant exposure to refining margin movements.

The refining margin is the difference between the gross product value ("GPV") and crude landed costs. This refining margin is subject to volatility of crude and product prices which may not move in tandem. Most notable however is that there are two different set of players in the market. These are the crude producers on the one hand and the consumers or end users on the other hand. While these players are mostly motivated by economic considerations, there are times when geopolitics become the more important motivator. Since oil is a universal commodity that is essential to commerce as well as to power economic progress and development, it is no surprise that geopolitical developments is part of the supply and demand equation.

The intermediaries between these players are the oil traders, the refiners, the wholesale and retail users of such products. Such intermediaries are quick to capitalise on arbitrage opportunities in the supply and demand equation and the result is frequent and volatile price movement. In recent years, the growth of the market in derivatives and financial instruments linked to oil has served at times to amplify such volatilities.

This review of recent trends in refining margins is meant to aid shareholders and potential investors in understanding a key component of the Group's business.

### Historical Perspective

2001 to 2002 were two of the most difficult years for the refining industry in the region. Refining margins were affected by relatively high crude prices and weak demand for refined products. The overhang or surplus refining capacity in the region added to the woes of refiners. Except for China, most of the region was suffering from near zero economic growth due to the 1997 Asian financial crisis. As a result, refining margins were below break-even or even negative for most periods. This led to shutdown of refineries in the Philippines, Japan and Australia in recent years.

The genesis of this situation in refining margins however goes further back in time. Between 1995 and 2001, substantial additions in refining capacities took place in the region. Refining capacity grew from 16 million bpd to reach almost 22 million bpd, an increase of more than 35 per cent in crude distillation capacity within a relatively short period of time. Such additions were motivated by the bullish forecasts of economic growth in the region. Most of these additions occurred in China, India and Taiwan.

While the regional refining capacity was growing at the remarkable average rate of 4.3 per cent a year, the total oil demand growth in retrospect was a more modest average of only 2.6 per cent per year. The expected high growth in oil demand that motivated the additional capacity had failed to materialise.

Economic growth rates in the region were severely dented by the Asian financial crisis (1997), the bursting of the Internet bubble (2000) and the downturn caused by the 9/11 events. More recently was the onset of SARS which, though short-lived proved very costly to the region. The current avian flu in the region is not expected to have more than a passing impact on the Asia Pacific economies unless a more virulent strain of the virus evolves.

The cumulative effects of the lower than anticipated economic growth and the addition of refining capacity resulted in the region being a net exporter of petroleum products for intermittent periods in 2001 and 2002.

### Growth Projections

The positive trend in refining margins seen in the second half of 2003 may however portend a turning point for oil demand in the region. Since recovering from the SARS outbreak, the economies in the region have benefited from improvements in the US and global economic outlook. China's insatiable appetite for capital goods, semi-finished products, petroleum and primary commodities made itself felt in the market as prices for such products and commodities started a seemingly inexorable ascent. After close to a decade of being mired in recession, Japan's economy seems to be on the mend. Other rising Asian economies such as India and Indo-China are also expecting growth rates to exceed 6 per cent per annum

for the rest of the decade. Besides exporting to drive growth, economists are also expecting that growth will come from increased capital and consumer spending from a more affluent and growing population.

The growth story in Asia for this decade however has to be China. In 2003, China surpassed France to become the world's fourth largest economy behind US, Japan and Germany. While the official growth rate figure is reported at nine per cent some observers believed that the economy actually grew at a faster clip of more than 10 per cent taking into account the booming underground economy. On a purchasing power parity basis, China's domestic economy is already larger than Japan and second to the US. China is investing heavily in infrastructure – rail and road transportation, power, buildings and bridges – ahead of the 2008 Olympic games in Beijing and the 2010 World Expo in Shanghai. China's growth momentum is expected to be maintained considering that 80 per cent of the population is still living in the poor and vast countryside and given the decision by the authorities to shift more of its rural population to the cities. China's recent opening of the under-developed Western part of the country and the revitalisation of the old heavy industrial heartland in North East China will create new growth opportunities for the foreseeable future.

The rising affluence in China has created an enormous domestic market for motor vehicles. Domestic passenger car production exceeded 2.2 million last year while total vehicle production surpassed 4.0 million. Meanwhile, China is adding another 2.7 million tonnes/year to its current ethylene capacity (a key building block for other petrochemical manufactures) of 5.0 million tonnes/year and this will exacerbate the already tight naphtha feedstock supply situation. Analysts have estimated that China's oil demand grew by 10 per cent last year compared to 0.5 per cent for the rest of Asia combined. For 2004, China's oil demand is forecast to exceed 5.4 million bpd, and will overtake Japan as the largest Asian oil consumer for the first time. While such a pace in oil demand growth is clearly not sustainable in the long term, China would need to continue importing more refined petroleum products for transportation, power and petrochemical feedstocks than it can produce over the next three to four years. Analysts have forecast a compounded annual growth rate of 6.8 per cent for China's oil demand for the period 2002-2006 versus 1.5 per cent for the rest of Asia.



SPC has a one-third interest in SRC

### Supply Projections

On the supply front, it is envisaged that no large-scale new green-field refineries will be built in Asia over the next three years given the excess of capacities built between 1995 and 2001. Rationalisation of refining capacity in the region will however continue due to economic and environmental reasons. Since 1998 some eight per cent of Japan's refining capacity of 4.9 million bpd has already been shut down, while another four per cent is expected to be closed over the next two years. In 2003, ChevronTexaco and ExxonMobil closed their refineries in the Philippines and Australia, respectively. Introduction of new clean fuels standards in 2005 and 2006 will see further consolidation in the refining industry, favouring the large complex but flexible refineries in Singapore.

Beyond the next four to five years, the capacity situation is less clear. Although significant additional capacity may be on the drawing board, realisation of such capacities would require four to five years from inception. Furthermore, as a rule of thumb, a sustainable US\$5-6 per barrel refining margin regime is required before new refinery construction, could be justified. While current margins may not justify new investments, it would support refinery creep where existing refiners extend resources to increase simple crude distillation unit ("CDU") capacity in existing plants. Up to 1.1 million bpd capacity including creep may be added over the next three years, whereas another 2.4 million bpd new refining capacity are planned up to year 2010. Most of the proposed new refineries are expected to be in China and India.

### Refining Margins Outlook

After a prolonged six years period of margin squeeze, the recent run-up in refining margins has given new hope to Asian refiners. The Asian refining margin improvements in 2003 were supported by stronger than expected demand fuelled by the global economic recovery and increased fuel oil demand due to Japan's nuclear problems. Supply, on the other hand, was constrained by capacity closures and restraint on crude throughput by refiners.

Although India is currently long in refined products, there are plans to add another 620,000 bpd of capacity by 2006. When the current re-investment cycle to add the planned 3-3.5 million bpd is completed by around 2008-2010, there is a concern that the region will again have significant exportable surplus of refined products. If the expansion materialises, India would potentially have more than 400,000 bpd surplus to export, this will significantly impact future refining margins in Asia from 2008 and beyond.

Refiners in the region however, view the current situation to be a return to a more balanced oil supply and demand situation and healthier refining margins is seen to be sustainable. Over the short-term time-frame of three to four years, robust economic growth in the Asia Pacific region and continuing rationalisation due to the imposition of clean fuels standards will continue to underpin the more robust refining margins. However, as noted above, motivations of players in the market may change and the expectation of a healthier level of refining margin may be tempered by refiners in Middle East and outside the region increasing crude-runs to take advantage of the better margins in the region.



SRC is ISO 9001 and ISO 14001 certified and consistently ranked in the top quartile of refiners in Asia Pacific