Petrochemical players combat volatility

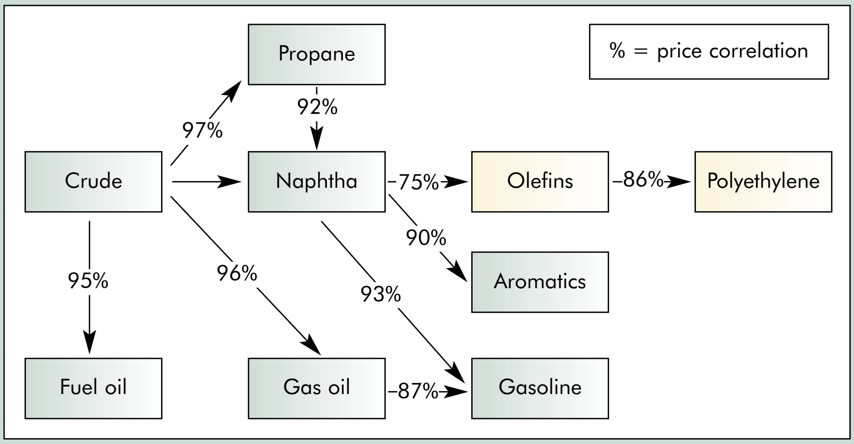
Petrochemical and plastics players are starting to regain investors' confidence by arming themselves with the necessary financial tools, says Rob Brewis of Enron.

The long suffering petrochemical players are finally starting to fight back after taking some debilitating blows from the energy markets over the past two years. A collective sigh of relief from industry analysts is sounding. At long last, it appears that the early years of the 21st century will not be characterised by the same traits that in the past have created instability and undermined petrochemical profitability and credibility in the investor community.

Big industry players are now starting to follow the lead of other commodity markets, such as metals, pulp and paper, coal, gas and electricity, by arming themselves with the necessary financial tools of trade to combat volatile margin swings.

FIGURE 1

Making the grade



Slow to change

Unfortunately, for some, change has been slow to come. Losses or profit squeezes are industry wide for the first and second quarters of 2001, as players fight against rapidly increasing costs of business. It is therefore hard to believe that the petrochemical and plastics markets were the last bastion of commodity industries to participate in financial transactions. Surprising indeed, as their products were some of the most volatile and their companies' share performance among the worst in the equity markets.

Lack of training, and therefore understanding, of financial risk management at business manager level has been a major stumbling block to the industry. Industry treasurers have been telling these business managers for years that they must find ways to negate the cyclic return on earnings that has exhibited cashflow and growth in the past.

In the mid-1990s, to combat this trend, industry players announced their intention to create a paper market for olefins and polymers in Europe and to date have invested little time, energy and money to back up these claims. At the time business managers felt well-founded in ignoring the potential. These industry players had not contributed much to developing this paper market, and their business units were measured (and still are in many cases) against their competitors, even when the return on the physical business is very poor. It is also surprising how little attention was given to risk management of their margins company-wide. Why should a business manager enter a margin hedge when the upside is a pat on the back, and the downside is loss of bonus or even loss of job? Therefore, the treasurer's role in highlighting to directors the real benefits of guaranteed margin and cashflow is all the more important.

Rob Brewis

Market considerations

Liquidity in petrochemical feedstock markets (propane and naphtha) has meant that products with reasonable price correlations such as ethylene, propylene and benzene can be priced up with confidence by market-makers to create liquidity on individual products. These products can then be offset with physical transactions in the underlying products, or through equal and opposite transactions in further downstream and/or related products. In this way, the petrochemical market is well positioned as a cross-commodity paper market. And the many different grades of a product, such as high-density polyethylene, can be financially hedged onto one central hybrid index, which is representative of the price movement for all (see *Figure 1*). The irony is that the upstream crude and products markets which have dealt the blows in the past are the ones that can ensure the long-term sustainability of petrochemical markets in the future.

An online shop window

Last year saw the dot.com players creating platforms to act as markets for the physical petrochemical and plastics market. These required buyers and sellers to meet in the market at the same time and to transact at prices that were attractive to both sides. The result is that the industry did not participate and the bulk of the business is still being done by traditional means. Why?

Price transparency implies efficiencies. Efficiency in these markets is the scourge of many incumbent petrochemical players and is resisted at all costs. The players in this market see no reason to give clients their best prices when extra margin can be made through clients' ignorance of actual market rates. In time, these markets will become increasingly more efficient – a problem that, to date, the industry has dealt with through mega-mergers and supply chain economics. The irony is that firms in the industry are underperforming and that electronic markets are the best way forward to reach and outperform shareholder expectations.

At the end of 1999, Enron set up www.EnronOnline.com, a web-based transaction system where clients trade physical and financial commodities including petrochemical and plastic swaps throughout the world, with Enron acting as principal. The site is free of charge and allows clients to look at Enron's prices and transact in real-time via the internet. Its success has been measured in notional turnover through the site, with more than $500bn since its launch in November 1999.

We hope this success will spark other market participants to follow this lead. Already CheMatch and the Chicago Mercantile Exchange (CME) have launched an online futures contract for benzene, and Chemconnect's commodities trading floor now includes the trading of financial swaps. Ultimately, all these initiatives lead to the same goal: helping plastics and petrochemical firms to smooth their revenues, protect their profits, lower their cost of capital and improve critical performance targets.

Investors and lenders are, by nature, risk-averse. When we help companies smooth out their financial results, we make them more appealing to the financial community. By building business models to facilitate transparency and efficiency in prices, you are attracting those players which had previously kept out of the market because of lack of information and market dynamics. ■

Rob Brewis is Manager of Enron's Petrochemicals and Plastics in Europe.
robert.brewis@enron.com
www.EnronOnline.com
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Case study – Different market participants

The two key market participants in the petrochemical and plastics financial markets are both consumers and producers of plastics and petrochemicals. For the consumers and users, plastics swaps are a simple way for them to lock in their 'cost of goods sold'. This is particularly important when sales are value driven and involve long-term priced contracts. But for petrochemical manufacturers the value chain is somewhat more complicated.

For example, an investment in a petrochemical steam cracker represents a significant amount of capital for a manufacturer. In running this steam cracker, the manufacturer has to allow for a changing cost of feedstock, which is fed into a cracker which then produces a range of different products. The graph below represents gross margin profitability on a typical plant running naphtha, on a basis of profit per ethylene tonne produced:

For some time, many of the more active players in the market have utilised the paper naphtha market to hedge their exposure to quarterly fixes in the price of ethylene and propylene. But this completes only half the picture, because the returns for low sulphur fuel oil, gasoline, mixed C4s and aromatics (benzene, xylene and toluene) remain unhedged. The resultant swings in return from these products have been anywhere from $65 per metric tonne to $190 per metric tonne over the past two years.

After the second quarter of this year, ethylene and propylene contract prices were set, Enron was successful in marketing the first ever complete petrochemical crack to a key industry player in Europe.

Because Enron employs separate traders for all the above-mentioned products, we were able to set up a 'crack' of the exact quantities of products that could be monitored and traded over-the-counter to help the customer hit the target limits it had set for the crack spread in relation to different indices.

We feel strongly that this sort of product creation, tailored to very specific parameters, will be the life-blood needed by customers to help them punch back, not only at the energy markets which have crippled them in the past, but the protagonists who have been critical of their lack of innovation. ■