CHEMSYSTEMS
PPE PROGRAM

Report Abstract

Quarterly Business Analysis

Quarter 1, 2010

Petrochemical Cost Price and Margin for Olefins, Polyolefins, Vinyls, Aromatics, Styrenics, Polyester Intermediates and Propylene Derivatives. Analysis for the United States, Western Europe, Middle East and Asia

March 2010

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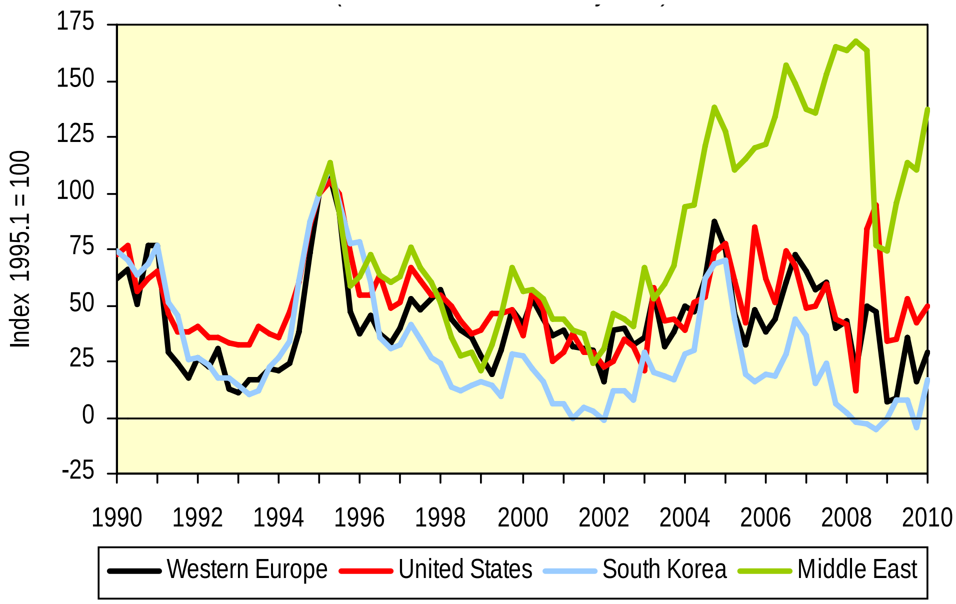
Nexant's Quarterly Business Analysis reports assess the current production economics for commodity petrochemicals, putting them into context with developments in the underlying market dynamics. A review of production economics in the Middle East has recently been added to the long running analysis of economics in Western Europe, United States and Asia. The reports are published as part of ChemSystems / Petroleum and Petrochemical Economics Programme (PPE). Subscriptions to the programme are available from www.chemsystems.com. For further details or to request a sample copy, please email chemsystems@nexant.com.

LENGTHENING ASIAN SUPPLY THREATENS RECOVERY OF WESTERN MARKETS

Petrochemical producers in Western markets have relied heavily on buoyant exports of petrochemicals to Asia over the last year to counter delicate domestic demand. Lengthening Asian markets after the Lunar New Year holiday in February impeded the rate of recovery in Western Markets. Inventories in China rose sharply as supplies from extensive new capacity entered the market.

Regional Petrochemical Industry Profitability

(Cash Margin Index Q1 1995=100)



Demand for petrochemicals in the United States continued its slow but steady recovery into the opening quarter of 2010. Domestic consumption remained very fragile, despite strong growth in the United States economy, which grew at its fastest rate for six years in the closing quarter of 2009. Much of the GDP growth was attributed to restocking and consumer spending remains fundamentally weak, hindered by high unemployment and tight credit markets.

West European demand for petrochemicals remained broadly steady in the early months of 2010. Domestic consumption for most petrochemicals was moderate, but considerably above the distressed volume experienced at the start of 2009. After emerging from recession in the third quarter of 2009, the European economy grew at just 0.1 percent in the closing quarter of 2009 and GDP remains almost two percent down on a year ago. Much of the demand growth seen in recent quarters was attributed to restocking inventories in the manufacturing industry, which had been massively reduced.

Exports to Asia continued to provide critical support to reinforce slight domestic consumption in Western markets. Exports to China were particularly strong through January. However export opportunities slowed considerably into March as Asian prices eased, depressing previously lucrative netbacks. Chinese consumers held very high inventories after the Lunar New Year and the supply side lengthened considerably as extensive new capacity came on stream. At least five new crackers, with a combined capacity totalling more than four million tons per year of ethylene achieved commercial production in the first quarter. Most crackers were integrated with further new derivative capacity on site.

Feedstock costs remained a heavy burden, with average Brent crude oil prices through January and February creeping above $75 per barrel, the highest since the third quarter of 2008. Naphtha prices strengthened considerably relative to crude oil, climbing seven percent. Firm demand for naphtha in Asia, and tight supplies amidst low refinery runs contributed to the strength of naphtha prices. Meanwhile, LPG prices surged to a considerable premium to naphtha, climbing more than ten percent on strong seasonal demand in heating applications. Firming gas prices in the United States eroded much of the cost advantage ethane crackers had commanded over naphtha crackers in recent quarters. Renewed strengthening of the dollar against the Euro also considerably reduced the competitiveness of derivative exports from the United States into Europe.

Ethylene markets in the United States were squeezed very tight through the first quarter as the supply side shortened with harsh weather, technical issues and maintenance restricting production. Ethylene prices increased sharply, with average contract prices gaining more than 25 percent from the previous quarter. Cracker profitability improved considerably, with margins climbing to their highest for a year. Early year tightness in European ethylene markets eased as exports of derivatives slowed and crackers restarted from outages. West European ethylene contract prices have been restored near to parity with prices in the United States. The high value of co-products improved the competitiveness of cracking heavier feedstocks rather than LPG, and naphtha cracker margins improved modestly. Asian demand for olefins was particularly strong in January, before slowing after the Chinese New Year holiday. Rising feedstock costs pushed ethylene prices to a 17 month high, in January, however strong co-product values offset much of this increase in costs, lifting margins to their highest for more than a year.

Propylene markets in the United States were squeezed very tight at the start of 2010, as demand improved and the supply side continued to shorten, with operating rates at refineries dropping to historic lows. Firm domestic consumption into polypropylene and acrylonitrile was bolstered by robust export demand for propylene oxide and oxo-alcohols. Prices rose sharply, initially pushed up by the increasing cost of refinery grade material and subsequently by the strong demand for polymer grade material. West European propylene markets were also squeezed very tight, as slow gasoline demand and industrial disputes considerably shortened supplies from refinery sources. Demand patterns were similar to ethylene, with strong exports of propylene derivatives to Asia building on moderate domestic consumption. Propylene prices strengthened considerably relative to ethylene, narrowing to a three percent discount in March. Margins for production from refinery sources rebounded to their highest for a year, while seasonally firm propane prices impaired the profitability of dehydrogenation.

The United States polyethylene market remained mediocre during the first quarter of 2010, and polypropylene again outperformed the other polyolefins. Fragile demand prevented producers from increasing prices sufficiently to cover the sharp uplift on olefin monomer costs, resulting in weak margins at the start of 2010. The ongoing surge in propylene prices heavily impaired the competitiveness of polypropylene in export markets. The performance of European polymer markets remained very subdued at the start of 2010. Polyolefin margins generally improved, reaping benefit of robust exports at the start of the year. Meanwhile polystyrene and PVC producers suffered further erosion of profitability, with margins languishing near all time lows. PET was the only polymer to cover cash costs on a non integrated basis, with unseasonably firm demand.

Demand for aromatics in the petrochemical sector improved at the start of 2010, with strong exports of aromatic derivatives to Asia. West European benzene contract prices rallied 37 percent in the first two months of 2010, gaining support from weakening of the Euro against the dollar. Margins for aromatics produced by conversion of toluene were very strong where feedstock was available at gasoline blending value. Meanwhile, aromatics producers integrated to naphtha suffered poor reforming margins.

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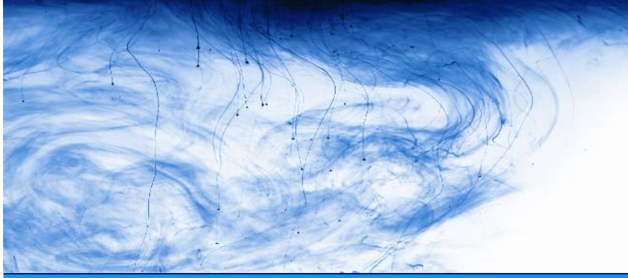

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