CHEMSYSTEMS

PPE PROGRAM

Report Abstract

Quarterly Business Analysis

Quarter 3, 2011

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

October 2011

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Nexant, Inc. (www.nexant.com) is a leading management consultancy to the global energy, chemical, and related industries. For over 38 years, ChemSystems has helped clients increase business value through assistance in all aspects of business strategy, including business intelligence, project feasibility and implementation, operational improvement, portfolio planning, and growth through M&A activities. Nexant has its main offices in San Francisco (California), White Plains (New York), and London (UK), and satellite offices worldwide.

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.

FALTERING REGIONAL ECONOMIES HIT PETROCHEMICAL PROFITABILITY IN THIRD QUARTER

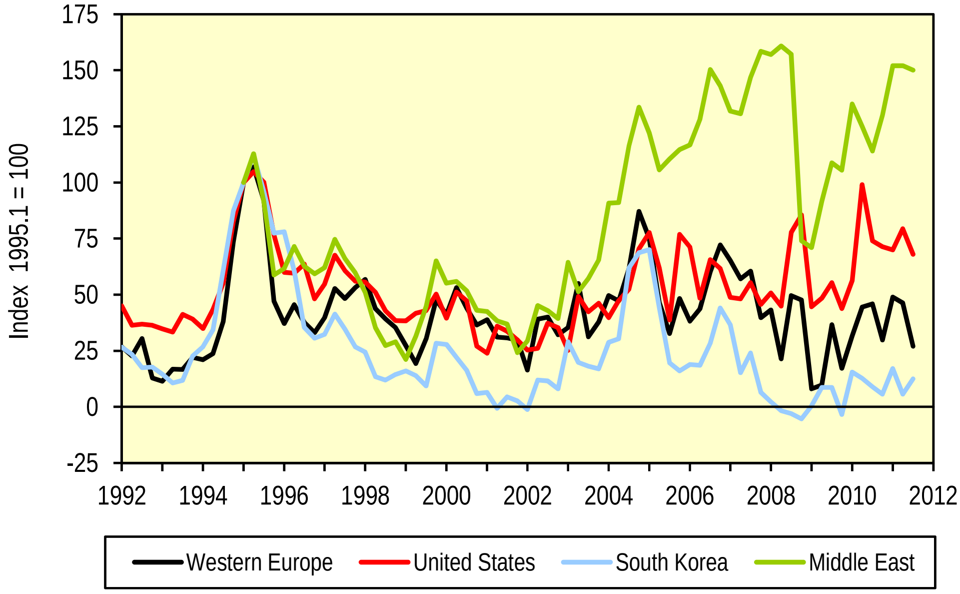
The global petrochemical industry recovered unexpectedly rapidly from the deep economic recession that plagued markets at the end of 2008. Profitability in many regions had rebounded to peak levels by the start of 2010, and remained there through the first half of 2011. However market sentiment deteriorated dramatically in the third quarter as confidence in the global economic outlook waned and fears of the "double dip" recession hung over the market. Consumption of petrochemicals slowed considerably as leading regional economies faltered. Feedstock costs remained under considerable pressure as Crude oil prices stayed stubbornly firm, remaining above$110 per barrel. With markets for most petrochemicals lengthening, margins stalled.

Brent crude oil prices remained highly volatile, fluctuating in a band between $110 and $120 per barrel as market sentiment swung in response to publication of contrasting leading economic indicators. Average crude oil prices through July and August eased a modest $4 per barrel from the second quarter, to average $114 per barrel. While naphtha prices briefly dropped to a sixth month low in August, cost savings at naphtha crackers were largely offset by a reduction in the value of C_3 and C_4 co-products. LPG prices remained at a considerable discount to naphtha, with butane proving a particularly competitive feedstock for flexible crackers.

Profitability of petrochemical production was impeded by a sharp worsening in market sentiment in the third quarter. Consumption of petrochemicals was blighted as consumers and manufacturers suffered a severe loss of confidence in the outlook for the global economy. Consumption in Western economies was particularly hard hit as several credit rating agencies reduced the top rating of the United States and fears over the sustainability of the Euro currency intensified. Meanwhile, Asian demand continued to be relatively soft and failed to counter the fragile Western demand. Strong Asian economies had been one of the principle drivers of the rapid recovery from the 2008 recession, but Asian markets have been less solid since the start of 2011.

The third quarter saw a dramatic change in fortunes for European petrochemical producers, with average profitability across the industry collapsing to its lowest since the global financial crisis took hold at the end of 2009. Nexant's petrochemical and polymer margin index tumbled more than forty percent from the average of 150 (Q1 1984=100) posted in the first half of the year. Demand stalled as confidence in sustainability of debts in Greece and several principle Eurozone nations stalled. Supplies of olefins lengthened as most crackers operated reliably, ending a period of tightness in the first half of the year. Modest relief in feedstock costs ultimately proved little comfort to producers who had to surrender margins as market sentiment changed sharply.

Regional Petrochemical Industry Profitability
(Cash Margin Index Q1 1995=100)

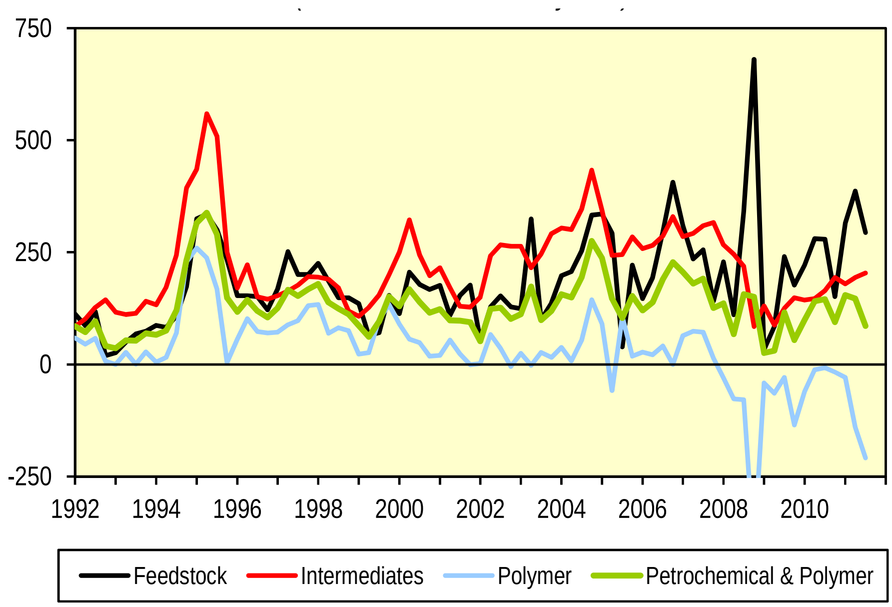


Petrochemical markets in the United States weakened in the third quarter, with the supply lengthening considerably after cracker outages created shortages in the first half of the year. There were some fears that supply could be disrupted with the onset of the hurricane season in the third quarter, but little production was ultimately lost. Demand was subdued, with consumption of propylene and butadiene derivatives hampered after prices surged to record highs in quarter two. Exports of propylene derivatives were heavily curtailed as material was uncompetitive. Average industry margins fell about 15 percent, dropping to their lowest for six quarters as markets weakened.

Asian petrochemical markets weakened steadily through the third quarter, after a brief period of strong demand in the early weeks of July. Demand stalled as a succession of economic indicators pointed to a rapid deterioration in regional economies across the globe. The supply side shortened due to a busy period of maintenance at derivative units, coupled with extensive unplanned outages at several large complexes.

Profitability of petrochemical production in the Middle East was preserved in the third quarter, with average export margins maintaining the broad peak achieved since the start of the year. Nexant's Middle East petrochemical cash margin index eased one percent from its first half average to settle at 150 (Q1 1995=100). Margins on olefins and polyolefins delivered into the European market decreased as confidence in the Euro zone economies deteriorated. Margins for exports into Asia improved modestly, buoyed by tight supplies. Strong polyester markets in Asia, supported a rise in export margins for MEG into both markets. Although Europe apparently offered stronger export margins than Asia, material continued to flow extensively into Asia as Middle Eastern producers aimed to build market share in this key demand centre.

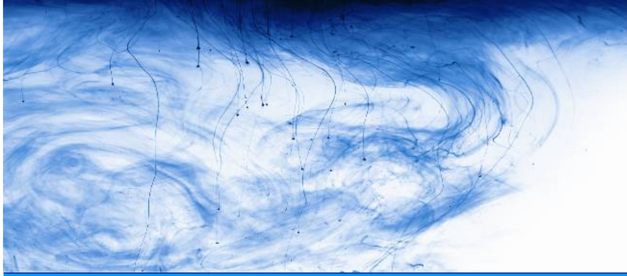
Western Europe Petrochemical Industry Sector Profitability
(Cash Margin Index Q1 1984=100)



All sectors of the petrochemical industry were exposed to the difficult business environment in the third quarter. Intermediates were the only sector to achieve a modest increase in profitability, principally due to seasonal strength in the polyester industry. Asian markets for polyester and intermediates were kept tight by a combination of strong demand and production outages at several sites in the Middle East and Asia. The lapse in polyester sector consumption in late quarter two was reversed as the fibre industry gained momentum in the normal run up to the peak year end season, and the bottle grade PET market also performed well.

Profitability of the polymer sector was severely depressed in the third quarter, with polyolefins, polystyrene and PVC posting the lowest margins of all the commodity petrochemicals in Europe. Many convertors held high inventories and were reluctant to return to resin purchases after the slow summer holiday period as the economic outlook deteriorated. Nexant's polymer margin index posted its second lowest rating in the last two decades. Margin continued to be taken up the value chain, at the cracker, with non-integrated producers struggling to achieve variable cost breakeven at times.

Nexant's Quarterly Business Analysis reports review production economics for petrochemicals in regional markets, and justify trends from underlying market developments. The QBA programme now includes monthly average production economics in the principle markets of Western Europe and the United States, where monthly contract settlements heavily influence industry profitability. The reports are published as part of ChemSystems / Petroleum and Petrochemical Economics Programme (PPE). Subscriptions to the programme are available from http://www.chemsystems.com.



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