

## Nexant/ChemSystems' Commentary on U.S. Energy and Chemicals July 2009

### **U.S. and Global GDP growth outlook**

GDP growth is predicted to be very slow in the near term as a result of the recent crisis in the financial markets. The consensus forecast in June 2009 is for U.S. and global real GDP to contract 2.5 and 2.4 percent respectively for the year, with U.S. growth starting in 4Q09. Annual real GDP growth will likely turn positive in 2010 with forecasts for U.S. and Global growth at 2 and 2.7 percent respectively. Some analysts are more bearish than the consensus, however.

### **U.S. Chemical sector lags Asian recovery**

The U.S. chemical sector has passed through the worst of its recession, but business conditions are still bleak and the nascent recovery appears weak in comparison with the rebound in Asia, according to industry leaders. Senior executives attending the American Chemistry Council (ACC) annual meeting in Colorado shared a common view that the start of the year was dreadful, incoming ACC chairman Brian Ferguson said. "The consensus... is that the first quarter was a disaster, everyone knows that." January seems to have been the bottom, said Ferguson, who is also chairman of US-based Eastman Chemical. "People continue to report marginal improvements into May, and now into July. So there is this slow march upwards," he added.

### **U.S. chemical market stable but not well**

While second-quarter (2Q09) earnings for U.S. chemical companies will probably show improvement over 1Q, continued weakness in key markets remains a concern, according to Wall Street analysts. The economy appears to have stabilized but is still very poor. End-market demand has improved after massive destocking in 1Q, but 2Q appears to have been difficult for chemicals and refining. 2Q earnings for diversified chemical companies are now being announced, but on average appear to have fallen significantly, year to year.

### **ACC sees U.S. chemical recovery at Q3 end**

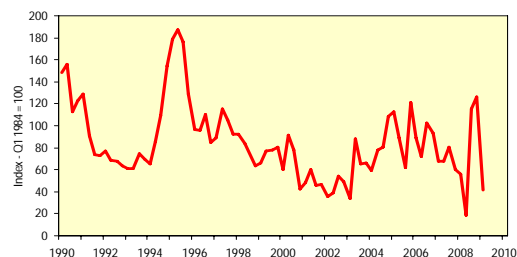
The rate of the production decline in the U.S. chemical industry has moderated in recent and

the industry should resume growth toward the end of the third quarter, per the American Chemistry Council (ACC). "Along the supply chain, inventories-to-sales ratios for chemicals have improved over the past few months," said Chief Economist Kevin Swift in June.

### **Nexant/ChemSystems' Detailed Analysis of the U.S. Industry for the 1<sup>st</sup> Quarter 2009**

The recession dominated the Petrochemical Industry in 1Q09. All sectors experienced decline in profitability. The **Petrochemical Profitability Index** tracked by Nexant (constant dollars, 1Q1984 = 100), decreased from 126 in 4Q08 to 41 in 1Q09.

US. PETROCHEMICAL INDUSTRY PROFITABILITY INDEX Weighted  
Average Cash Margin-Constant Dollars



GIS Charts v10.1.1

### **U.S. Market Segment Recap, 1<sup>st</sup> Quarter 2009**

#### • **Crude Oil and Refining**

**Crude oil** prices were steady from January through to March, after declining about 30% on average from the previous quarter to about \$42 per barrel. Refining margins increased considerably in 1Q09 to about \$10/B for a "cracking" refinery.

#### • **Natural Gas and Feedstocks**

Average **natural gas** prices were down sharply in 1Q09 to \$4.4/MMBtu, directionally in sync with most feedstocks, but reflecting ample supply. Petrochemical demand eroded and the U.S. economy weakened as manufacturing and construction activity remained stalled. Petrochemical feedstock prices, however, stabilized after the falls seen in the second half of 2008 and even strengthened somewhat as crude oil prices recovered a bit in March. With

ethane and by product credits lower, NGL extraction margins have fallen significantly from the highs of recent years. But, relative to historical trends, extraction margins were "okay".

- **Olefins and Intermediates**

The U.S. Olefins market was weak in 1Q09, with lower demand as the economic downturn especially impacted manufacturing and construction. Average feedstock costs dropped from 4Q08, but further decreases in **ethylene** and co-product prices hurt margins. Ethylene price declined to 31.8 cts/lb in 1Q09. Naphtha and LPG crackers suffered more severe erosion of margins as ethane became the preferred U.S. olefin feedstock.

- **Polymers**

**LDPE** prices decreased 16 cents per pound to approximately 50 cents in 1Q09 due decreasing demand and a decline in ethylene prices. As a result margins plummeted in 1Q09. **LLDPE** prices decreased drastically in 1Q09 by 17 cents per pound to 44 cents, resulting in decreased margins for LLDPE producers. **HDPE** markets decreased in similar trend to that of the other polyethylenes and integrated leader margins decreased about 50 % to approximately 14 cents/lb, while non-integrated plants lost nearly all their margin.

**Propylene** prices decreased from 37 cents per pound in 4Q08 to 25 cents in 1Q09. The easing in feedstock prices and poor demand were major contributors to the decline in **polypropylene** prices in 1Q09, down 18 cts/lb 38 cents. **Styrene** markets were balanced as producers maintained reduced operating rates as retreated from the brief high in late 2008. The **polystyrene** price remained weak as demand was soft, with weak benzene prices.

**Caustic** soda production started to ease in 1Q09 as contract prices decreased to ~\$900/ton. The slowdown of chlorine markets tightened the chloroalkali market and ECU margins fell, but were still highly attractive. **VCM** margins fell abruptly due to the ease in VCM contract prices. **PVC** prices remained weak in

1Q09 as the economic downturn continued to strongly depress the housing segment.

**Benzene** prices decreased to \$1.35 per gallon in February and then remained weak. **Mixed xylenes** contract prices were relatively strong, while **toluene** prices decreased by 5 cents/gal.

- **Other Monomers / Intermediates**

**Ethylene glycol** prices declined to 30 cts/lb in 1Q09, while margins improved but at low operating rates. **Para-xylene** markets achieved a balance of sorts in 1Q09 as downstream markets bottomed out and upstream prices fluctuated. **PTA** profitability improved slightly.

The collapse in **acrylonitrile** demand slowed in 1Q09 as reduced prices were more competitive. ACN prices in 1Q09 decreased by 22 cents per pound. The U.S. **phenol** market remained hard hit by extremely low demand from construction and automotive sectors. Phenol prices dropped 14 cents per pound as feedstock costs declined.

- **2<sup>nd</sup> Quarter 2009 Summary Review**

In 2Q09 the chemical industry remained very difficult overall. Markets were in recession and year to year operating earnings were under pressure in general, despite strengths in some selected and niche markets/specialties.

Global oil demand contracted in 2Q09 with a drop in demand for the manufacturing, industrial production and travel sectors. Natural gas prices decreased in the quarter on ample supply; while some other feedstocks saw price increases. The polyolefin market showed some improvement in the quarter. Despite significant improvements in prices, aromatics margins were depressed by high raw material costs. Styrenics remained weak with low operating rates, and caustic soda prices plummeted. In general, US petrochemical export volumes were strong in 2Q09, reflecting the competitiveness of U.S. olefin production.

*Note: (1) More detail on the various conclusions above can be obtained via subscribing to Nexant/ChemSystems' multi-client publications and single-client services. (Please see contact information below.) (2) This newsletter was last updated in July 2009.*