

Chemicals
North America
Special Report

Outlook for the North American Chemicals Industry

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Related Research

- *Liquidity Focus: North American Chemicals; April 13, 2009*
- *Global Economic Outlook; March 31, 2009*

Executive Summary

- This report analyzes key macroeconomic data, indicators from critical end-user markets for chemical products, and chemical industry-specific trends in order to determine the state of and the outlook for the North American chemicals industry, as well as implications for the industry's credit profile.
- A section of this report also focuses on key subsectors of the industry, as headline numbers for the industry as a whole often mask deviating trends and developments in specific subsectors.

Key Conclusions

- Chemical companies continue to suffer from extremely weak demand in critical end-user markets for chemical products, such as automobiles, housing and those markets dependent on discretionary consumer spending.
- Key macroeconomic data and end-market as well as chemical industry-specific trends fail to indicate that a rebound is taking place now or will happen any time soon. Absent such rebound in demand in key markets, the outlook for the chemical industry remains challenging. Going forward, some relief for the industry will come from restocking effects after drastic destocking in the fourth quarter of 2008, some seasonal impacts, lower raw material and energy costs, and benefits from initiated restructuring programs. However, the magnitude of the relief will not be enough to make up for the decline in sales volume in the wake of weak demand.
- Some major economic indicators such as light vehicle sales and housing starts show moderate upticks from year-end 2008 and the beginning of 2009. However, the data remain substantially below first-quarter 2008 numbers and levels needed to spark fundamentally stronger demand for chemical products. Particularly, the ongoing rise in unemployment makes it unlikely that discretionary consumer spending will trigger incremental demand.
- Indicators specific to the chemical industry point in the same direction. Particularly, the value of chemical shipment and operating rates show a significant decline year-over-year. Weekly chemical railcar loads also continue to trail last year's numbers. This view is supported by actions taken, and statements and forecasts made by industry bellwethers and industry groups, which mostly expect 2009 to be a recession year.
- As a result, Fitch expects that weak demand for chemical products will continue to depress sales volumes. The challenging economic environment will weigh on operating and financial performance over the next several quarters. The credit profiles of the industry and its players will remain under pressure, particularly when the relatively strong second and third quarters of 2008 will be replaced by the anticipated weaker quarters of this year for the calculation of trailing 12-month leverage and coverage ratios.

- The downturn is particularly pronounced in commodity chemicals, where players are not only exposed to the cyclical along major basic chemical value chains, but also struggle with new capacity coming online mainly in the Middle East. The resulting increase in nameplate capacity will not be matched by demand, thus creating additional pressure on profitability.
- The few remaining pockets of stability or even growth are limited to chemical products with exposure to the pharmaceuticals, basic food and beverages, water treatment, personal care and cleaning end-markets. The stimulus package might also trigger demand for chemicals used in infrastructure, energy efficiency, and alternative or renewable energy projects.

Fitch-Rated North American Chemical Issuers

Issuer	IDR	Outlook/Watch
Dow Chemical	BBB	Negative
DuPont	A	Negative
Eastman Chemical	BBB	Stable
Georgia Gulf	C	NA
JohnsonDiversey	B–	Negative
Kronos	CCC	Negative
Lubrizol	BBB	Stable
Methanex	BBB	Negative
Monsanto	A	Stable
Mosaic	BBB	Stable
Nalco	B	Stable
NOVA	B–	Positive
RPM Int.	BBB–	Stable
Rockwood	B	Negative
Terra	BB	Evolving
Valhi	CCC	Negative

NA – Not applicable.
Source: Fitch Ratings.

- Despite near-term challenges, long-term fundamentals for agrochemicals remain strong and decoupled from the general economic cycle.

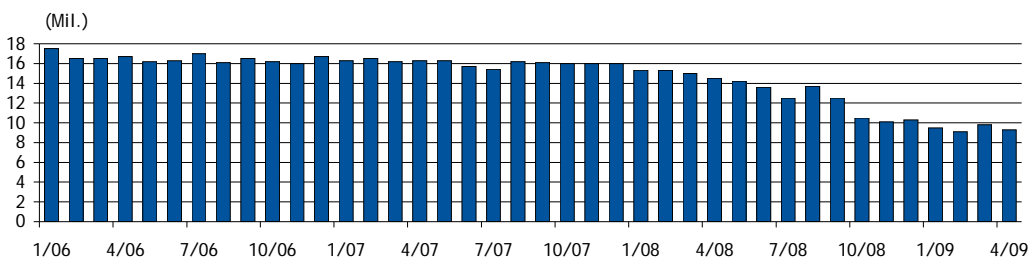
Macroeconomic Indicators and Key End-User Markets

This section focuses on macroeconomic data and key indicators for the state of cyclical end-user markets for chemical products, such as light vehicle sales for automotives, the Manufacturing ISM Report for manufacturing, residential construction starts for the housing and construction market, and the unemployment rate for markets relying on discretionary consumer spending. While some of the indicators showed improvements compared to statistics earlier in the year, data generally remained well below last year's readings, implying a slow and gradual recovery over several quarters before numbers will return to levels prior to the economic downturn. Other indicators, particularly the unemployment rate, continue to deteriorate without signs of bottoming out.

Light Vehicle Sales

The U.S. automotive market does not yet show clear signs of a rebound. In April, sales of cars and light trucks totaled 819,540 units. Sales fared better than in February's sales of 688,909 units, but dropped from March sales of 857,735, when fleet sales to rental car companies and higher incentives supported sales. Compared to April 2008 sales volume declined 34%. At an annualized rate, industry sales were 9.32 million units, below the annualized March rate of 9.86 million and far below the 16 million to 17 million units reached prior to the economic downturn. The steep fall demonstrates the magnitude of the recovery needed before previous sales levels are reached again. In the most likely scenario, the recovery will be gradual and over an extended period of time, not providing an imminent stimulus for the demand for chemicals products in the automotive sector.

Car and Light Vehicle Sales
(Seasonally Adjusted at Annual Rates)

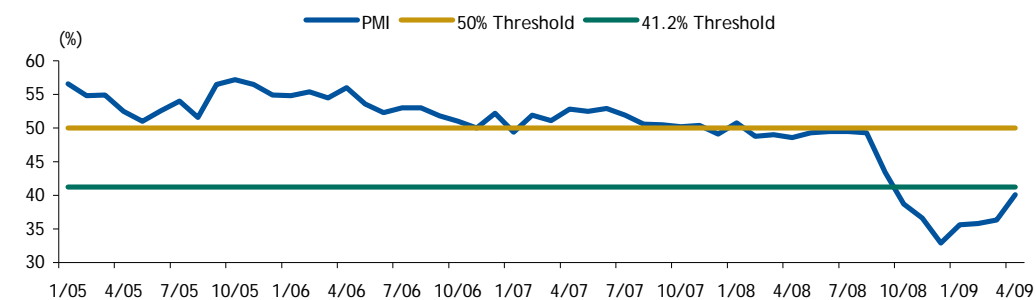


Source: Bureau of Economic Analysis.

Manufacturing ISM Report on Business

The April 2009 Manufacturing Business Survey indicates a slower pace of decline, but manufacturing activities continued to fall for the 15th consecutive month and only one of the 18 manufacturing industries reported growth. The Purchasing Managers Index (PMI), the headline indicator compiled by the Institute for Supply Management, increased by 3.8 percentage points to 40.1% in April compared to the previous months. However, a reading below 50% indicates that manufacturing is still contracting. Based on the historical relationship between the PMI index and real gross domestic product (GDP), a reading below 41.2% also implies that the broader economy is shrinking. The April PMI reading of 40.1% would indicate a 1.3% decrease in annual GDP, thus showing a slowing decline but not a rebound of the economy.

Purchasing Managers Index (PMI)



Source: Institute for Supply Management.

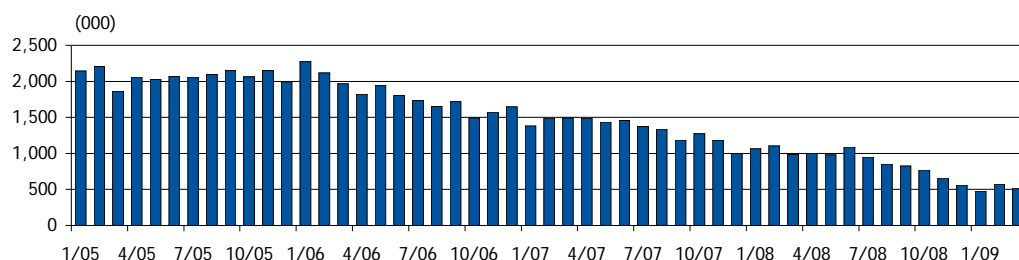
Residential Construction and Housing

Residential construction, another key end-user market for chemical products, continues to be soft after showing moderate improvements in February. The seasonally adjusted annual rate of new privately owned housing units dropped to 510,000 in March 2009, the latest available month, from 572,000 in February. At the same time, the National Association of Realtors reported a 3.0% decrease in sales of pre-owned houses to a seasonally adjusted annual rate of 4.57 million in March over the previous month. In February, both indicators had sparked some hope for increasing demand for chemical products in the residential housing sector, as numbers had shown a moderate uptick compared to January. However, as proven by declining March numbers, these improvements were too early to signal a rebound in the market. By and large, demand

was supported by falling prices. Nationwide, the average sales price for pre-owned homes was \$175,200, representing a 12.4% decline since last year. Distressed properties account for roughly half of the transactions.

New Privately Owned Housing Units Started

(Seasonally Adjusted Annual Rate)



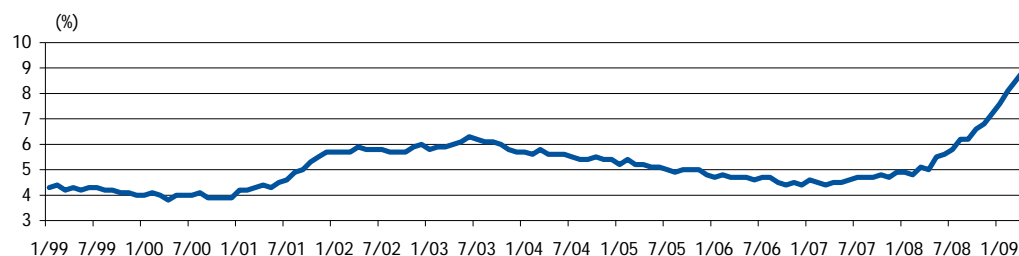
Source: U.S. Census Bureau.

Unemployment Rate

The grimmest macroeconomic data comes from the employment market. In April, the unemployment rate increased to 8.9% from 8.5%, reaching its highest level since 1983. Since the beginning of the downturn, more than 5 million jobs have been lost and increasing numbers of economists forecast a rise above 10% later this year. First-time claims for unemployment insurance surpassed the 600,000 mark for the 14th consecutive week, when 601,000 people filed their initial claims in the week ending May 1. The last week in March had 674,000 filings, representing the highest number of claims in any week since 1982. This makes it unlikely that demand for chemical goods in markets largely dependent on discretionary consumer spending — such as leisure and recreational, textile and apparel, and home furnishing — will rebound any time soon. The numbers are also bad news for sales of consumer durable goods and vehicles, which in turn would stimulate chemical product sales.

Unemployment Rate

(Seasonally Adjusted)



Source: Bureau of Labor.

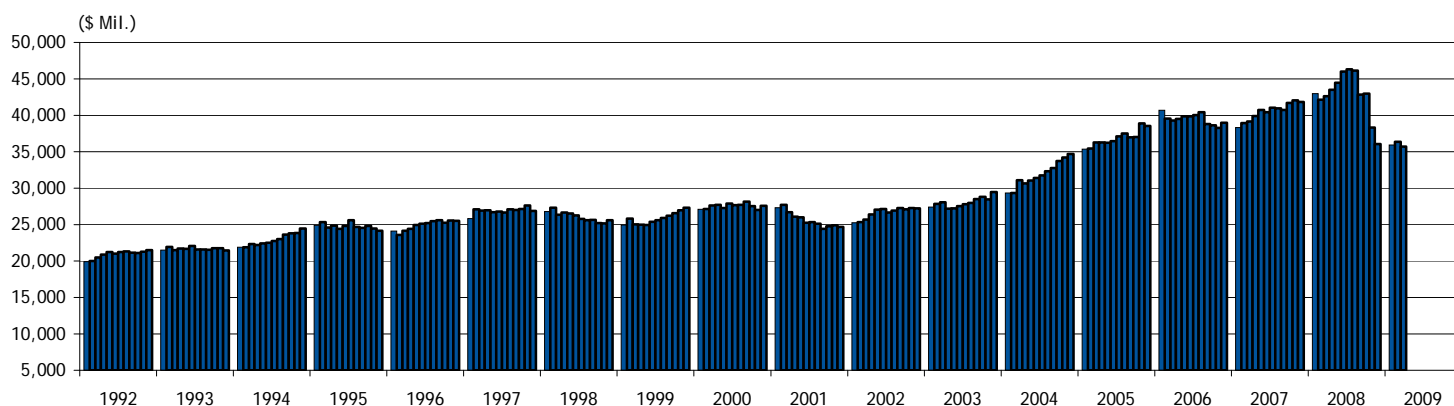
Chemical Industry Indicators

In this section our emphasis is on market and operating statistics and forecasts, but we also consider recent comments made and actions taken by chemicals companies, as those constitute real-time indicators for the state of the industry.

Value of Shipments

In September 2008, the value of shipments of chemical products excluding pharmaceuticals dropped compared to the previous month. In November, it fell below last year's value, and the decline accelerated to 16.5% in January compared to the same month in 2008. In March, U.S. chemicals companies shipped products valued at \$35.7 billion to their customers, representing a drop of 16.2% compared to February 2008.

Chemical and Allied Products Excluding Pharmaceutical and Medical Products — Monthly Value of Shipments
(Seasonally Adjusted)

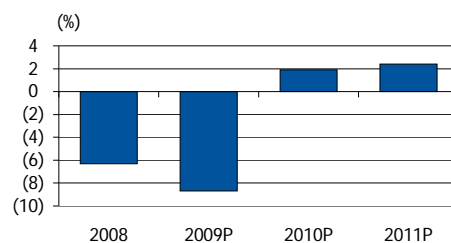


Source: U.S. Bureau of the Census.

Chemical Industry Output Forecast

The American Chemistry Council (ACC), the industry's U.S. trade association, revised its forecast for U.S. chemical output sharply downward in the beginning of March. Reflecting a worsening economic environment and dropping demand, the ACC now expects chemical output excluding pharmaceuticals to shrink by 8.7% in 2009, a substantial revision from the 3.1% decrease expected in December. The decline is led by basic chemicals, which are anticipated to decline by 12.5%, while the decrease is less pronounced for specialty chemicals (–4.8%), agricultural chemicals (–5.5%) and consumer products (–3.6%). The ACC expects a stabilization and modest recovery of 1%–3% for all subsegments and 2% for the aggregated chemicals sector in 2010 and 2011.

ACC Annual Change of U.S. Chemical Output Excluding Pharmaceuticals

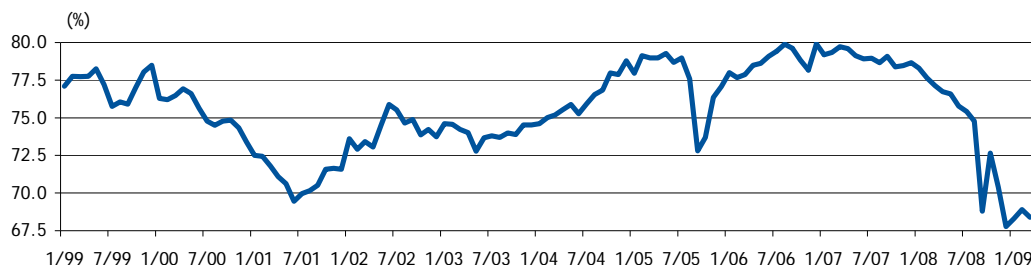


P – Projection.
Source: ACC.

Chemical Industry Operating Rates

Operating rates in the chemicals industry reached their lowest level in 10 years in the fourth quarter of 2008, when capacity utilization dropped below 70%. So far, operating rates have failed to rebound from this level. Preliminary readings for the first quarter of 2009 continue to be low at 68.5%. Numbers also remained flat in March with a seasonally adjusted operating rate of 68.4%, thus also failing to show a sequential rebound. Chemical companies continue to idle plants or, in some cases, have even moved to permanently take capacity off-line by shutting down production plants.

Monthly Capacity Utilization for the U.S. Chemical Industry
(Seasonally Adjusted)

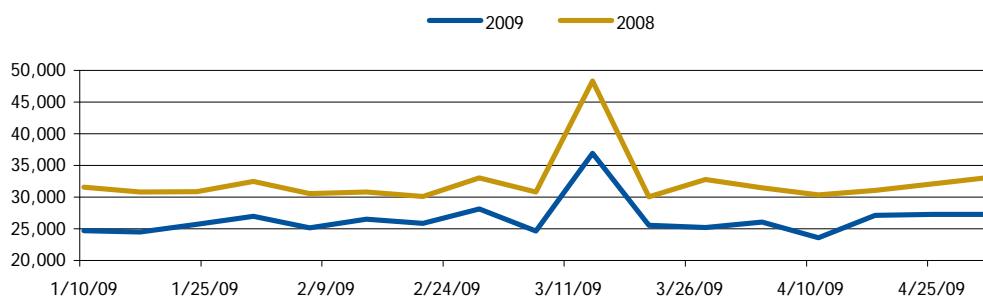


Source: Federal Reserve Board.

Chemical Railcar Loads

U.S. chemical railroad loads offer an early indication of how chemicals sales trend, as the numbers are provided weekly by the American Railroad Association. However, the indicator does not provide a full perspective on chemicals sales because only approximately 20% of chemical product shipments are by rail, with the balance being shipped by truck, barge and pipeline.

Weekly Chemical Railcar Loads



Source: Association of American Railroads.

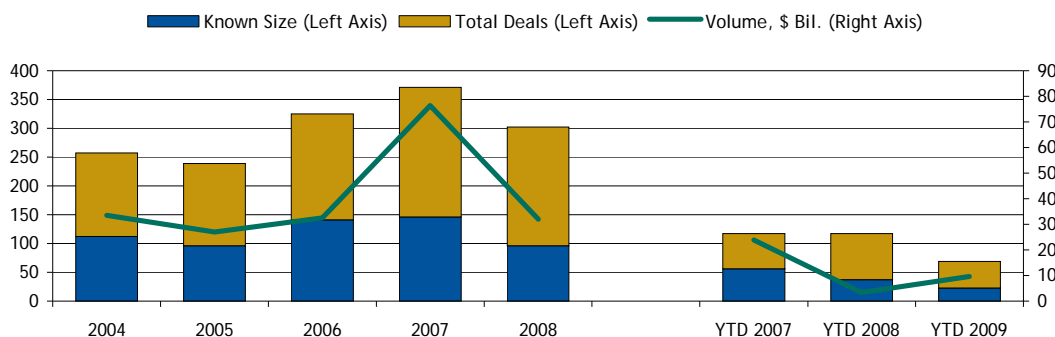
Year-to-date, chemical railroad loads total 438,868 cars, thus trailing year-to-date 2008 figures by 17.8%. In the second half of April, the shipment gap narrowed to 13%–17.5% compared to last year, indicating a slower pace of decline. However, the chemical railcar load numbers cannot be interpreted as signs of a rebound of demand for chemical products.

Merger and Acquisition in the Chemicals Industry

Mergers and acquisitions and asset disposals can be a good indicator of the state of the industry as the number and volume increase. The number and volume of deals peaked in 2007, with more than 350 transactions and an aggregated volume of \$76.4 billion for deals with known size. In 2008, volume dropped to \$32.1 billion as the number of leveraged buyouts declined substantially. The first four months of 2009 saw approximately 70 deals in an aggregated volume of \$9.6 billion for the deals with known size. The number of transactions declined by about 40% compared to 2007 and 2008. The volume of known deals increased year-to-date compared to 2008, but the increase is driven by four pending \$1 billion-plus deals. Except for specific transactions, financial

sponsors are expected to remain sidelined. The transactions will emphasize strategic bolt-on acquisitions, which tend to be small to medium in size. Number and volume will also be contained by the still-restricted availability of credit in the bank markets.

Mergers and Acquisitions in Chemical Industry — Number and Volume of Deals



YTD - Year to date.
Source: Bloomberg.

Capital Expenditures and Investments

Almost all commodity and specialty chemical companies announced major restructurings in order to adjust to much lower demand levels throughout 2009. Restructuring plans consist of workforce reductions and shortened work hours, plant idling or shutdowns, and process efficiency efforts. Most of the restructuring initiatives also include lower capital expenditure targets for 2009 as companies scale back, delay or cancel capital-intensive projects. Three companies alone with 2008 capital expenditures above \$600 million announced they would cut capital expenditure budgets by approximately \$2 billion combined. In contrast, no chemicals company has announced that it would increase its capital expenditures, with the exception of investments in individually identified pockets of growth such as water treatment, or alternative energies and subsectors that are decoupled from the broader economic cycle, such as agrochemicals.

Pending Mergers and Acquisitions YTD in 2009 with \$1 Billion-Plus Volume

Acquirer	Target	Deal Size (\$ Bil.)
Agrium	CF Industries	4.1
IPIC	NOVA Chemicals	2.1
CF Industries	Terra Industries	1.8
K+S AG	Morton Salt	1.7

Source: Bloomberg.

2008 Capital Expenditure and 2009 Budgets for Selected Chemicals (\$ Bil.)

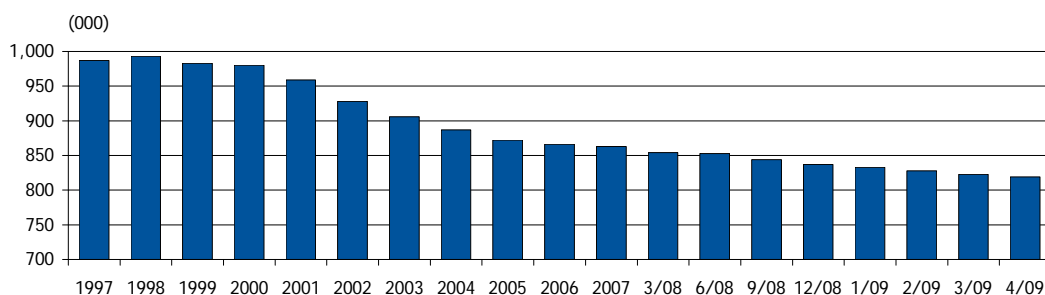
	2008 CAPEX	2009 Budget	Reduction
Dow Chemical	2.3	1.1	(1.2)
DuPont	2.0	1.4	(0.6)
Eastman	0.6	0.35-0.4	(0.2)-(0.25)

Source: Company reports.

Chemical Industry Employment

The restructurings to adjust to lower demand levels are taking a toll on employment at U.S. chemicals companies. Since the beginning of the recession in December 2007, 44,000 jobs were lost in the industry — about 18,000 in the first four months of 2009 alone. The total number of employees in the industry dropped to 818,400 at the end of

U.S. Chemical Industry Employment



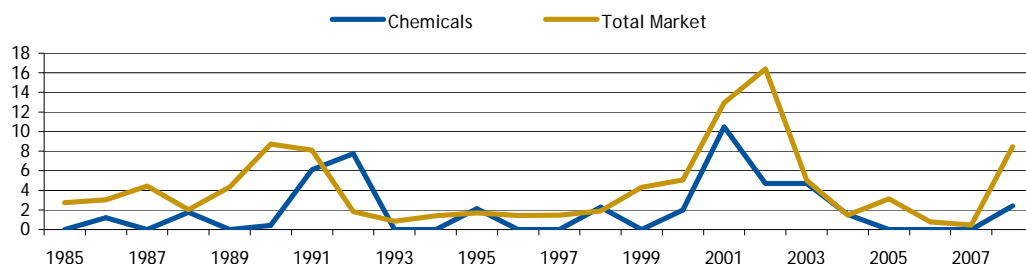
Source: Bureau of Labor.

April, and further job losses are expected, given the ongoing restructuring initiatives announced by almost all chemicals companies.

Chemicals Default Rates

After five years of very low default rates in the chemicals industry, defaults and Chapter 11 bankruptcy protection filings started to rise substantially. 2009 is likely to test the record high default rates of 10.5% in 2001 and 7.7% in 1992. Since the beginning of the year, Tronox Inc. (Tronox) has sought bankruptcy protection and was joined by Netherlands-based LyondellBasell Industries (LyondellBasell), whose U.S. operations, Lyondell Chemical Co., filed for bankruptcy. Fitch has withdrawn all ratings for Tronox and LyondellBasell. The latest Chapter 11 filing comes from Chemtura Corp., which Fitch does not rate.

U.S. High Yield Default Index Versus Chemical Defaults (1985-2008)



Source: Fitch Ratings.

Company Statements

In its first-quarter earnings call on April 30, Dow Chemical Co. (Dow Chemical) provided one ray of hope for stabilization and sequential improvements, when the company reported an operating rate of 70% for March 2009. While the rate was well below last year's, it represents a sequential improvement from the low of 44% reached in December. The average operating rate improved to 68% for first-quarter 2009, compared to 64% in fourth-quarter 2008. The increase in production is backed by a moderate uptick in demand, mainly due to inventory restocking, compared to fourth-quarter 2008. The broader demand picture, however, looks less optimistic. The company emphasized that it continues to expect 2009 to be a year of global recession.

In its fourth-quarter 2008 earnings call on February 26, BASF SE (BASF) emphasized that 2009 will be a year of unprecedented challenges. The company stated that demand for chemical products has not picked up since the start of 2009 and that a reversal of the trend is not yet in sight. BASF — the largest chemicals company in terms of revenues — believes that the situation in its sales markets is worsening and that chemical production excluding pharmaceuticals will shrink by 2% globally in 2009.

While announcing additional cost reductions in a news release on March 9, Eastman Chemical Co. stated that visibility into global demand continues to be limited. For the remainder of the year, the company expects difficult economic conditions and only a modest improvement in demand that increases the company's capacity utilization from the current rate of 71% to 75%–80%.

In its first-quarter 2009 earnings call on April 21, El DuPont de Nemours & Co. (DuPont) highlighted increased cost cutting targets as the result of management actions and less impact from destocking in the second quarter. However, the company continues to expect fundamentally weak demand in key markets throughout 2009.

Oil and Gas Price Expectations

On the cost side, the industry expects some relief coming from lower or flat prices for oil throughout 2009. Chemical Market Associates, Inc. (CMAI) expects the price for crude oil (WTI; spot) to hover around \$50 per barrel in 2009. As announced in its earnings call on February 26, BASF also based its 2009 outlook on the assumption that crude oil will trade at an average of \$50 per barrel. For natural gas, CMAI expects a moderate increase to \$4.45 per million British thermal units (BTU; contract burner tip) by year-end. DuPont stated during its earnings call that the company anticipates costs for raw materials, energy and transportation to decrease between 4% and 6%, with some potential upside possible in 2009.

Subsector Overview

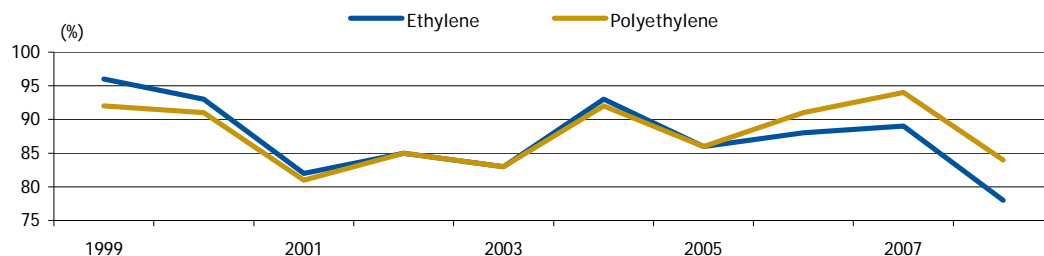
This section of the report focuses on key subsectors of the industry, as headline numbers for the industry as a whole often mask deviating trends and developments in specific subsectors.

Ethylene and Polyethylene

Operating rates for ethylene reached a 10-year low annual average of 78% in 2008, when the rapid demand decline hit the industry toward the end of the year. Polyethylene, averaged across high, low and low linear density, trended down equally with an operating rate of 84% after 94% in 2007. Recently, Dow Chemical reported some improvement for its polyethylene production. Its operating rate bottomed out in December near an unprecedented 60%, but improved to approximately 85% in January and 95% in February. The company was expecting an average rate of 91% for first-quarter 2009 compared to 74% in fourth-quarter 2008.

At the World Petrochemical Conference held in March 2009, CMAI forecasted that all major petrochemical commodities are or will be experiencing oversupply and that operating rates will drop to levels not seen for many years. The buildup of capacity, particularly in the Middle East, expands global nameplate capacity, while the economic downturn caps demand at flat at best. For ethylene, CMAI expects global excess capacity of 17 million metric tons, or 15% of total demand. This excess capacity compares to 7% seen in the past economic downturns in 2002 and 1993. The surplus is driven primarily by global nameplate capacity expansion, mainly in the Middle East, from 125 million metric tons in 2007 to 145 million in 2010, while global capacity will remain flat at 115 million metric tons. Surplus capacity will be partly balanced by

Average Annual North American Industry Operating Rates for Ethylene and Polyethylene



Source: CMAI, ACC, NOVA Chemicals.

shutdowns of older, high-cost plants. So far, capacity shutdowns equaling 2.5 million metric tons have been announced. CMAI expects an additional 6.5 million metric tons to be taken offline, of which 4 million are in North America.

North American Ethylene and Polyethylene Nameplate Capacity by Company

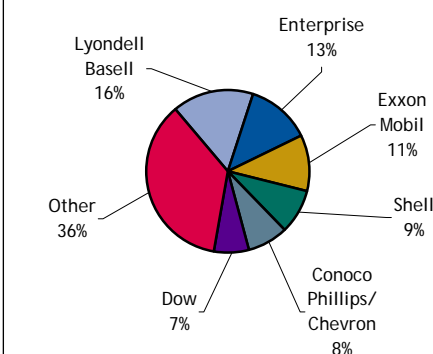
North American Ethylene		North American Polyethylene	
Company	(Mil. Pounds)	Company	(Mil. Pounds)
Dow Chemical	12,600	Dow Chemical	9,810
LyondellBasell	10,700	ExxonMobil Chemical	8,660
ExxonMobil Chemical	9,500	LyondellBasell	5,560
ChevronPhillips Chemical	7,800	ChevronPhillips Chemical	5,090
NOVA Chemicals	6,600	NOVA Chemicals	3,620
Royal Dutch/Shell Group	6,500	Westlake	2,550
INEOS	3,800	Formosa	2,190
Formosa	3,300	INEOS	2,040
PEMEX	3,000	PEMEX	1,940
Westlake	2,900	Total Petrochemicals	970
Other	10,000	Other	850
Total	76,700	Total	43,280

Source: CMAI, NOVA Chemicals.

Propylene and Polypropylene

North American propylene supply totaled 22.2 million metric tons in 2008, of which 15.3 million was consumed in the chemical's production, with the balance being utilized in refineries for fuel production. The main chemical consumption is in the production of polypropylene, which accounted for 58% of the demand for polymer and chemical grade propylene, the two grades that are exclusively utilized in the chemical's production. Following the economic downturn, the leading polypropylene producers began to idle or permanently shut down capacity. The buildup of Middle Eastern capacity also applies to propylene and polypropylene production. As a result, CMAI expects that high-cost steam cracker production will decrease in North

North American Propylene Production Capacity — Polymer Grade and Chemical Grade



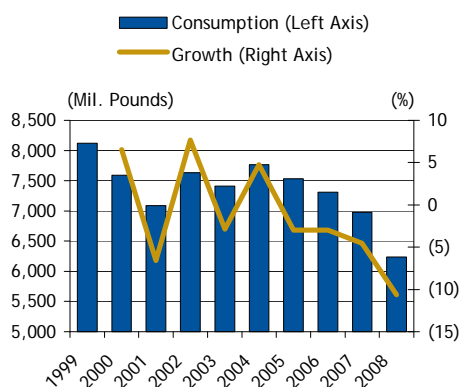
Source: CMAI.

America over the next three to five years. CMAI estimates that steam cracker capacity of approximately 9 million metric tons will be idled by 2013. Production will be shifted to new technologies such as “on-purpose production.”

Styrene and Polystyrene

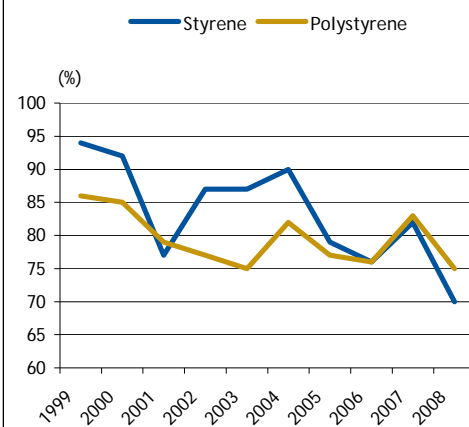
North American consumption of solid and expandable polystyrene declined for the sixth consecutive year. The decline rate accelerated to 10.6% and total consumption stood at 6,235 million pounds in 2008. As a result, North American operating rates reached a 10 year lows of 70% for styrene and 75% for polystyrene.

North American Consumption and Growth — Solid and Expandable Polystyrene (1999–2008)



Source: CMAI, NOVA Chemicals.

North American Operating Rates for Styrene and Polystyrene (Fiscal Years)



Source: CMAI, NOVA Chemicals.

North American Styrene and Polystyrene Capacity

Styrene		Solid Polystyrene		Expandable Polystyrene	
Company	Mil. Pounds	Company	Mil. Pounds	Company	Mil. Pounds
Ineos NOVA	3,720	American Styrenics	1,900	NOVA Chemical	370
Cosmar (SBAIC/Total)	2,540	Total Petrochemicals	1,650	Flint Hills Resources	201
American Styrenics (Dow/CPC)	2,100	INEOS Nova	1,640	Dart Container	198
LyondellBasell	2,000	BASF	350	Grupo Alfa	182
Dow Chemical	1,030	Resirene	330	BASF	182
Shell Chemical	990	Dart Container	210	Styrochem	110
Westlake Chemical	560	Down Chemical	170	Grupo Idesa	65
NOVA Chemical	400	SABIC	100	Nexkemia	40
BASF	380	American PS	70	Plastifab	18
PEMEX	330	Other	30	Productos de Estireano	18
Other	0	Total	6,450	Others	12
Total	14,050			Total	1,396

Source: CMAI, NOVA Chemicals.

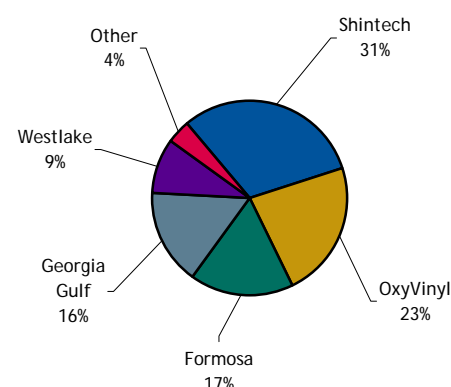
Styrene and polystyrene suffer from weak demand, as high feedstock prices, competition from other materials, and overcapacity adversely affected economics of the value chain. The challenging operating environment led to industry consolidation. Since 2007, NOVA Chemicals Co. acquired Sterling's styrene business and, in turn, brought its styrene and polystyrene into a joint venture with INEOS Group Ltd. Dow

Chemical and Chevron Phillips Chemical Co. formed the American Styrenics Joint Venture in 2008. Unfavorable dynamics in the sector are expected to persist, as the global buildup of capacity, most notably in the Middle East, continues with more than 6 million pounds of new annual capacity coming online by 2012.

Polyvinyl Chloride

Market dynamics of the polyvinyl chloride (PVC) segment are highly dependent on the state of the construction and housing industry. Main end-uses for rigid PVC resins, which account for approximately two-thirds of consumption, include pipes, windows and door profiles, moldings and outdoor fencing, decking and railing. Flexible PVC resin uses include flooring, wire and cable coatings, film and sheets, and shower curtains. As such, manufacturers suffer from the ongoing slump in construction activities. Operating rates dropped below 80% for the full year 2008 from a peak of above 90% in 2006. Although the industry is highly concentrated, with the top five suppliers having a market share of more the 95%, operating rates are expected to remain low. While PVC benefited from replacing traditional building materials such as wood and metals, the ongoing challenging environment in the U.S. housing sector weighs on demand, outpacing potential replacement benefits.

North American PVC Supply Market Share (2008)



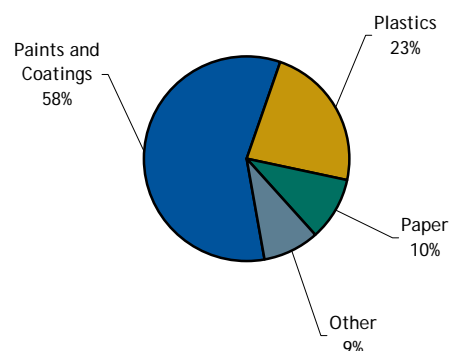
Source: CMAI, Westlake.

Titanium Dioxide

Global demand growth for titanium dioxide (TiO₂) is expected to reach 4% per annum over the coming years, but this growth is generated almost entirely in Asia, and particularly in China. In contrast, demand is decreasing in North America, as the paint and coatings sector, which accounts for 58% of end user demand for TiO₂, continues to suffer from the weakness in the U.S. automotive and housing markets. Other key end-markets, plastics and paper, also face difficult economic environments and do not trigger a demand increase either.

Historically, capacity utilization was in the high 80% range and at some leading plants even in the 90% range. However, the demand weakness will likely push TiO₂ operating rates down to the lower 80% range or below for the full year 2009. Despite a high market share concentration, with seven players controlling approximately 60% of the global market and 75% of the market excluding China, major price increases are not anticipated in the North American market, given the weak demand pattern and ongoing strong competition among the leading producers. As a result, profit margins will continue to be small. Emphasized by the Chapter 11 bankruptcy protection filing of the second-

End-User Markets for Titanium Dioxide



Source: Chemical Week.

North American Titanium Dioxide Production Capacity

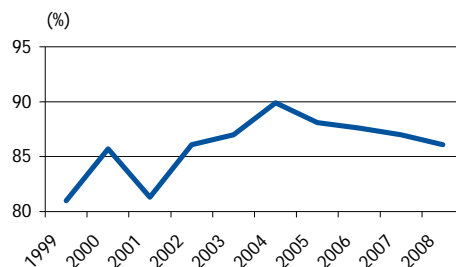
(000 Metric Tons)

DuPont	1,010
Tronox	335
Millenium	155
Huntsman-Kronos	125
Kronos	96
Total	1,721

Source: *Chemical Week*.

largest U.S. producer, Tronox, earlier this year, conditions in the TiO₂ sector are expected to remain difficult throughout the year.

Titanium Dioxide Operating Rates

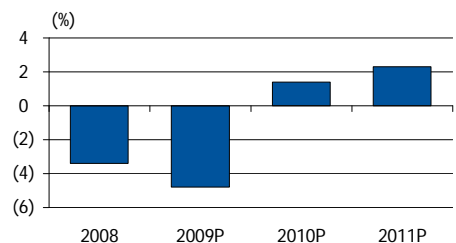


Source: International Business Management Associates, Inc.

Specialty Chemicals/Fine Chemicals

The forecast for the diverse specialty chemical sector is more favorable than for commodity manufacturers, as some of the sector's higher-margin, innovation-driven products are applied in less cyclical end-user markets. However, specialty chemicals are not immune to the economic downturn. Dependent on their specific portfolio composition, some of the specialty chemicals also generate a substantial portion of their revenues in cyclical end-user markets. For the sector, the ACC forecasts U.S. specialty chemical output to decline 4.8% in 2009, before specialty chemicals return to moderate growth of 1.0%–2.5% in 2010 and 2011.

U.S. Specialty Chemicals Output Growth



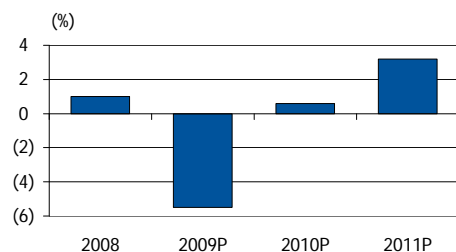
P - Projection.
Source: ACC.

Specialty chemicals products, which are less exposed to cyclicity and the current economic downturn, include pharmaceutical ingredients and intermediates, food and beverage flavors and processing substances, basic personal care ingredients, water treatment chemicals and cleaning products. Going forward, other specialty chemicals, which are used in energy-efficiency, alternative or renewable energy and infrastructure projects, will also benefit once effects from the stimulus package are felt.

Agrochemicals

North American agrochemicals benefited from two strong back-to-back growing seasons for both corn and wheat; tight supplies; and a weak U.S. dollar, which supported exports. The economic decline, a six-month fall in commodity prices and the strengthening of the U.S. dollar reversed favorable conditions. Driven by near-term challenges such as higher inventories and a slowdown in demand, the ACC expects a 5.5% decline in agrochemicals output in 2009.

ACC Forecast for Agrochemical Output



P - Projection.
Source: ACC.

Long-term fundamentals remain intact as they are driven by a growing global population and increasing income levels in emerging economies. As such, agrochemicals remain decoupled from the broader economic cycle and the ACC anticipates the sector will return to growth by 2010.

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