CHEMICAL EARNINGS CLIMB ONCE AGAIN

Improved pricing, demand, and output spark big quarterly and annual increases

WILLIAM J. STORCK, C&EN NORTHEAST NEWS BUREAU

THE FOURTH QUARTER PUT THE cap on 2004 for the U.S. chemical industry. Or perhaps it should be called the winner's wreath, as the 24 chemical companies sampled by C&EN finished their fifth straight quarter of above-40% earnings increases. It was also the first year since 1995 that total earnings for the sample increased in every quarter when compared with the comparable year-earlier quarter.

For the fourth quarter, total earnings at the 24 companies, excluding significant extraordinary and nonrecurring items, increased 45.2% from the same quarter of 2003 to \$2.76 billion as sales rose 16.4% to \$35.3 billion. This drove the aggregate profit margin for the full group of companies to 6.4% from 5.2% the year before.

For the full year, earnings were up 52.0% when compared with 2003 to \$9.58 billion on a 15.1% sales increase to \$139.7 billion. Aggregate profitability rose to 6.9% from 5.2% in 2003.

The reason for the growth is simple—it lies in the industry fundamentals of pricing, demand, and the output needed to fill that demand. Of these fundamentals, pricing is paramount, as recognized by Rohm and Haas Chief Executive Officer Raj L. Gupta, who says of the quarter: "Of particular note was the solid increase in selling prices, which have been essential to temper the continuing rising raw material and energy costs. However, selling price increases still lag those continually rising raw material costs, and as a result, our gross profit remains depressed."

Rohm and Haas's quarterly earnings increased 16.5% to \$127.0 million, at the lower end of the double-digit rises among the companies surveyed, and sales rose 13.2% to \$1.86 billion.

Government price data give a picture of what companies were seeing during the fourth quarter and, indeed, the full year. The Labor Department's producer price index for all chemicals in the fourth quarter rose 12.1% from the comparable quarter in 2003 and was up 7.7% for the year.

This figure, however, includes pharmaceuticals. More relative to the products made by many of the companies in the C&EN survey, the index for basic chemicals increased a whopping 25.0%. For the full year, the index was up 14.7% for these products. It must be remembered, however, that many of these basic chemicals are raw materials for downstream specialty makers such as Rohm and Haas. And that is why their costs are rising.

Plastic resins also scored big price gains, rising 22.8% for the quarter and 11.2% for the year, according to government data.

As with pricing, basic chemical production vastly outperformed the total chemical industry for the quarter and the year. The

TOP 10 RANKINGS

Chemical industry leaders for the fourth quarter ...

SALES

RANK 2004		\$ MILLIONS	RANK 2003
1	Dow Chemical	\$10,936.0	1
2	DuPont	6,000.0	2
3	PPG Industries	2,411.0	3
4	Air Products	1,991.0	4
5	Rohm and Haas	1,864.0	5
6	Praxair	1,786.0	6
7	Eastman Chemical	1,658.0	7
8	Monsanto	1,098.0	9
9	Engelhard	1,016.6	8
10	Lubrizol	936.2	10

EARNINGS

	\$ MILLIONS	RANK 2003
Dow Chemical	\$823.0	1
DuPont	371.0	2
PPG Industries	186.0	5
Praxair	181.0	3
Air Products	166.8	4
Rohm and Haas	127.0	6
Engelhard	61.4	7
Sigma Aldrich	54.7	8
Eastman Chemical	54.0	17
Cabot	35.0	9

PROFITABILITY

	EARNINGS AS % OF SALES	RANK 2003
Sigma Aldrich	15.5%	1
Praxair	10.1	2
Air Products	8.4	3
PPG Industries	7.7	8
Dow Chemical	7.5	10
Cabot	7.1	4
Rohm and Haas	6.8	5
FMC Corp.	6.6	12
Cytec Industries	6.2	14
DuPont	6.2	11

... and for full-year 2004

SALES

RANK 2004		\$ MILLIONS	RANK 2003
1	Dow Chemical	\$40,161.0	1
2	DuPont	27,340.0	2
3	PPG Industries	9,513.0	3
4	Air Products	7,717.5	4
5	Rohm and Haas	7,300.0	5
6	Praxair	6,594.0	6
7	Eastman Chemical	6,139.0	8
8	Monsanto	5,572.0	7
9	Engelhard	4,166.4	9
10	Lubrizol	3,155.6	10

EARNINGS

	\$ MILLIONS	RANK 2003
Dow Chemical	\$2,577.0	2
DuPont	2,393.0	1
Praxair	697.0	3
PPG Industries	696.0	4
Air Products	639.1	5
Rohm and Haas	496.0	7
Monsanto	386.0	6
Engelhard	238.8	8
Sigma Aldrich	232.9	9
Eastman Chemical	220.0	13

PROFITABILITY

	EARNINGS AS % OF SALES	RANK 2003
Sigma Aldrich	16.5%	1
Praxair	10.6	2
DuPont	8.8	5
Air Products	8.3	3
PPG Industries	7.3	8
Cabot	7.0	10
Monsanto	6.9	4
Cytec Industries	6.9	5
Rohm and Haas	6.8	12
Dow Chemical	6.4	14

NOTE: Based on 24 companies listed on page 22.

RESULTS

Chemical companies continued to turn in strong growth in fourth quarter

	FOURTH-QUARTER 2004						FULL-YEAR 2004					
	SALES ($ MILLIONS)	EARNINGS[a] ($ MILLIONS)	CHANGE FROM 2003 SALES	CHANGE FROM 2003 EARNINGS	PROFIT MARGIN[b] 2004	PROFIT MARGIN[b] 2003	SALES ($ MILLIONS)	EARNINGS[a] ($ MILLIONS)	CHANGE FROM 2003 SALES	CHANGE FROM 2003 EARNINGS	PROFIT MARGIN[b] 2004	PROFIT MARGIN[b] 2003
Air Products	$1,991.0	$166.8	18.2%	26.6%	8.4%	7.8%	$7,717.5	$639.1	18.1%	28.1%	8.3%	7.6%
Albemarle	451.1	19.6	52.9	6.5	4.3	6.2	1,513.7	75.7	36.3	13.3	5.0	6.0
Arch Chemicals	241.8	–8.6	31.8	nm	def	def	1,120.9	20.1	29.8	95.1	1.8	1.2
Cabot	495.0	35.0	11.0	16.7	7.1	6.7	1,983.0	139.0	8.3	32.4	7.0	5.7
Cambrex	117.4	5.3	15.0	–13.1	4.5	6.0	439.2	24.2	8.3	9,777.6	5.5	0.1
Cytec Industries	450.6	28.0	24.5	91.8	6.2	4.0	1,721.3	119.0	17.0	30.8	6.9	6.2
Dow Chemical	10,936.0	823.0	31.3	73.3	7.5	5.7	40,161.0	2,577.0	23.1	100.5	6.4	3.9
DuPont	6,000.0	371.0	–7.4	25.3	6.2	4.6	27,340.0	2,393.0	1.3	43.4	8.8	6.2
Eastman Chemical	1,658.0	54.0	31.2	440.0	3.3	0.8	6,139.0	220.0	20.8	165.1	3.6	1.6
Engelhard	1,016.6	61.4	–2.2	–1.3	6.0	6.0	4,166.4	238.8	12.2	4.1	5.7	6.2
FMC Corp.	513.7	33.8	1.3	48.9	6.6	4.5	2,051.2	119.8	6.8	77.5	5.8	3.5
H.B. Fuller	378.5	12.9	9.3	–1.5	3.4	3.8	1,409.6	35.6	9.5	–18.2	2.5	3.4
Georgia Gulf	590.9	24.1	58.6	265.2	4.1	1.8	2,206.2	105.9	52.7	401.9	4.8	1.5
Great Lakes Chemical	410.5	3.0	24.9	nm	0.7	def	1,603.7	37.5	12.5	331.0	2.3	0.6
Hercules	511.0	19.0	11.6	18.8	3.7	3.5	1,997.0	89.0	8.2	9.9	4.5	4.4
Lubrizol	936.2	34.2	80.5	62.9	3.7	4.0	3,155.6	137.3	54.0	29.5	4.4	5.2
Monsanto	1,098.0	35.0	6.8	236.5	3.2	1.0	5,572.0	386.0	9.3	4.7	6.9	7.2
PPG Industries	2,411.0	186.0	10.9	43.1	7.7	6.0	9,513.0	696.0	8.6	32.6	7.3	6.0
PolyOne	515.9	1.8	8.8	nm	0.3	def	2,161.5	37.6	47.6	nm	1.7	def
Praxair	1,786.0	181.0	22.2	16.8	10.1	10.6	6,594.0	697.0	17.5	19.1	10.6	10.4
Rohm and Haas	1,864.0	127.0	13.2	16.5	6.8	6.6	7,300.0	496.0	13.7	72.2	6.8	4.5
Sigma Aldrich	351.9	54.7	9.2	17.1	15.5	14.5	1,409.2	232.9	8.6	22.3	16.5	14.7
Stepan	239.4	0.6	18.9	nm	0.3	def	935.8	10.3	19.2	22.6	1.1	1.1
Terra Industries	354.6	7.3	11.8	–17.0	2.1	2.8	1,509.1	49.9	11.7	nm	3.3	def
TOTAL[c]	$35,319.1	$2,275.9	16.4%	45.2%	6.4%	5.2%	$139,719.9	$9,576.7	15.1%	52.0%	6.9%	5.2%

a After-tax earnings from continuing operations, excluding significant extraordinary and nonrecurring items. **b** After-tax earnings as a percentage of sales. **c** Percentages calculated from combined sales and earnings. **def** = deficit. **nm** = not meaningful.

Federal Reserve Board's chemical production index for all chemicals increased 3.8% in the fourth quarter over the comparable period the year before, and for the full year it was up just 2.7% over 2003. Basic chemical output, in contrast, grew 6.6% in the fourth quarter and 4.7% for all of 2004.

The increases in prices and production were, of course, driven by demand. According to Commerce Department data, the value of all chemical shipments in the fourth quarter was $131.4 billion, a 10.8% increase over the same period in 2003. And for the full year, total chemical shipments were up 9.9% to $504.3 billion.

Excluding pharmaceuticals, chemical shipments rose 13.2% for the quarter to $101.9 billion and 13.7% for the year to $388.0 billion.

Besides an improving U.S. economy, another important factor in shipments growth was a big increase in export demand. Government data show total chemical exports rising 23.0% in the quarter to $29.1 billion and 19.5% for the year to $109.4 billion. Exports excluding pharmaceuticals increased 22.3% in the quarter to $23.1 billion and 18.3% for the year to $86.1 billion.

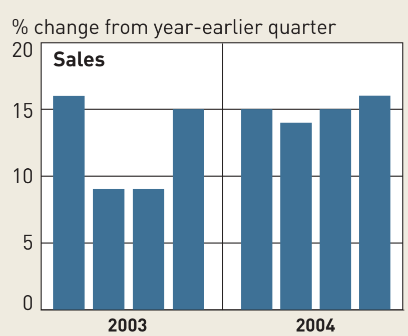
As a result, exports as a percentage of shipments for all chemicals increased to 21.9% and 21.7% for the quarter and full year, respectively. Excluding pharmaceuticals, the percentages were 22.6% for the quarter and 18.3% for all of 2004. This is a far cry from 10 years ago when exports of all chemicals accounted for just 12.8% of annual shipments

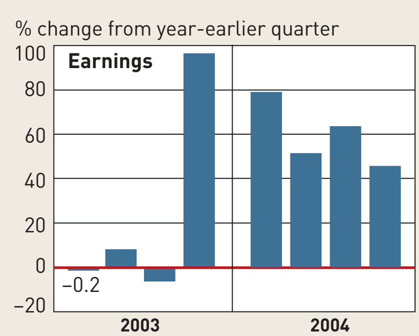
CHEMICAL INDUSTRY 2004

Fourth-quarter results

Sales increased 16%
Earnings rose 45%
Profitability was 6.4%
Production improved 3.8%
Prices were up 12.1%

NOTE: All sales, earnings, and profit-margin data are based on the 24 chemical companies above.
SOURCES: Federal Reserve Board (production data), Department of Labor (prices data)





CRITERIA FOR C&EN EARNINGS ANALYSIS

C&EN's quarterly report on financial performance of the U.S. chemical industry contains data from 24 major U.S. basic chemical companies and from 11 diversified companies. To be included, a company must have at least 50% of its sales in chemicals.

In referring to chemical sales, C&EN means sales of chemicals whose molecular composition has been changed during manufacture. Hence, these include traditional categories of basic petrochemicals and inorganics, organic intermediates and inorganic compounds, polymers such as plastics and fibers, and agricultural chemicals and specialty derivatives.

In listing earnings, the report gives after-tax income for continuing operations, excluding significant nonrecurring and extraordinary items.

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and 14.1%, excluding pharmaceuticals.

Export growth, by far, outpaced import growth in the two periods. Import growth for all chemicals was 11.4% in the quarter to $28.8 billion and 11.8% for the year. Excluding drugs, quarterly import growth was 11.8% to $19.7 billion, with an 11.9% increase for the full year to $77.8 billion.

Total chemicals for the quarter actually showed a surplus of $370.0 million, up from a deficit of $2.13 billion in the same period a year earlier. The total chemical deficit for 2004 was cut to $3.51 billion from $9.51 billion in 2003.

Pharmaceuticals have been a major factor in the trade deficit in chemicals since the monthly balance began to go almost consistently negative toward the end of 2001. Thus, when drugs are excluded, the resulting trade surplus for the rest of the industry rose 177% for the quarter to $3.30 billion and 152% for the year to $8.26 billion.

WHILE EXPORTS were soaring, demand growth for chemicals in the U.S. was also impressive. Domestic demand—shipments minus exports plus imports—rose 9.1% for the quarter to $131.0 billion and 8.4% for the year to $507.8 billion. Without counting pharmaceuticals, domestic demand for the quarter was up 8.7% to $96.6 billion and 12.4% for the year to $379.8 billion.

With economic fundamentals like these, it's no wonder U.S. chemical companies performed well in the fourth quarter and had their first really good full year in quite some time.

Only one company, Arch Chemicals, showed a deficit in the fourth quarter and none did for the full year. Arch had a loss of $8.6 million, despite a 31.8% increase in sales to $241.8 million. The company's HTH water treatment unit was the main culprit, posting a $16.1 million operating loss for the quarter.

Of the remaining 23 companies, 19 had higher earnings in fourth-quarter 2004 than in 2003. These include Great Lakes Chemical, PolyOne, and Stepan, which had losses in fourth-quarter 2003 but posted positive results in the 2004 fourth quarter.

Three companies had triple-digit increases for the quarter—Eastman Chemical, Georgia Gulf, and Monsanto. Eastman had the most impressive gain, with earnings rising 440.0% to $54.0 million on a 31.2% increase in sales to $1.66 billion. Eastman attributed the improvement primarily to "continued focus on more profitable businesses and product lines, cost reduction efforts, higher selling prices, and higher sales volume." It also noted that fourth-quarter raw material and energy costs increased by approximately $250 million when compared with the 2003 quarter. Eastman's earnings for the full year rose 165.1% to $220.0 million as sales increased 20.8% to $6.14 billion.

Georgia Gulf saw earnings rise 265.2% to $24.1 million in the quarter on a 58.6% sales increase to $590.9 million. For the full year, the company's earnings were up 401.9% to $105.9 million, and sales increased 52.7% to $2.21 billion. CEO Ed Schmitt concisely explains: "Strong demand and very limited capacity additions allowed us to produce at nearly full capacity and increase sales prices."

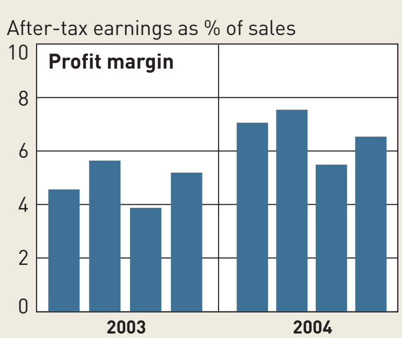
Monsanto's quarterly earnings rose 236.5% to $35.0 million as sales increased 6.8% to $1.10 billion. The company credits its seed performance, not only in the U.S., but also in Brazil, Europe, and Australia.

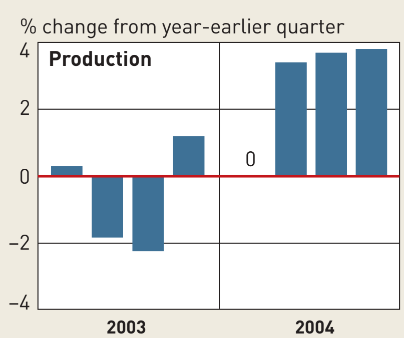
These companies were not the only ones that had stellar growth in the quarter. Cytec Industries' earnings almost doubled, rising 91.8% to $28.0 million on a 24.5% increase in sales to $450.6 million. "Sales volumes were up 16%, selling prices were up 7%, and exchange rate changes added 2%," CEO David Lilley notes. However, he also says that "raw material and energy costs, continuing their upward trend, were significantly higher and were well above the prior-year period."

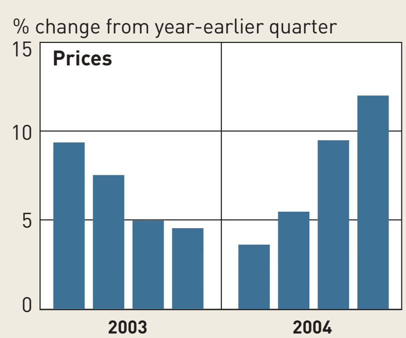
In the area of growth, it was not just the medium-sized and small companies that racked up good earnings gains. Industry leader Dow Chemical saw quarterly earnings grow 73.3% to $823.0 million. Sales were up 31.3% to $10.9 billion. The sales increase came from 6% better volume and a 28% price rise. The company says strong industry demand drove high operating rates and allowed it to expand margins across most businesses, despite an unprecedented $1.5 billion increase in feedstock and energy costs compared with the same period in 2003.

Dow also notes that, for the full year, feedstock and energy costs climbed more than $3.4 billion compared to 2003. Despite this, the company's earnings doubled for the year, rising 100.5% to $2.58 billion on a 23.1% sales increase to $40.2 billion. Volume for the year increased 6% and prices were up 17%.

Number two DuPont did not fare so







well, with earnings increasing 25.3% to $371.0 million in the quarter and sales declining 7.4% to $6.0 billion. However, DuPont's reported fourth-quarter 2003 sales figure of $6.48 billion included its divested textiles and interiors unit.

DuPont says higher raw material costs reduced earnings for the fourth quarter by about $230 million. CEO Charles O. Holliday Jr. says, "The fourth quarter caps a year of improved operating performance by our company, delivering broad-based revenue growth, cost productivity, and margin improvement." For all of 2004, DuPont's earnings improved by 43.4% to $2.39 billion on a 1.3% increase in sales to $27.3 billion.

With 2004 behind them, chemical industry executives expect continued growth in 2005, but they are also seeing continued problems with feedstock and energy costs. Holliday says, "With the structural transformation of our company now complete, our number one priority is delivering on our business, which we are confident will create superior value for our customers and our shareholders." The company expects 2005 earnings to be between $2.65 and $2.85 per share—an increase of 11 to 20%.

IN GENERAL, DuPont sees worldwide industrial economic growth at historic trend line rates, with strong growth in Eastern Europe, China, and Latin America. It sees growth at slightly below trend line in the U.S. and Western Europe.

At Dow, CEO Andrew Liveris says: "We expect worldwide demand for our products to continue to grow and supply to tighten further. We find that our customers are becoming more concerned about the availability of our products, as opposed to their price." However, he says the company is not looking for much relief from high feedstock and energy costs. "We now consider them to be a permanent part of the industry landscape, and we have prepared ourselves accordingly." He adds, "We will control the things we can control and take 2005 one quarter at a time."

At Praxair, CEO Dennis H. Reilly says: "We expect continued strong growth in 2005, bolstered by our growing hydrogen business, the consolidation and integration of the acquired business in Germany, a record pipeline of new contracts and projects under construction, and increased price realization. We believe that economic activity in North America, South America, and Asia will be strong, while growth in Europe is likely to slow somewhat from 2004." The company expects earnings per share in the $2.33 to $2.45 range. Praxair earned $2.10 per share in 2004.

OIL COMPANIES

Chemical Business Earnings Soar

Earnings growth at oil companies is not totally attributable to the much talked about higher oil prices. Earnings from their chemical operations are also having a positive impact.

Chemical earnings at five major oil companies rose 170.1% in the fourth quarter to a total of $1.59 billion. This follows a 252.2% increase in the third quarter, so it can be argued that they are overcoming the high cost of their own feedstock.

The largest increase among the group was at ChevronTexaco, where fourth-quarter earnings of $75.0 million were 25 times greater than in the same quarter a year earlier.

At ConocoPhillips, ChevronTexaco's partner in Chevron Phillips Chemical, from which both companies derive most of their chemical results, earnings increased 654.5% to $83.0 million. ConocoPhillips' comments thus pretty well pertain to its partner as well: "The increase over fourth-quarter 2003 reflects improved margins and volumes in olefins and polyolefins as well as improved margins in the aromatics and styrenics business lines."

ExxonMobil, which recently replaced General Electric as the world's number one company in terms of stock market capitalization, saw its earnings from chemicals climb 162.2% in the quarter to $1.25 billion, due to improved margins and increased sales volumes. Prime product sales volumes were up 3.8% to 6.9 million tons.

Occidental Petroleum's earnings from chemical operations rose 97.2% in the quarter to $142.0 million on higher selling prices in all major products. "Our chemicals business had its best year since 1997," Chief Executive Officer Ray R. Irani says.

And at Sunoco, which has the smallest chemical operations among the five firms, quarterly earnings from that business increased 53.8% to $40.0 million. "Despite continued high feedstock costs, chemical results have improved year-on-year for seven consecutive quarters, and over the second half of 2004 earned $70 million," CEO John G. Drosdick says. Product demand remains healthy, and we expect this cyclical recovery to continue."

	FOURTH QUARTER			FULL YEAR		
$ MILLIONS	2004	2003	CHANGE	2004	2003	CHANGE
ChevronTexaco	$75.0	$3.0	2,400.0%	$314.0	$69.0	355.1%
ConocoPhillips	83.0	11.0	654.5	249.0	7.0	3,457.1
ExxonMobil	1,248.0	476.0	162.2	3,428.0	1,432.0	139.4
Occidental Petroleum	142.0	72.0	97.2	424.0	220.0	92.7
Sunoco	40.0	26.0	53.8	94.0	53.0	77.4
TOTAL[a]	$1,588.0	$588.0	170.1%	$4,509.0	$1,781.0	153.2%

a Percentages calculated from combined earnings.

FMC CEO William G. Walter says: "Our financial performance should further improve in 2005. We expect continued double-digit growth in earnings per share, before restructuring and other income and charges, to result in full-year earnings of between $3.70 and $3.90 per diluted share, driven by a significant recovery in selling prices in industrial chemicals, lower interest expense, and continued growth in specialty chemicals, partially offset by higher input costs." FMC's 2004 earnings per share were $3.20.

At Rohm and Haas, which had a 16.5% earnings increase for the quarter and a 72.2% rise for the year, the economic assumptions include global gross domestic product growth of 3.5%, compared with 4.0% in 2004; an expectation that the dollar will remain at current levels compared with the euro and the yen; and expectation that raw materials and energy costs will likely continue to increase throughout 2005, driven by high oil and natural gas prices, as well as a tight supply-and-demand balance for most commodities.

"Given these assumptions," Gupta says, "sales growth should be in the 9 to 11% range, yielding annual sales of approximately $8 billion. This would represent the third consecutive year of double-digit sales growth. Our 2005 earnings should be in the $2.50- to $2.75-per-share range, a substantial improvement over our 2004 performance," when the company's earnings per share from continuing operations were $2.21.■