

# RECESSION TAKES BITE OUT OF EARNINGS

Good full-year data for shipments belie the messy picture of **FINANCES** at companies worldwide

**FROM THE VANTAGE POINT** of 2009, it's incredible that, in both the U.S. and Canada, chemical prices and shipments increased in 2008. Corporate data paint a more accurate picture of the year. High prices and healthy shipments were not strong enough to protect profits for most of the world's chemical firms. By the fourth quarter, massive inventory destocking pummeled demand, and it was not clear when—or whether—it would return to prior levels.

In the first half of 2008, the global chemical industry battled high energy and feedstock prices and flat or shrinking demand in the U.S. and Europe. Industry leaders looked to the buying power of emerging markets in Asia and South America to supply revenues.

As the year wore on, the economic slowdown hit the chemical industry in waves.

The market for construction materials was the first to fail, because of the bursting of the real estate bubble. Then demand for products aimed at the automotive and electronics markets declined toward the end of the year as consumer spending eroded. Even high-growth economies such as China cut back on industrial production.

Companies supplying the agriculture sector bucked the trend of falling demand. High prices for food commodities drove farmers to invest in their land to increase output. Strong demand for fertilizers and agricultural chemicals boosted profits for firms such as Terra Industries, whose 2008 earnings tripled compared with 2007.

Although conditions worsened as 2008 went on, broad economic data suggest that the business of chemistry was reasonably strong for the year as a whole. In the U.S., overall chemical shipments jumped by

9.6%, compared with 9.0% in 2007. Agricultural chemicals led the pack with a 29.8% increase. On the other hand, shipments of coatings and adhesives, which were hurt by the construction slowdown, declined by 8.8% compared with an increase of 8.2% in 2007. Prices rose for all chemicals, especially agricultural products, whose prices soared by 54.0%.

In Canada, chemical shipments rose 4.1% compared with 2007. Again, the strongest gain was in agriculture, with shipments up 31.7%. Canadian chemical prices jumped by 10.2%. In Europe, growth of chemical shipments slowed but stayed positive in Belgium, Germany, the Netherlands, and Spain.

Still, the earnings picture was a mess. The sharp drop in demand resulted in lousy third- and fourth-quarter earnings that wiped out previous gains for a large portion of the chemical enterprise. In the U.S., 16 of 29 companies surveyed by C&EN saw full-year earnings decline from 2007. Similarly, two of the four Canadian companies surveyed had worse results than in the previous year. Not surprisingly, Canadian fertilizer companies Agrium and PotashCorp saw huge earnings increases.

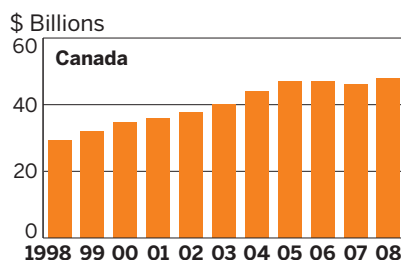
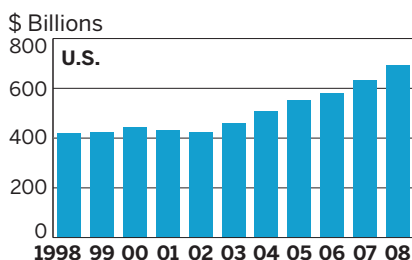
**THE PICTURE WAS WORSE** in Europe, with 2008 profits shrinking at 11 of 19 firms that C&EN surveyed. Fiscal-year reports from Japan showed a total wipeout, with all 12 firms tracked by C&EN suffering significant earnings declines and with half of the group reporting losses. Companies with large exposure to the petrochemical business, such as Mitsubishi Chemical, Mitsui Chemicals, and Sumitomo Chemical, fared exceptionally poorly.

Even the pharmaceutical industry's financial results were weak. The drug business is generally well insulated from economic cycles, because its products are a necessity for many consumers. But other factors contributed to lower 2008 earnings at three of eight firms in the U.S. and four of five in Europe. The industry continued to struggle as blockbuster drugs came off patent and generics ate into market share. Manufacturing problems and safety concerns for other drugs added to the headaches. Meanwhile, three of four U.S. biopharmaceutical firms booked solid earnings results for the year, powered by drugs like Amgen's cancer treatment Avastin and Biogen Idec's two multiple sclerosis drugs Avonex and Tysabri.

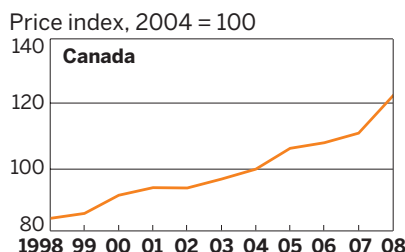
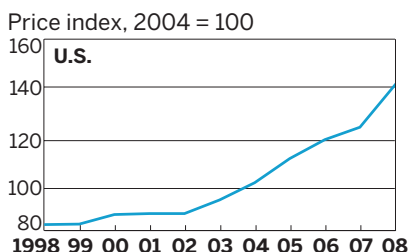
Most chemical firms felt confident that

## DEMAND AND PRICES

U.S. chemical shipments jumped by 9.6%, and Canada's increased by 4.1% ...



... while U.S. and Canadian prices surged by 14.4% and 10.2%, respectively



**SOURCES:** U.S. Departments of Labor and of Commerce, Statistics Canada

## U.S. SHIPMENTS

Drop in spending on durable goods slowed shipments of coatings and adhesives

\$ BILLIONS	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	ANNUAL CHANGE	
												2007-08	1998-08
All chemicals	\$416.6	\$419.5	\$442.2	\$427.4	\$420.5	\$459.1	\$506.1	\$549.1	\$577.0	\$629.3	\$689.9	9.6%	5.2%
Chemicals, excluding pharmaceuticals	313.2	311.7	320.4	307.7	315.1	341.4	389.2	411.2	423.0	464.2	515.6	11.1	5.1
Agricultural chemicals	24.2	21.6	20.3	20.7	19.7	18.7	20.7	24.8	27.0	32.4	42.1	29.8	5.7
Coatings & adhesives	26.8	27.5	29.7	30.0	28.4	28.5	30.5	30.4	32.9	35.6	32.5	-8.8	1.9
All other chemicals	262.1	262.5	270.3	256.9	267.0	294.2	338.0	356.0	363.1	396.2	441.1	11.3	5.3
Pharmaceuticals	103.4	107.8	121.8	119.7	105.4	114.3	116.9	137.9	154.0	165.1	174.3	5.6	5.4

SOURCE: C&EN calculations using Department of Commerce data

## CANADA SHIPMENTS

Pharmaceutical and agricultural chemical shipments were strong in 2008; other categories slipped

\$ BILLIONS	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	ANNUAL CHANGE	
												2007-08	1998-08
All manufacturing	\$413.9	\$478.9	\$526.5	\$509.7	\$525.2	\$528.7	\$547.0	\$563.1	\$569.8	\$569.7	\$567.3	-0.4%	3.2%
Chemical manufacturing	29.5	32.1	34.9	36.0	38.0	40.4	44.2	46.5	47.0	46.1	47.9	4.1	5.0
Basic chemicals	8.0	8.6	10.3	10.8	11.0	11.8	12.5	13.5	14.5	13.6	13.6	0.0	5.5
Petrochemicals	2.3	2.8	4.2	4.1	3.8	4.5	5.6	6.8	7.5	6.8	6.8	0.0	11.2
Resins & synthetic rubber	5.3	5.7	6.6	6.1	6.7	7.0	9.3	9.8	8.8	8.4	7.9	-6.7	4.1
Pesticide, fertilizer & other agricultural chemicals	2.5	2.3	2.3	2.3	2.4	3.1	3.5	3.8	3.5	3.8	5.1	31.7	7.2
Pharmaceuticals & medicine	4.5	4.8	5.2	6.4	7.1	7.4	8.3	8.7	9.6	9.5	11.1	16.8	9.4
Paints, coatings & adhesives	2.3	2.4	2.3	2.4	2.4	2.6	2.6	2.7	2.8	2.8	2.8	0.0	2.3
Soaps, cleaners & toilet preparations	2.8	3.6	3.2	2.9	2.9	3.3	2.9	2.8	3.2	3.2	2.9	-8.8	0.3

NOTE: Monetary statistics for all years were converted at the 2008 average exchange rate of \$1.00 U.S. = \$1.066 Canadian. SOURCE: Statistics Canada

## EUROPE SHIPMENTS

Growth slowed but remained positive in 2008

\$ BILLIONS	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	ANNUAL CHANGE	
												2007-08	1998-08
Belgium	\$42.7	\$43.4	\$52.0	\$62.4	\$63.0	\$65.1	\$69.7	\$70.7	\$75.4	\$79.5	\$80.4	1.1%	6.5%
Germany	172.0	178.8	198.9	197.2	195.1	200.9	209.3	223.9	237.3	255.8	258.5	1.0	4.2
Netherlands	35.5	37.2	47.7	47.3	47.6	50.0	53.6	58.2	66.9	72.2	73.6	2.0	7.6
Spain	43.8	45.6	52.7	55.2	55.8	57.9	61.3	64.9	70.5	74.5	75.5	1.4	5.6

NOTE: Monetary statistics for all years were converted at the 2008 average exchange rate of \$1.00 U.S. = 0.679 euros.

SOURCES: European Chemical Industry Council, national agencies

their strong balance sheets, built up during the years since the 2000-01 recession, would help them weather the storm. But by the end of the year, falling earnings and higher costs for credit led to reorganizations and cost-cutting programs at many firms.

On a positive note, the cutbacks did not affect 2008 spending on long-term assets or R&D, likely because much of the money was earmarked in 2007, when the economic outlook was sunnier. In the U.S., capital spending at surveyed companies shot up 18.6%, and R&D spending continued to

grow, expanding by 6.0%. Pharmaceutical company spending on R&D was up, but at a slower rate, increasing only 3.4%.

In Canada, capital spending increased at all surveyed firms. The agriculture boom spurred investment by PotashCorp, which contributed greatly to the more than 60% increase in spending for the group.

Capital spending in Europe continued to rebound from its low point in 2004. Led by Air Liquide, Linde, and Solvay, European chemical companies tracked by C&EN hiked investments by 17.6%. Chemical

R&D spending in Europe rose by 5.4%.

Japanese chemical firms were ahead of their North American and European counterparts when it came to cutting back on capital spending. After four years of growth, the companies shrank outlays by 13.4%. Chemical companies outside of Japan have pledged to sharply curtail capital spending in 2009, although they say they will not cut spending on R&D, calling it the lifeblood of their businesses. Likewise, in Japan, spending on R&D increased by a healthy 8.7% for the year.

## U.S. PRICE INDEX

Chemical prices were up sharply, especially for agricultural chemicals, which rose with higher commodity food prices

PRODUCER PRICE INDEX, 2004 = 100	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	ANNUAL CHANGE	
												2007-08	1998-08
All commodities	84.8	85.6	90.4	91.5	89.3	94.1	100.0	107.3	112.3	117.7	129.2	9.8%	4.3%
Industrial commodities	84.5	85.7	91.3	92.0	89.7	94.2	100.0	108.6	114.4	118.6	130.3	9.9	4.4
Finished goods	88.0	89.5	92.9	94.8	93.5	96.5	100.0	104.8	108.0	112.2	119.3	6.3	3.1
Chemicals & allied products	82.5	82.7	86.7	87.1	87.1	92.8	100.0	110.1	118.0	123.2	140.9	14.4	5.5
Industrial chemicals	74.5	73.1	79.3	78.9	78.2	87.0	100.0	115.8	130.4	139.1	168.6	21.2	8.5
Prepared paint	88.1	89.6	91.5	93.6	95.0	97.2	100.0	106.9	114.5	118.9	126.9	6.7	3.7
Paint materials	80.0	80.2	82.6	83.4	92.3	96.2	100.0	106.0	110.6	117.6	125.2	6.5	4.6
Drugs & pharmaceuticals	85.3	88.4	90.5	92.1	93.5	96.6	100.0	104.9	109.7	113.6	120.6	6.2	3.5
Fats & oils, inedible	76.0	57.5	45.7	50.6	58.8	80.4	100.0	95.6	96.3	123.3	187.7	52.2	9.5
Agricultural chemicals	89.3	85.9	86.5	91.0	86.1	94.0	100.0	106.4	110.1	126.0	194.0	54.0	8.1
Plastic resin & materials	76.9	77.1	86.8	82.2	80.1	89.6	100.0	118.4	121.6	120.1	131.8	9.7	5.5
Other chemicals & products	93.7	94.1	95.4	97.0	97.1	98.1	100.0	104.9	109.9	112.4	119.8	6.6	2.5

SOURCE: Department of Labor

## CANADA PRICE INDEX

Prices for most major categories jumped in 2008

PRODUCER PRICE INDEX, 2004 = 100	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	ANNUAL CHANGE	
												2007-08	1998-08
All commodities	91.7	93.3	97.3	98.3	98.3	97.0	100.0	101.6	103.9	105.7	110.1	4.2%	1.9%
Chemicals & chemical products	85.1	86.6	92.1	94.4	94.3	97.0	100.0	106.3	108.0	110.9	122.2	10.2	3.7
Inorganic industrial chemicals	91.4	89.6	90.4	95.7	96.2	97.8	100.0	108.3	116.6	142.1	148.6	4.6	5.0
Sulfuric acid	99.0	95.5	92.9	103.1	102.8	98.9	100.0	103.2	111.4	116.9	147.4	26.1	4.1
Caustic soda	110.6	99.3	100.6	130.6	111.7	109.5	100.0	112.3	109.5	106.8	135.4	26.7	2.0
Ammonia	87.9	83.5	86.0	90.9	88.9	97.2	100.0	114.7	100.9	141.0	236.7	67.9	10.4
Organic industrial chemicals	63.6	68.3	82.7	89.0	85.9	92.6	100.0	113.6	115.1	116.0	134.1	15.7	7.8
Benzene-toluene-xylene	38.6	43.5	69.4	57.6	51.6	59.0	100.0	109.1	112.2	118.2	121.5	2.8	12.2
Olefins	52.2	62.9	77.6	86.3	79.1	92.6	100.0	123.8	124.4	125.0	152.7	22.2	11.3
Synthetic resins	87.1	89.2	99.2	96.8	95.2	97.4	100.0	106.7	105.4	97.3	105.3	8.2	1.9
Polyethylene (a)	91.4	95.0	101.4	98.6	94.8	100.2	100.0	106.9	112.1	109.4	119.7	9.4	2.7
Polystyrene	86.0	85.7	90.3	89.8	89.4	92.7	100.0	104.2	104.3	105.5	106.7	1.1	2.2
Thermosets	91.3	87.1	95.7	104.9	100.6	100.6	100.0	100.0	101.6	102.4	103.7	1.3	1.3
Agricultural chemicals	100.1	99.0	98.9	98.9	98.9	99.2	100.0	100.1	100.1	100.4	100.7	0.3	0.1
Pharmaceuticals	92.2	92.9	93.4	94.0	97.8	99.2	100.0	100.8	103.0	103.7	104.9	1.2	1.3
Paints & varnishes	86.7	87.9	90.6	93.8	95.6	97.3	100.0	104.9	110.2	111.5	115.4	3.4	2.9
Soaps & cleaners	99.4	99.9	99.9	100.0	100.0	100.0	100.0	100.0	100.2	100.1	99.9	-0.2	0.0
Toilet preparations	92.7	94.7	97.0	98.4	99.7	100.7	100.0	98.9	97.4	97.0	98.6	1.7	0.6
Pigments, lakes & toners	101.9	103.6	105.4	103.6	101.8	99.8	100.0	105.2	107.1	105.0	103.9	-1.0	0.2

a Includes high- and low-density polyethylene. SOURCE: Statistics Canada

## EXPLANATION

# Column Headings In Tables Of Company Results

**Year.** Data are for the calendar year unless otherwise indicated. Data for earlier years are not restated to reflect subsequent acquisitions or divestitures.

**Net sales.** Gross sales less discounts, allowances, and returns; generally excludes excise taxes and other operating income or revenue.

**Earnings.** Net sales and other income less operating costs, nonoperating charges, depreciation, depletion, interest expense, deferred charges, minority interest in income, and taxes. Nonrecurring or extraordinary credits and charges may be included.

**Profit margin.** Earnings divided by net sales, expressed as a percentage.

**Total assets.** Sum at year's end of current assets, investments, prepaid expenses, net plant and equipment, and other tangible assets. Excludes insofar as possible intangible assets, including goodwill, value of patents, and the like.

**Stockholders' equity.** Equity at year's end of preferred and common stockholders, including value of capital stock, capital and earned surplus, and surplus reserves, as well as contingency and miscellaneous reserves for which no definite purpose is stated. Intangible

assets are deducted insofar as possible.

**Return on equity.** The amount of net income returned as a percentage of shareholders' equity.

**Capital spending, % of sales.** The percentage of sales revenues spent on long-term assets such as property, plant, and equipment.

**R&D spending, % of sales.** The percentage of sales revenues spent on research.

**Earnings per share.** Earnings less preferred dividends, divided by the number of shares of common stock outstanding.

**Dividend, \$ per share.** Cash dividends paid (or declared) on each share of common stock; excludes the value of stock dividends and adjusted for stock splits.

**Dividend yield, % of price.** Dividend per share divided by the average of the high and low prices of the common stock during the year.

**Stock price range.** High and low market prices of common stock during the year, adjusted for stock splits but not stock dividends.

**Price/earnings ratio.** Average of the high and low prices of the common stock during the year divided by earnings per share.

## U.S. COMPANY RESULTS

The economic downturn late in the year brought mixed earnings results for chemical and pharmaceutical firms

YEAR	NET SALES	EARNINGS	PROFIT MARGIN	TOTAL ASSETS	STOCK- HOLD- ERS' EQUITY	RETURN ON EQUITY	CAPITAL SPEND- ING, % OF SALES	R&D SPEND- ING, % OF SALES	EARN- INGS PER SHARE	DIVIDEND, \$ PER SHARE	DIVIDEND YIELD, % OF PRICE	STOCK PRICE RANGE, PER SHARE		PRICE/ EARNINGS RATIO
												HIGH	LOW	

(Monetary figures, except per share amounts, are in millions of dollars)

### CHEMICALS

#### AIR PRODUCTS & CHEMICALS (a)

2008	\$10,415	\$1,091	10.5%	\$11,354	\$3,813	28.6%	10.4%	1.3%	\$4.97	\$1.70	2.0%	\$106.06	\$65.05	17.2
2007	10,038	1,043	10.4	11,154	3,990	26.1	10.5	1.4	4.67	1.48	1.8	98.51	66.19	17.6
2006	8,850	795	9.0	10,079	3,822	20.8	14.3	1.7	3.38	1.34	2.2	69.54	53.00	18.1
2005	8,144	712	8.7	9,390	3,557	20.0	11.4	1.6	3.15	1.25	2.1	65.81	51.85	18.7

#### ALBEMARLE

2008	\$2,467	\$194	7.9%	\$2,427	\$620	31.3%	4.0%	2.7%	\$2.10	\$0.48	1.5%	\$45.90	\$16.16	14.8
2007	2,336	233	10.0	2,388	837	27.8	4.2	2.7	2.41	0.42	1.0	48.84	32.92	17.0
2006	2,369	201	8.5	2,127	625	32.2	4.2	2.0	1.51	0.35	1.2	37.35	19.29	18.8
2005	2,108	115	5.5	2,153	536	21.4	3.3	2.0	2.41	0.62	1.7	39.50	32.04	14.8

#### ARCH CHEMICALS

2008	\$1,492	\$37	2.5%	\$850	-\$21	def	3.6%	1.5%	\$1.49	\$0.80	2.6%	\$40.19	\$20.76	20.5
2007	1,488	49	3.3	838	118	41.8%	2.8	1.4	1.43	0.80	2.1	48.02	29.29	27.0
2006	1,435	14	1.0	793	10	146.4	1.9	1.3	0.61	0.80	2.3	31.00	37.21	55.9
2005	1,305	40	3.0	665	13	310.9	1.4	1.6	1.67	0.80	3.0	31.14	21.96	15.9

#### CABOT (a)

2008	\$3,191	\$86	2.7%	\$2,821	\$1,212	7.1%	6.2%	2.3%	\$1.34	\$0.72	2.3%	\$40.49	\$21.98	23.3
2007	2,616	127	4.9	2,598	1,156	11.0	5.4	2.6	1.87	0.72	1.7	49.87	34.48	22.6
2006	2,543	90	3.5	2,498	1,160	7.8	7.4	2.3	1.32	0.64	1.8	39.50	30.42	26.5
2005	2,125	106	5.0	2,349	1,074	9.9	8.8	2.8	1.77	0.64	1.9	39.27	27.66	18.9

a Fiscal year ends Sept. 30. def = deficit.

# FINANCES

YEAR	NET SALES	EARNINGS	PROFIT MARGIN	TOTAL ASSETS	STOCK- HOLD- ERS' EQUITY	RETURN ON EQUITY	CAPITAL SPEND- ING, % OF SALES	R&D SPEND- ING, % OF SALES	EARN- INGS PER SHARE	DIVIDEND, \$ PER SHARE	DIVIDEND YIELD, % OF PRICE	STOCK PRICE RANGE, PER SHARE		PRICE/ EARNINGS RATIO
												HIGH	LOW	
(Monetary figures, except per share amounts, are in millions of dollars)														
<b>CALGON CARBON</b>														
2008	\$400	\$36	9.0%	\$355	\$220	16.4%	8.3%	1.0%	\$0.67	ne	ne	\$23.03	\$9.11	24.0
2007	351	15	4.3	312	136	11.0	3.4	1.1	0.31	ne	ne	16.96	5.43	def
2006	316	-9	def	286	112	def	4.1	1.3	def	ne	ne	8.69	4.15	def
2005	291	-8	def	348	151	def	5.5	1.6	def	\$0.90	11.8%	10.25	4.94	def
<b>CELANESE</b>														
2008	\$6,823	\$372	5.5%	\$6,023	-\$961	def	4.0%	1.2%	\$2.44	\$0.16	0.6%	\$50.99	\$5.71	11.6
2007	6,444	336	5.2	6,767	-229	def	4.5	1.1	2.11	0.16	0.5	44.77	24.50	16.4
2006	6,656	319	4.8	6,557	-551	def	3.8	1.1	1.95	ne	ne	26.33	16.80	11.1
2005	6,070	305	5.0	6,015	-1,195	def	3.5	1.5	1.67	ne	ne	20.06	13.54	10.1
<b>CHEMTURA (a)</b>														
2008	\$3,546	-\$973	def	\$2,282	-\$307	def	3.4%	1.4%	def	\$0.15	3.1%	\$8.81	\$1.02	def
2007	3,747	-27	def	3,831	-41	def	3.1	1.7	def	0.20	2.1	12.33	6.95	def
2006	3,723	-253	def	3,849	1,128	def	3.4	1.8	def	0.20	1.9	13.53	7.75	def
2005	2,987	144	4.8%	4,365	1,154	12.4%	3.5	1.7	\$0.60	0.20	1.4	17.95	9.89	23.2
<b>CYTEC INDUSTRIES (b)</b>														
2008	\$3,640	\$284	7.8%	\$2,501	\$350	81.1%	5.4%	2.3%	\$3.46	\$0.50	1.2%	\$63.77	\$16.28	11.6
2007	3,504	207	5.9	2,957	825	25.0	3.3	2.2	4.20	0.40	0.6	71.78	53.83	15.0
2006	3,330	168	5.0	2,789	528	31.8	3.1	2.2	3.45	0.40	0.7	62.30	45.80	15.7
2005	2,926	143	4.9	2,307	-266	def	3.6	2.3	3.07	0.40	0.9	53.90	39.34	15.2
<b>DOW CHEMICAL</b>														
2008	\$57,514	\$579	1.0%	\$41,255	\$9,292	6.2%	4.0%	2.3%	\$0.62	\$1.68	5.8%	\$43.43	\$14.93	47.1
2007	53,513	2,887	5.4	44,448	15,036	19.2	3.9	2.4	2.99	1.64	3.8	47.96	38.89	14.5
2006	49,124	4,141	8.4	41,882	13,366	31.0	3.6	2.4	4.30	1.46	3.7	45.15	33.00	9.1
2005	46,307	4,546	9.8	42,351	11,741	38.7	3.4	2.3	4.62	1.34	2.8	56.75	40.18	10.5
<b>DUPONT</b>														
2008	\$30,529	\$2,007	6.6%	\$31,364	\$2,289	87.7%	6.5%	4.6%	\$2.20	\$1.64	4.4%	\$52.49	\$21.32	16.8
2007	29,378	2,988	10.2	29,201	6,206	48.1	5.4	4.6	3.25	1.52	3.2	53.90	42.25	14.8
2006	27,421	3,148	11.5	27,190	4,835	65.1	5.6	4.7	3.38	1.48	3.4	49.68	38.52	13.0
2005	26,639	2,053	7.7	28,479	4,136	49.6	5.0	5.0	2.08	1.46	3.2	54.90	37.60	22.2
<b>EASTMAN CHEMICAL</b>														
2008	\$6,726	\$328	4.9%	\$4,956	\$1,228	26.7%	9.4%	2.3%	\$4.31	\$1.76	3.4%	\$78.29	\$25.87	12.1
2007	6,830	321	4.7	5,693	1,766	18.2	7.6	2.3	3.84	1.76	2.7	72.44	57.54	16.9
2006	7,450	409	5.5	5,859	1,715	23.8	5.2	2.2	4.98	1.76	3.2	61.29	47.30	10.9
2005	7,059	557	7.9	5,461	1,300	42.8	4.9	2.3	6.81	1.76	3.3	61.80	44.10	7.8
<b>FMC CORP.</b>														
2008	\$3,115	\$330	10.6%	\$2,797	\$706	46.7%	5.6%	3.0%	\$4.35	\$0.50	0.9%	\$80.23	\$28.53	12.5
2007	2,633	157	6.0	2,553	884	17.8	4.4	3.6	2.08	0.41	0.9	59.00	35.63	22.7
2006	2,347	145	6.2	2,571	856	16.9	4.9	4.1	1.84	0.27	0.8	38.99	25.87	17.6
2005	2,150	111	5.2	2,591	811	13.7	4.3	4.4	1.42	ne	ne	31.94	21.63	18.9
<b>H.B. FULLER (c)</b>														
2008	\$392	\$19	4.8%	\$845	\$299	6.4%	5.1%	4.2%	\$0.37	\$0.26	1.3%	\$27.84	\$12.23	54.1
2007	1,400	101	7.2	1,021	455	22.2	1.5	1.2	1.68	0.26	1.0	31.53	20.66	15.5
2006	1,472	81	5.5	1,111	410	19.7	1.4	1.1	1.38	0.25	1.1	15.60	28.25	15.9
2005	1,512	57	3.8	1,010	486	11.7	1.6	1.1	0.99	0.48	3.1	18.06	12.63	15.5
<b>GEORGIA GULF (d)</b>														
2008	\$2,916	-\$258	def	\$1,405	-\$345	def	2.1%	ne	def	\$0.24	4.8%	\$9.00	\$1.01	def
2007	3,157	-255	def	1,844	-161	def	2.7	ne	def	0.32	2.3	21.54	6.36	def
2006	2,428	52	2.1%	1,993	-72	def	3.7	ne	\$1.51	0.32	1.2	34.65	18.36	17.6
2005	2,274	96	4.2	923	285	33.5%	1.4	ne	2.79	0.32	0.8	55.90	21.40	13.9
<b>a</b> Crompton and Great Lakes Chemical merged in 2005 to become Chemtura. <b>b</b> Acquired Surface Specialties in 2005. <b>c</b> Fiscal year ends Dec. 2. <b>d</b> Acquired Royal Group Technologies in October 2006. <b>def</b> = deficit. <b>ne</b> = nonexistent.														

YEAR	NET SALES	EARNINGS	PROFIT MARGIN	TOTAL ASSETS	STOCK- HOLD- ERS' EQUITY	RETURN ON EQUITY	CAPITAL SPEND- ING, % OF SALES	R&D SPEND- ING, % OF SALES	EARN- INGS PER SHARE	DIVIDEND, \$ PER SHARE	DIVIDEND YIELD, % OF PRICE	STOCK PRICE RANGE, PER SHARE		PRICE/ EARNINGS RATIO
												HIGH	LOW	
(Monetary figures, except per share amounts, are in millions of dollars)														
W.R. GRACE														
2008	\$3,317	\$122	3.7%	\$3,758	-\$544	def	4.0%	2.5%	\$1.68	ne	ne	\$27.79	\$3.01	9.2
2007	3,115	80	2.6	3,747	-472	def	4.4	2.6	1.12	ne	ne	30.65	18.86	22.1
2006	2,827	18	0.6	3,521	-666	def	4.2	2.3	0.27	ne	ne	20.35	8.12	52.7
2005	2,570	67	2.6	3,413	-699	def	3.1	2.3	1.00	ne	ne	13.79	6.75	10.3
INTERNATIONAL FLAVORS & FRAGRANCES														
2008	\$2,839	\$230	8.1%	\$2,023	-\$154	def	3.0%	7.5%	\$2.87	\$0.96	2.7%	\$47.20	\$24.90	12.6
2007	2,277	247	10.9	1,994	-116	def	2.9	8.7	2.82	0.88	1.8	54.20	46.00	17.8
2006	2,095	228	10.9	1,733	159	143.3%	2.8	8.9	2.50	0.77	1.9	49.88	32.53	16.5
2005	1,993	209	10.5	1,866	143	146.5	4.7	9.0	2.02	0.73	2.0	42.90	31.19	18.3
LUBRIZOL														
2008	\$5,028	-\$66	def	\$3,007	\$381	def	4.0%	4.4%	def	\$1.23	2.8%	\$61.38	\$26.72	def
2007	4,499	283	6.3%	3,092	399	71.0%	4.1	4.9	\$4.05	1.16	2.0	69.95	48.76	14.7
2006	4,041	182	4.5	2,987	309	58.9	3.2	5.1	3.09	1.04	2.3	50.75	38.02	14.4
2005	4,043	204	5.0	2,823	24	855.0	3.4	5.1	2.89	1.04	2.6	44.51	35.25	13.8
MONSANTO (a)														
2008	\$11,365	\$2,007	17.7%	\$13,328	\$4,711	42.6%	8.1%	8.6%	\$3.59	\$0.83	0.8%	\$141.50	\$66.26	28.9
2007	8,563	922	10.8	8,943	3,463	26.6	5.9	9.1	1.66	0.55	1.0	70.88	42.75	34.2
2006	7,344	698	9.5	8,977	3,774	18.5	5.0	9.9	1.27	0.40	1.1	47.58	27.80	29.7
2005	6,924	157	2.3	7,990	3,212	4.9	3.0	8.5	0.29	0.34	1.3	34.62	17.08	89.1
NALCO HOLDING														
2008	\$4,212	-\$343	def	\$2,266	-\$2,383	def	3.2%	1.8%	def	\$0.14	0.8%	\$26.28	\$7.80	def
2007	3,913	129	3.3%	2,398	-2,104	def	2.9	1.7	\$0.88	0.14	0.5	30.98	19.94	28.9
2006	3,603	99	2.7	2,187	-2,579	def	2.6	1.7	0.67	ne	ne	21.51	15.83	27.9
2005	3,312	48	1.4	2,128	-2,719	def	2.3	1.8	0.33	ne	ne	22.03	14.25	55.0
NEWMARKET CORP. (b)														
2008	\$1,617	\$73	4.5%	\$757	\$237	30.8%	2.0%	5.1%	\$4.75	\$0.80	1.4%	\$93.57	\$23.37	12.3
2007	1,375	79	5.7	725	271	29.0	2.3	5.6	4.63	0.58	1.2	60.36	38.81	10.7
2006	1,263	54	4.3	693	250	21.5	2.1	5.6	3.08	0.50	1.1	70.00	23.55	15.2
2005	1,076	35	3.3	652	216	16.2	1.7	6.1	2.02	ne	ne	25.26	12.95	9.5
POLYONE (c)														
2008	\$2,739	-\$273	def	\$1,045	-\$57	def	1.6%	1.0%	def	ne	ne	\$6.39	\$2.33	def
2007	2,643	11	0.4%	1,288	354	3.2%	1.6	0.8	\$0.12	ne	ne	9.29	5.93	63.4
2006	2,662	126	4.7	1,477	278	45.3	1.5	0.8	1.36	ne	ne	9.89	6.31	6.0
2005	2,451	63	2.6	1,390	90	69.7	1.3	0.7	0.68	ne	ne	10.25	5.31	11.4
PPG INDUSTRIES (d)														
2008	\$15,849	\$538	3.4%	\$10,585	-\$780	def	2.4%	2.8%	\$3.25	\$2.09	3.9%	\$71.00	\$35.94	16.5
2007	11,206	815	7.3	10,541	2,063	39.5%	3.2	3.2	4.91	2.04	2.8	82.42	64.01	14.9
2006	11,037	711	6.4	8,039	1,252	56.8	3.4	2.9	4.27	1.91	3.0	69.80	56.53	14.8
2005	10,201	776	7.6	7,027	1,399	55.5	2.8	3.0	4.54	1.86	2.9	74.73	55.64	14.4
PRAXAIR														
2008	\$10,796	\$1,211	11.2%	\$11,024	\$1,979	61.2%	14.9%	0.9%	\$3.80	\$1.50	2.0%	\$99.73	\$47.40	19.4
2007	9,402	1,177	12.5	11,281	3,041	38.7	14.6	1.0	3.62	1.20	1.6	91.99	58.32	20.8
2006	8,324	696	8.4	9,418	2,870	24.3	13.2	1.0	3.00	1.00	1.7	63.70	50.65	19.1
2005	7,656	824	10.8	8,865	2,276	36.2	11.5	1.0	2.22	0.72	1.5	54.31	41.06	21.5
QUAKER CHEMICAL														
2008	\$582	\$11	1.9%	\$338	\$79	13.9%	2.1%	2.9%	\$1.05	\$0.92	4.2%	\$33.82	\$10.19	21.0
2007	546	15	2.7	347	79	19.0	1.6	2.7	1.55	0.86	3.9	25.00	19.25	14.3
2006	460	12	2.5	311	65	18.0	2.7	2.8	1.19	0.86	4.5	21.94	16.70	16.2
2005	424	2	0.4	288	62	2.7	1.6	3.3	0.17	0.86	4.2	25.07	15.80	120.2

**a** Fiscal year ends Dec. 2. **b** Formerly Ethyl Corp. **c** Acquired GLS, a provider of specialty thermoplastic polyester elastomers, in 2008 for \$148.9 million. **d** Acquired coatings firm SigmaKalon Group in 2008. **def** = deficit. **ne** = nonexistent.



# FINANCES

YEAR	NET SALES	EARNINGS	PROFIT MARGIN	TOTAL ASSETS	STOCK- HOLD- ERS' EQUITY	RETURN ON EQUITY	CAPITAL SPEND- ING, % OF SALES	R&D SPEND- ING, % OF SALES	EARN- INGS PER SHARE	DIVIDEND, \$ PER SHARE	DIVIDEND YIELD, % OF PRICE	STOCK PRICE RANGE, PER SHARE		PRICE/ EARNINGS RATIO
(Monetary figures, except per share amounts, are in millions of dollars)														
ROHM AND HAAS														
2008	\$9,575	\$480	5.0%	\$6,825	-\$108	def	5.4%	3.4%	\$2.44	\$1.60	2.7%	\$75.68	\$44.83	24.7
2007	8,897	660	7.4	7,048	0	def	4.7	3.3	3.12	1.44	2.6	62.68	47.05	17.6
2006	8,230	755	9.2	6,525	1,003	75.3%	4.9	3.5	3.41	1.28	2.6	53.86	42.77	14.2
2005	7,994	638	8.0	6,508	698	91.4	4.2	3.4	2.86	1.12	2.5	50.00	39.47	15.6
SIGMA-ALDRICH														
2008	\$2,201	\$342	15.5%	\$2,048	\$870	39.3%	4.1%	3.0%	\$2.65	\$0.52	1.1%	\$63.04	\$34.33	18.4
2007	2,039	311	15.3	2,072	1,059	29.4	3.9	2.9	2.34	0.46	1.0	55.87	37.70	20.0
2006	1,798	277	15.4	1,847	924	30.0	4.1	2.9	2.05	0.42	1.2	39.68	31.27	17.3
2005	1,667	258	15.5	1,665	767	33.7	5.5	3.0	3.76	0.76	1.2	67.10	55.34	16.3
SOLUTIA														
2008	\$2,110	\$786	37.3%	\$2,400	-\$823	def	4.0%	0.6%	\$4.97	ne	ne	\$17.29	\$3.64	2.1
2007	3,535	-203	def	2,433	-1,801	def	4.2	1.3	def	ne	ne	0.79	0.18	def
2006	2,905	-47	def	1,935	-1,537	def	3.6	1.5	def	ne	ne	0.75	0.28	def
2005	2,825	11	0.4	1,873	-1,565	def	2.9	1.6	0.11	ne	ne	1.69	0.33	9.2
STEPAN														
2008	\$1,600	\$37	2.3%	\$601	\$197	18.8%	3.1%	2.1%	\$3.52	\$0.85	1.9%	\$60.82	\$27.75	12.6
2007	1,330	15	1.1	562	185	8.1	3.0	2.3	1.50	0.83	2.8	34.90	25.40	20.1
2006	1,173	7	0.6	531	166	4.0	3.9	2.5	0.63	0.81	2.8	33.00	25.05	46.1
2005	1,078	14	1.3	500	151	9.0	3.8	2.7	1.39	0.79	3.3	27.48	20.80	17.4
TERRA INDUSTRIES														
2008	\$2,891	\$633	21.9%	\$2,113	\$1,059	59.8%	3.1%	ne	\$6.12	\$0.30	0.9%	\$57.64	\$11.21	5.6
2007	2,348	202	8.6	1,884	616	32.8	1.4	ne	1.90	ne	ne	51.15	11.08	16.4
2006	1,837	-1	def	1,567	477	def	2.8	ne	def	ne	ne	12.40	5.45	def
2005	1,931	17	0.9	1,516	485	3.5	1.6	ne	0.18	ne	ne	9.27	4.87	39.3
PHARMACEUTICALS														
ABBOTT LABORATORIES														
2008	\$29,528	\$4,734	16.0%	\$27,281	\$2,341	202.2%	4.4%	9.1%	\$3.12	\$1.40	2.5%	\$60.50	\$49.45	17.6
2007	25,914	3,606	13.9	23,864	17,779	20.3	6.4	9.7	2.34	1.30	2.4	59.50	48.75	23.1
2006	22,476	1,717	7.6	26,217	14,054	12.2	6.0	10.0	1.12	1.18	2.7	49.87	39.18	39.8
2005	22,338	3,372	15.1	19,190	14,415	23.4	5.4	8.2	2.17	1.10	2.5	50.00	37.50	20.2
BRISTOL-MYERS SQUIBB														
2008	\$20,597	\$3,155	15.3%	\$23,574	\$6,263	50.4%	4.6%	17.4%	\$1.59	\$1.24	5.6%	\$27.08	\$17.54	14.0
2007	19,348	1,968	10.2	19,844	10,562	18.6	4.4	16.7	0.99	1.12	3.9	32.35	25.73	29.3
2006	17,914	1,585	8.8	18,898	9,991	15.9	4.4	16.5	0.81	1.12	4.8	26.32	20.24	28.7
2005	19,207	2,992	15.6	21,394	11,208	26.7	3.8	14.3	1.52	1.12	4.7	26.48	21.03	15.6
ELI LILLY & CO.														
2008	\$20,378	-\$2,072	def	\$25,158	\$2,681	def	4.6%	18.8%	def	\$1.88	4.3%	\$57.18	\$29.91	def
2007	18,634	2,953	15.8%	24,333	13,664	21.6%	5.8	18.7	\$2.71	1.70	3.1	60.56	49.09	20.2
2006	15,691	2,663	17.0	21,955	10,981	24.3	6.9	19.9	2.45	1.60	2.9	58.86	50.41	22.3
2005	14,645	3,122	21.3	24,581	10,896	28.7	8.9	20.7	2.87	1.52	2.8	60.44	49.76	19.2
JOHNSON & JOHNSON														
2008	\$63,747	\$12,949	20.3%	\$57,217	\$14,816	87.4%	4.8%	11.9%	\$4.57	\$1.80	2.9%	\$72.76	\$52.06	13.7
2007	61,095	10,576	17.3	52,191	14,556	72.7	4.8	12.6	3.65	1.62	2.6	65.45	59.72	17.1
2006	53,324	11,053	20.7	41,868	39,318	28.1	5.0	13.4	3.73	1.46	2.3	69.41	56.70	16.9
2005	50,414	10,411	20.7	45,850	37,871	27.5	5.2	12.8	3.46	1.28	2.0	69.99	59.76	18.8
def = deficit. ne = nonexistent.														

YEAR	NET SALES	EARNINGS	PROFIT MARGIN	TOTAL ASSETS	STOCK- HOLD- ERS' EQUITY	RETURN ON EQUITY	CAPITAL SPEND- ING, % OF SALES	R&D SPEND- ING, % OF SALES	EARN- INGS PER SHARE	DIVIDEND, \$ PER SHARE	DIVIDEND YIELD, % OF PRICE	STOCK PRICE RANGE, PER SHARE		PRICE/ EARNINGS RATIO
(Monetary figures, except per share amounts, are in millions of dollars)														
MERCK & CO.														
2008	\$24,850	\$7,808	31.4%	\$45,232	\$16,794	46.5%	5.2%	19.3%	\$3.64	\$1.52	3.6%	\$61.18	\$22.82	11.5
2007	24,197	3,275	13.5	46,183	18,185	18.0	4.2	20.2	1.51	1.52	2.9	61.62	42.35	34.4
2006	22,636	4,334	19.1	42,194	17,560	24.7	4.3	21.1	1.03	1.52	3.9	46.37	31.81	38.0
2005	22,012	4,631	21.0	43,242	17,917	25.8	6.4	17.5	2.10	1.52	5.0	35.20	25.50	14.5
PFIZER														
2008	\$48,296	\$8,026	16.6%	\$71,963	\$18,371	43.7%	3.5%	16.5%	\$1.19	\$1.28	6.6%	\$24.08	\$14.45	16.2
2007	48,418	8,213	17.0	73,388	65,010	12.6	3.9	16.7	1.19	0.96	3.8	28.60	22.16	21.3
2006	48,371	11,024	22.8	69,611	71,358	15.4	4.2	15.7	1.52	0.96	3.8	28.60	22.16	16.7
2005	51,298	8,094	15.8	66,005	65,627	12.3	4.1	14.1	1.10	0.76	3.1	29.21	20.27	22.5
SCHERING-PLOUGH														
2008	\$18,502	\$1,903	10.3%	\$19,185	\$1,597	119.2%	4.0%	19.1%	\$1.07	\$0.26	1.3%	\$27.73	\$12.76	18.9
2007	12,690	-1,473	def	19,215	10,385	def	4.9	23.1	def	0.25	0.9	33.34	22.75	def
2006	10,594	1,121	10.6	15,579	7,908	14.2	4.3	20.7	0.71	0.22	1.1	23.90	18.00	29.5
2005	9,508	269	2.8	14,900	7,387	3.6	5.0	19.6	0.12	0.22	1.1	22.45	17.68	167.2
WYETH														
2008	\$44,834	\$4,418	10.0%	\$49,725	\$14,490	30.5%	3.3%	7.5%	\$3.29	\$1.06	2.7%	\$49.50	\$28.06	11.8
2007	22,400	4,616	20.6	38,198	18,211	25.3	6.2	14.5	3.38	1.06	2.0	62.20	43.65	15.7
2006	20,351	4,197	20.6	32,197	14,653	28.6	6.3	15.3	3.08	1.01	2.1	54.13	41.91	15.6
2005	18,756	3,656	19.5	31,725	11,994	30.5	5.8	14.7	2.70	0.94	2.2	47.88	38.48	16.0
BIOPHARMACEUTICALS														
AMGEN														
2008	\$14,687	\$4,196	28.6%	\$22,116	\$6,059	69.3%	4.6%	20.6%	\$2.82	ne	ne	\$75.85	\$46.44	21.7
2007	15,858	2,950	18.6	3,366	5,921	49.8	8.0	20.6	2.48	ne	ne	80.36	63.92	29.1
2006	12,022	3,674	30.6	2,314	5,038	72.9	10.1	28.0	2.93	ne	ne	86.17	57.20	24.5
2005	9,977	2,363	23.7	2,028	4,712	50.1	8.7	23.2	1.10	ne	ne	64.76	52.70	53.4
BIOGEN IDEC														
2008	\$2,840	\$783	27.6%	\$5,180	\$2,506	31.2%	9.7%	37.7%	\$2.65	ne	ne	\$73.59	\$55.68	24.4
2007	2,137	638	29.9	4,999	5,534	12.8	13.3	43.3	2.82	ne	ne	84.75	42.86	22.6
2006	1,781	214	12.0	4,652	7,150	4.6	11.1	40.3	0.63	ne	ne	52.72	40.24	73.8
2005	1,617	161	10.0	4,261	6,906	3.8	19.7	46.3	0.47	ne	ne	70.00	33.18	109.8
GENENTECH														
2008	\$10,531	\$3,427	32.5%	\$19,189	\$13,073	17.9%	7.1%	26.6%	\$3.21	ne	ne	\$99.14	\$65.60	25.7
2007	9,443	2,769	29.3	16,195	11,905	17.1	10.3	25.9	2.59	ne	ne	89.73	65.35	29.9
2006	7,640	2,113	27.7	13,051	14,842	16.2	15.9	23.2	1.97	ne	ne	95.16	75.58	43.3
2005	5,488	1,279	23.3	10,258	7,470	12.5	25.5	23.0	1.18	ne	ne	100.20	43.90	61.1
GENZYME														
2008	\$4,197	\$421	10.0%	\$5,615	\$4,250	7.5%	14.2%	31.2%	\$1.50	ne	ne	\$83.97	\$52.16	45.4
2007	3,458	480	13.9	5,343	6,613	9.0	11.9	21.3	1.82	ne	ne	76.90	58.71	37.3
2006	2,887	-17	def	4,400	5,611	def	11.6	22.5	def	ne	ne	75.34	54.64	def
2005	2,453	442	18.0	3,800	5,150	11.6	7.8	20.5	1.73	ne	ne	77.53	55.90	38.6
def = deficit. ne = nonexistent.														



## CANADA COMPANY RESULTS

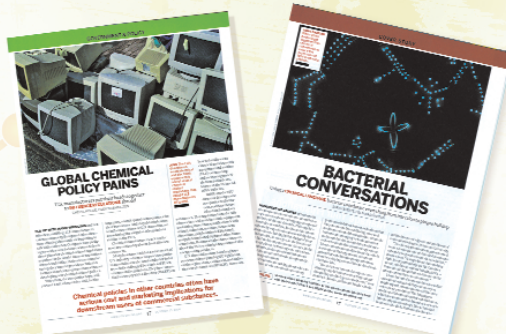
### Earnings at the fertilizer firms skyrocketed in 2008

				STOCK- HOLDERS'			CAPITAL SPEND- ING, % OF	R&D SPEND- ING, % OF	EARNINGS	DIVIDEND,	DIVIDEND	STOCK PRICE RANGE,		PRICE/ EARNINGS
YEAR	NET SALES	EARNINGS	PROFIT MARGIN	TOTAL ASSETS	EQUITY	ON EQUITY	SALES	SALES	PER SHARE	\$ PER SHARE	YIELD, % OF PRICE	HIGH	LOW	RATIO
(Monetary figures, except per share amounts, are in millions of dollars)														
AGRIUM														
2008	\$10,268	\$1,322	12.9%	\$7,382	\$1,674	79.0%	4.9%	na	\$8.34	\$0.11	0.2%	C\$ 116.15	C\$ 28.70	8.1
2007	5,491	441	8.0	5,588	2,841	15.5	8.3	na	3.25	0.11	0.2	71.67	25.38	14.0
2006	4,373	33	0.8	3,016	984	3.4	4.8	na	0.25	0.11	0.4	36.88	22.32	111.1
2005	3,491	283	8.1	2,777	1,172	24.1	5.0	na	2.12	0.11	0.5	32.66	17.75	11.2
METHANEX														
2008	\$2,314	\$172	7.4%	\$2,791	\$1,255	13.7%	22.8%	na	\$1.82	\$0.61	2.9%	C\$ 33.85	C\$ 10.78	11.5
2007	2,267	376	16.6	2,835	1,301	28.9	12.3	na	3.68	0.55	2.1	33.94	20.95	7.0
2006	2,108	457	21.7	2,401	1,167	39.2	3.0	na	4.18	0.49	2.0	32.79	20.37	6.0
2005	1,658	224	13.5	2,056	900	24.9	7.1	na	1.89	0.41	2.1	24.58	16.46	10.2
NOVA CHEMICALS														
2008	\$7,366	\$46	0.6%	\$4,034	\$914	5.0%	2.3%	0.7%	\$0.55	\$0.38	2.2%	C\$ 32.18	C\$ 5.05	31.7
2007	6,732	324	4.8	4,856	1,101	29.4	2.3	0.7	3.88	0.38	1.1	43.70	30.13	8.9
2006	6,519	125	1.9	4,077	546	22.9	3.0	0.8	1.52	0.38	1.1	41.25	29.50	21.8
2005	5,616	26	0.5	5,217	1,215	2.1	7.5	0.9	0.31	0.38	0.8	64.25	36.65	152.7
POTASHCORP (a)														
2008	\$9,447	\$3,495	37.0%	\$10,130	\$4,470	78.2%	12.7%	na	\$11.01	\$0.40	0.3%	C\$ 246.29	C\$ 61.81	13.1
2007	5,234	1,104	21.1	9,595	5,897	18.7	11.6	na	3.40	0.35	0.4	148.89	51.92	27.7
2006	3,767	632	16.8	6,091	2,654	23.8	13.5	na	1.98	0.20	0.5	56.96	28.93	20.3
2005	3,847	543	14.1	5,226	2,001	27.1	10.0	na	1.63	0.20	0.6	46.00	28.25	21.4

**NOTE:** Stock price ratios were calculated at the 2008 average exchange rate of \$1.00 U.S. = \$1.066 Canadian (C\$). **a** Stock split three-for-one in 2007. **na** = not available.

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**C&EN**  
CHEMICAL & ENGINEERING NEWS

## EUROPE COMPANY RESULTS

Earnings, for the most part, decreased, reflecting the poor economy

YEAR	NET SALES	EARNINGS	PROFIT MARGIN	TOTAL ASSETS	STOCK- HOLDERS' EQUITY	RETURN ON EQUITY	CAPITAL SPEND- ING, % OF SALES	R&D SPEND- ING, % OF SALES	EARNINGS PER SHARE	DIVIDEND, \$ PER SHARE	DIVIDEND YIELD, % OF PRICE	STOCK PRICE RANGE, PER SHARE		PRICE/ EARN- INGS RATIO
												HIGH	LOW	

(Monetary figures, except per share amounts, are in millions of dollars)

### CHEMICALS

#### BELGIUM

##### Solvay

2008	\$13,976	\$596	4.3%	\$18,062	\$6,988	8.5%	13.9%	5.9%	\$13.84	\$3.24	2.9%	€ 97.90	€ 51.45	7.9
2007	14,090	1,150	8.2	16,458	6,564	17.5	8.1	5.8	13.93	3.24	2.0	123.20	92.00	11.4
2006	13,836	1,165	8.4	16,342	6,562	17.8	6.2	6.0	14.02	4.12	2.8	116.20	83.10	10.5
2005	12,603	1,162	9.2	16,546	5,771	20.1	5.9	5.5	13.93	2.15	1.6	104.10	79.95	9.7

#### FINLAND

##### Kemira

2008	\$4,172	-\$3	def	\$4,212	\$1,437	def	5.3%	2.5%	def	\$0.37	2.5%	€ 14.77	€ 5.42	def
2007	4,137	94	2.3%	4,310	1,601	5.9%	8.7	2.3	\$0.78	0.74	3.1	19.20	13.11	30.5
2006	3,714	172	4.6	4,077	1,605	10.7	6.5	2.0	1.41	0.71	3.4	17.17	11.07	14.7
2005	2,935	130	4.4	3,431	1,500	8.7	5.7	2.2	1.08	0.38	2.2	14.02	9.86	16.4

#### FRANCE

##### Air Liquide (a)

2008	\$19,298	\$1,797	9.3%	\$21,951	\$10,318	17.4%	14.6%	1.2%	\$6.88	\$3.31	3.0%	€ 95.65	€ 55.78	16.2
2007	17,519	1,653	9.4	19,813	9,533	17.3	11.4	1.1	6.22	3.00	2.4	93.14	75.08	19.9
2006	16,117	1,475	9.2	23,987	9,667	15.3	10.3	1.1	12.19	5.88	5.4	83.00	63.76	8.9
2005	15,361	1,373	8.9	23,888	9,140	15.0	9.3	1.0	11.52	4.14	4.6	68.93	53.55	7.8

##### Arkema (b)

2008	\$8,296	\$147	1.8%	\$6,588	\$2,972	5.0%	5.9%	2.7%	\$2.43	\$0.88	2.1%	€ 45.75	€ 10.93	17.2
2007	8,354	179	2.1	6,530	2,848	6.3	5.7	2.8	2.96	1.10	1.7	50.88	36.35	21.7
2006	8,635	67	0.8	6,684	2,853	2.3	5.7	2.9	1.10	ne	ne	41.48	24.94	44.3
2005	8,406	-574	def	6,881	2,154	def	5.8	3.1	def	ne	ne	ne	ne	ne

##### Rhodia (c)

2008	\$7,015	\$155	2.2%	\$6,368	-\$552	def	5.1%	1.5%	\$1.53	\$0.37	1.6%	€ 27.35	€ 3.93	15.0
2007	7,041	190	2.7	6,592	-572	def	5.3	1.9	1.87	0.37	10.1	2.99	1.96	1.9
2006	7,132	91	1.3	7,161	961	9.5%	5.4	2.1	0.07	ne	ne	2.71	1.35	40.6
2005	7,485	-905	def	8,311	-980	def	5.0	2.0	def	ne	ne	1.94	1.18	def

#### GERMANY

##### Altana (d)

2008	\$1,976	\$152	7.7%	\$2,577	\$1,735	8.7%	8.0%	5.4%	\$1.12	\$0.15	0.8%	€ 16.90	€ 7.53	16.1
2007	2,031	189	9.3	2,536	1,674	11.3	6.6	4.9	1.40	0.75	1.4	55.89	14.57	37.1
2006	1,905	84	4.4	9,333	8,474	1.0	5.8	5.2	0.60	1.91	2.8	51.65	42.46	114.8

##### BASF (e)

2008	\$91,758	\$4,289	4.7%	\$74,904	\$27,573	15.6%	4.0%	2.2%	\$4.61	\$2.87	5.4%	€ 52.41	€ 19.95	11.6
2007	85,308	5,984	7.0	68,895	29,585	20.2	4.4	2.4	6.13	2.87	4.5	50.81	35.98	10.4
2006	77,446	5,105	6.6	66,671	27,348	18.7	4.6	2.4	4.70	2.21	4.5	37.12	29.49	10.4
2005	62,937	4,665	7.4	52,508	25,795	18.1	4.6	2.5	4.23	1.47	3.5	32.67	25.06	10.1

##### Bayer

2008	\$48,480	\$2,532	5.2%	\$77,336	\$24,065	10.5%	5.3%	8.1%	\$3.27	\$2.06	2.7%	€ 65.68	€ 36.83	23.1
2007	47,673	6,935	14.5	75,631	24,761	28.0	5.7	8.0	8.60	1.99	2.6	62.53	40.20	8.8
2006	42,626	2,478	5.8	82,275	18,917	13.1	6.0	7.9	3.27	1.47	2.8	40.92	30.56	16.1
2005	40,310	2,351	5.8	54,058	16,423	14.3	5.1	6.3	3.23	1.02	2.4	35.92	22.11	13.2

**NOTE:** Monetary statistics, except stock prices, for all years were converted at the 2008 average exchange rate of \$1.00 U.S. = 0.679 euros, 1.0816 Swiss francs, and 0.539 pounds sterling. **a** Stock split two-for-one in June 2007. **b** Spun off from Total in 2006; prior figures are pro forma. **c** One-for-12 reverse stock split in June 2007. **d** Divested pharmaceuticals in 2006. **e** Stock split two-for-one in 2008. **def** = deficit. **ne** = nonexistent.

# FINANCES

YEAR	NET SALES	EARNINGS	PROFIT MARGIN	TOTAL ASSETS	STOCK- HOLDERS' EQUITY	RETURN ON EQUITY	CAPITAL SPEND- ING, % OF SALES	R&D SPEND- ING, % OF SALES	EARNINGS PER SHARE	DIVIDEND, \$ PER SHARE	DIVIDEND YIELD, % OF PRICE	STOCK PRICE RANGE, PER SHARE		PRICE/ EARN- INGS RATIO
												HIGH	LOW	
(Monetary figures, except per share amounts, are in millions of dollars)														
Lanxess														
2008	\$9,685	\$252	2.6%	\$6,850	\$2,072	12.2%	5.4%	1.5%	\$3.02	\$0.74	2.2%	€ 34.37	€ 10.28	10.9
2007	9,727	165	1.7	5,961	2,245	7.4	4.3	1.3	1.94	1.47	2.8	43.75	26.72	26.7
2006	10,222	290	2.8	6,190	2,102	13.8	3.8	1.3	3.43	0.37	0.7	43.55	24.46	14.6
2005	10,525	-92	def	6,390	1,849	def	3.5	1.4	def	ne	ne	27.65	13.63	def
Linde (a)														
2008	\$18,649	\$1,056	5.7%	\$35,087	\$12,149	8.7%	11.6%	0.8%	\$6.24	\$2.65	2.5%	€ 97.90	€ 46.51	17.0
2007	18,115	1,401	7.7	36,736	13,558	10.3	8.4	0.8	8.39	2.50	2.0	91.75	75.26	14.7
2006	18,311	2,706	14.8	41,212	12,107	22.3	7.8	1.6	18.39	2.21	2.2	79.56	56.32	5.4
2005	14,001	757	5.4	18,575	6,585	11.5	9.1	1.8	5.98	2.06	2.6	63.36	45.55	13.4
Merck KGaA														
2008	\$11,131	\$541	4.9%	\$23,041	\$14,084	3.8%	5.2%	16.3%	\$2.49	\$2.21	2.0%	€ 93.79	€ 57.67	44.8
2007	10,389	5,152	49.6	21,967	12,789	40.3	4.0	14.6	23.87	1.77	1.3	106.55	79.96	5.8
2006	9,213	1,447	15.7	11,927	5,604	25.8	4.0	12.0	7.47	1.33	1.2	89.10	63.96	15.1
2005	8,641	971	11.2	10,718	4,900	19.8	4.6	12.2	5.01	1.25	1.4	74.90	48.45	18.1
Wacker (b)														
2008	\$6,330	\$647	10.2%	\$6,812	\$3,067	21.1%	17.4%	3.8%	\$13.02	\$2.65	1.4%	€ 197.70	€ 62.23	14.7
2007	5,566	622	11.2	5,768	2,746	22.6	14.9	4.0	12.50	3.31	1.5	197.70	98.05	17.4
2006	4,912	458	9.3	4,796	2,334	19.6	14.5	4.6	9.51	2.95	2.0	127.35	74.31	15.6
2005	4,056	212	5.2	4,303	1,375	15.4	11.0	5.3	4.27	ne	ne	ne	ne	ne
NETHERLANDS														
AkzoNobel (c)														
2008	\$22,703	-\$1,504	def	\$27,591	\$11,654	def	3.5%	2.3%	\$6.45	\$2.65	4.5%	€ 57.11	€ 22.85	9.1
2007	15,041	854	5.7%	28,327	16,383	5.2%	3.5	2.8	2.16	2.65	3.3	65.56	44.41	37.4
2006	20,222	1,697	8.4	18,821	6,275	27.0	3.9	6.4	5.89	1.77	2.7	49.41	38.30	11.0
2005	19,137	1,415	7.4	18,290	5,264	26.9	3.9	6.2	4.93	1.77	3.4	40.18	30.82	10.6
DSM (d)														
2008	\$13,901	\$850	6.1%	\$14,216	\$6,915	12.3%	6.2%	4.2%	\$5.05	\$1.77	4.2%	€ 41.27	€ 15.76	8.3
2007	13,133	631	4.8	14,467	7,925	8.0	5.3	4.2	3.43	1.77	3.4	39.87	31.63	15.3
2006	12,294	811	6.6	14,888	8,196	9.9	6.0	3.9	4.15	1.47	2.9	39.70	28.58	12.1
2005	12,063	776	6.4	14,757	8,058	9.6	4.9	3.5	3.92	1.47	3.4	35.22	23.07	11.0
SWITZERLAND														
Ciba														
2008	\$5,470	\$521	9.5%	\$6,388	\$1,523	34.2%	4.2%	3.9%	\$7.78	ne	ne	CHF 60.40	CHF 24.00	5.0
2007	6,024	219	3.6	8,116	3,052	7.2	4.1	4.0	3.26	\$2.30	3.8%	85.80	45.30	18.6
2006	5,866	-38	def	8,386	2,969	def	3.7	4.3	def	2.77	4.0	84.95	63.30	def
2005	6,852	-236	def	9,800	3,605	def	3.7	3.7	def	2.77	3.8	85.00	72.51	def
Clariant														
2008	\$7,459	-\$42	def	\$5,495	\$1,836	def	3.3%	2.3%	def	ne	ne	CHF 12.95	CHF 6.10	def
2007	7,880	4	0.1%	6,727	2,191	0.2%	3.6	2.5	def	\$0.23	1.6%	22.30	9.44	33.1
2006	7,481	-72	def	6,638	2,247	def	4.4	2.6	def	0.23	1.4	20.54	14.10	def
2005	7,555	177	2.3	6,764	2,392	7.4	4.3	2.4	\$0.75	0.23	1.3	21.30	16.70	23.5
Givaudan														
2008	\$3,777	\$103	2.7%	\$6,467	\$1,934	5.3%	4.7%	8.4%	\$14.33	\$9.24	1.1%	CHF 107.00	CHF 710.00	57.5
2007	3,816	88	2.3	7,294	2,478	3.5	4.7	9.0	12.07	18.00	1.7	1,264.00	996.00	86.5
2006	2,686	381	14.2	4,341	2,582	14.8	5.8	8.5	53.81	17.37	1.8	1,160.00	888.50	17.6
2005	2,575	376	14.6	4,171	2,251	16.7	5.8	7.9	51.91	16.26	2.2	890.50	729.50	14.4

**NOTE:** Monetary statistics, except stock prices, for all years were converted at the 2008 average exchange rate of \$1.00 U.S. = 0.679 euros, 1.0816 Swiss francs, and 0.539 pounds sterling. **a** Acquired BOC in September 2006. **b** Became a publicly traded company in 2005. **c** Divested pharmaceuticals in 2007; acquired ICI in 2008. **d** Stock split two-for-one in September 2005. **def** = deficit. **ne** = nonexistent.

YEAR	NET SALES	EARNINGS	PROFIT MARGIN	TOTAL ASSETS	STOCK- HOLDERS' EQUITY	RETURN ON EQUITY	CAPITAL SPEND- ING, % OF SALES	R&D SPEND- ING, % OF SALES	EARNINGS PER SHARE	DIVIDEND, \$ PER SHARE	DIVIDEND YIELD, % OF PRICE	STOCK PRICE RANGE, PER SHARE		PRICE/ EARN- INGS RATIO
												HIGH	LOW	

(Monetary figures, except per share amounts, are in millions of dollars)

<b>Lonza</b>														
2008	\$2,714	\$388	14.3%	\$5,200	\$1,787	21.7%	21.2%	3.7%	\$7.53	\$1.62	1.4%	CHF 158.30	CHF 83.95	14.9
2007	2,651	278	10.5	4,572	1,670	16.7	20.8	3.1	5.43	1.62	1.4	138.00	103.50	20.5
2006	2,692	205	7.6	3,613	1,484	13.8	12.7	2.6	3.97	1.39	1.6	108.74	78.30	21.7
2005	2,328	174	7.5	3,999	1,376	12.6	10.8	2.5	3.58	1.19	1.8	80.65	63.35	18.6

<b>Syngenta</b>														
2008	\$11,624	\$1,385	11.9%	\$14,584	\$5,901	23.5%	3.8%	8.3%	\$14.63	\$6.00	2.6%	CHF 349.25	CHF 158.00	16.0
2007	9,240	1,109	12.0	13,280	6,041	18.4	3.4	9.0	11.42	4.80	2.1	295.70	207.80	20.4
2006	8,046	634	7.9	11,852	5,694	11.1	2.7	9.9	6.46	3.80	2.2	234.40	146.90	27.3
2005	8,104	622	7.7	11,404	5,431	11.5	2.1	10.1	6.22	3.30	2.6	163.50	115.40	20.7

## PHARMACEUTICALS

<b>FRANCE</b>														
<b>Sanofi-Aventis</b>														
2008	\$40,601	\$5,672	14.0%	\$106,019	\$66,378	8.5%	5.8%	16.6%	\$4.33	\$3.24	4.3%	€ 66.90	€ 36.06	17.5
2007	41,294	7,747	18.8	105,862	65,829	11.8	5.7	16.2	5.73	3.05	3.2	71.95	56.20	16.5
2006	41,767	5,897	14.1	114,472	67,450	8.7	5.1	15.6	4.34	2.58	2.4	79.25	64.85	24.4
2005	40,203	3,817	9.5	127,566	68,931	5.5	4.2	14.8	2.47	2.24	2.3	76.70	56.40	39.6

<b>SWITZERLAND</b>														
<b>Novartis</b>														
2008	\$41,459	\$8,233	19.9%	\$78,299	\$50,437	16.3%	5.1%	17.4%	\$3.59	\$1.85	3.6%	CHF 65.45	CHF 46.14	14.4
2007	38,072	11,968	31.4	75,452	49,396	24.2	6.7	16.9	5.13	1.48	2.4	74.60	58.05	12.0
2006	36,031	7,175	19.9	68,008	41,294	17.4	5.0	14.8	3.04	1.25	1.9	76.80	64.20	21.4
2005	31,005	6,130	19.8	57,732	33,164	18.5	3.7	15.6	2.62	1.06	1.8	71.50	55.35	22.4

<b>Roche</b>														
2008	\$42,160	\$10,022	23.8%	\$70,323	\$49,743	20.1%	6.9%	19.4%	\$9.45	\$4.62	2.6%	CHF 229.50	CHF 155.20	18.8
2007	42,604	10,563	24.8	72,204	49,230	21.5	7.6	18.2	10.31	4.24	1.9	266.70	210.20	21.4
2006	38,807	7,283	18.8	68,723	43,234	16.8	8.5	15.7	8.36	3.13	1.5	252.50	198.00	24.9
2005	32,795	5,474	16.7	64,060	38,551	14.2	9.4	16.0	6.35	2.77	1.6	230.00	139.00	26.9

<b>UNITED KINGDOM</b>														
<b>AstraZeneca</b>														
2008	\$31,601	\$6,101	19.3%	\$46,784	\$16,060	38.0%	3.5%	16.4%	\$4.20	\$2.05	4.8%	£28.88	£17.48	10.2
2007	29,559	5,595	18.9	47,957	14,915	37.5	3.8	17.5	3.74	1.87	3.9	29.84	21.44	12.7
2006	26,475	6,043	22.8	29,932	15,416	39.2	3.0	14.7	3.85	1.72	4.8	23.60	14.68	9.2
2005	23,950	4,706	19.6	24,840	13,691	34.4	3.4	14.1	2.91	1.30	3.0	28.37	18.61	15.0

<b>GlaxoSmithKline</b>														
2008	\$45,180	\$10,095	22.3%	\$73,085	\$15,432	65.4%	5.9%	14.4%	\$1.63	\$1.06	4.8%	£13.85	£9.95	13.5
2007	42,186	10,346	24.5	57,577	18,404	56.2	6.7	14.2	1.74	0.98	4.0	14.77	11.69	14.1
2006	43,132	10,008	23.2	47,455	17,917	55.9	5.9	14.9	1.76	0.89	3.3	15.77	13.26	15.3
2005	40,225	8,944	22.2	50,510	13,578	65.9	4.2	14.5	1.52	0.82	3.2	15.44	11.75	16.6

**NOTE:** Monetary statistics, except stock prices, for all years were converted at the 2008 average exchange rate of \$1.00 U.S. = 0.679 euros, 1.0816 Swiss francs, and 0.539 pounds sterling.

## JAPAN COMPANY RESULTS

Several firms posted hundreds of millions of dollars in net losses

YEAR	NET SALES	EARNINGS	PROFIT MARGIN	TOTAL ASSETS	STOCK- HOLDERS' EQUITY	RETURN ON EQUITY	CAPITAL SPENDING, % OF SALES	R&D SPEND- ING, % OF SALES	EARN- INGS PER SHARE	DIVIDEND, \$ PER SHARE	DIVIDEND YIELD, % OF PRICE	STOCK PRICE RANGE, PER SHARE		PRICE/ EARNINGS RATIO
												HIGH	LOW	
<b>ASAHI KASEI</b>														
2008	\$15,022	\$46	0.3%	\$13,341	\$5,795	0.8%	8.2%	3.9%	\$0.03	\$0.10	2.1%	¥636	¥295	137.3
2007	16,412	677	4.1	13,786	5,929	11.4	4.9	3.3	0.48	0.13	1.8	902	505	14.1
2006	15,705	663	4.2	14,121	6,321	10.5	5.2	2.3	0.47	0.12	1.5	906	661	16.0
2005	14,495	577	4.0	13,309	5,747	10.0	4.4	2.4	0.41	0.10	1.5	857	499	16.0
<b>DIC (a)</b>														
2008	\$9,018	\$26	0.3%	\$7,142	\$1,053	2.4%	4.7%	1.6%	\$0.03	\$0.06	2.4%	¥367	¥124	73.3
2007	10,426	300	2.9	9,462	2,471	12.1	3.6	1.4	0.38	0.08	1.8	576	312	11.3
2006	9,824	217	2.2	9,593	2,246	9.7	4.9	1.5	0.27	0.05	1.1	510	370	15.5
2005	9,719	51	0.5	9,377	1,820	2.8	4.2	1.5	0.06	0.04	1.0	528	274	62.2
<b>JSR CORP.</b>														
2008	\$3,409	\$135	4.0%	\$3,284	\$2,368	5.7%	5.4%	6.1%	\$0.55	\$0.31	2.0%	¥2,455	¥801	28.9
2007	3,934	358	9.1	4,033	2,492	14.4	7.1	4.8	1.42	0.31	1.3	3,010	2,045	17.2
2006	3,538	326	9.2	3,955	2,162	15.1	6.0	4.7	1.29	0.23	0.8	3,590	2,300	22.1
2005	3,271	296	9.0	3,686	2,058	14.4	6.9	4.7	1.16	0.19	0.7	2,025	3,780	24.3
<b>KANEKA</b>														
2008	\$4,348	-\$18	def	\$4,048	\$2,386	def	7.6%	3.8%	def	\$0.15	2.5%	¥798	¥471	def
2007	4,865	182	3.7%	4,378	2,453	7.4%	6.3	3.3	\$0.53	0.15	1.8	1,207	605	16.4
2006	4,577	178	3.9	4,518	2,339	7.6	7.5	3.6	0.52	0.15	1.3	1,448	970	22.6
2005	4,491	272	6.1	4,383	2,522	10.8	7.5	3.6	0.78	0.15	1.2	1,596	1,079	16.6
<b>MITSUBISHI CHEMICAL</b>														
2008	\$20,215	-\$650	def	\$26,510	\$6,470	def	6.7%	6.1%	def	\$0.12	2.3%	¥758	¥299	def
2007	28,337	1,587	5.6%	26,751	8,007	19.8%	5.8	3.8	\$1.16	0.15	1.8	1,155	634	7.5
2006	25,368	970	3.8	22,428	6,888	14.1	5.0	3.5	0.71	0.14	1.6	1,003	741	11.9
2005	23,300	828	3.6	20,569	6,345	13.0	4.1	3.7	0.67	0.08	1.1	815	672	10.7
<b>mitsui chemicals</b>														
2008	\$14,388	-\$921	def	\$11,500	\$3,524	def	5.4%	2.8%	def	\$0.09	2.0%	¥685	¥206	def
2007	17,281	240	1.4%	14,211	4,638	5.2%	4.7	2.4	\$0.31	0.12	1.3	1,179	648	28.4
2006	16,327	506	3.1	14,491	4,506	11.2	4.3	2.2	0.64	0.10	1.1	1,084	660	13.1
2005	14,242	427	3.0	12,853	4,488	9.5	5.5	2.5	0.54	0.08	1.0	954	570	13.6
<b>SHIN-ETSU CHEMICAL</b>														
2008	\$11,614	\$1,497	12.9%	\$16,297	\$13,213	11.3%	13.3%	3.1%	\$3.51	\$0.97	1.9%	¥6,920	¥3,400	14.2
2007	13,312	1,776	13.3	18,556	13,916	12.8	19.5	3.5	4.13	0.87	1.2	9,500	4,970	17.0
2006	12,619	1,490	11.8	17,990	12,770	11.7	16.1	3.2	3.46	0.68	1.0	8,150	5,460	19.0
2005	10,909	1,113	10.2	16,165	11,352	9.8	10.6	2.8	2.58	0.34	0.6	7,010	3,800	20.3
<b>SHOWA DENKO</b>														
2008	\$9,710	\$24	0.2%	\$9,305	\$2,568	0.9%	5.5%	2.0%	\$0.02	\$0.05	2.0%	¥386	¥114	127.6
2007	9,897	320	3.2	9,959	2,889	11.1	6.8	1.7	0.27	0.05	1.3	472	313	14.3
2006	8,845	279	3.2	10,038	2,568	10.9	9.9	2.1	0.24	0.04	0.8	540	414	19.1
2005	7,853	151	1.9	9,539	2,000	7.5	5.1	2.1	0.13	0.03	0.8	247	470	26.2
<b>SUMITOMO CHEMICAL</b>														
2008	\$17,296	-\$572	def	\$19,562	\$7,502	def	7.5%	7.3%	def	\$0.09	1.7%	¥785	¥264	def
2007	18,344	610	3.3%	22,816	9,731	6.3%	7.5	5.6	\$0.37	0.12	1.4	1,035	637	21.9
2006	17,313	908	5.2	22,487	9,967	9.1	8.9	5.5	0.55	0.12	1.3	1,073	751	16.1
2005	15,056	877	5.8	21,070	6,942	12.6	8.0	5.9	0.53	0.10	1.4	964	493	13.3

**NOTE:** Monetary statistics, except stock prices, for all years were converted at the 2008 exchange rate of \$1.00 = 103.39 yen. Statistics were prepared on the basis of consolidated results. The fiscal year ends March 31 of the following calendar year, except for Showa Denko's, which ends Dec. 31. **a** Formerly Dainippon Ink & Chemical. **def** = deficit.

YEAR	NET SALES	EARNINGS	PROFIT MARGIN	TOTAL ASSETS	STOCK- HOLDERS' EQUITY	RETURN ON EQUITY	CAPITAL SPENDING, % OF SALES	R&D SPEND- ING, % OF SALES	EARN- INGS PER SHARE	DIVIDEND, \$ PER SHARE	DIVIDEND YIELD, % OF PRICE	STOCK PRICE RANGE, PER SHARE		PRICE/ EARNINGS RATIO
												HIGH	LOW	

(Monetary figures, except per share amounts, are in millions of dollars)

#### TAIYO NIPPON SANSO

2008	\$4,795	\$160	3.3%	\$5,168	\$1,879	8.5%	13.3%	0.8%	\$0.40	\$0.12	1.6%	¥989	¥521	18.3
2007	4,911	212	4.3	5,293	2,107	10.1	7.1	0.6	0.53	0.12	1.2	1,137	802	17.8
2006	4,436	194	4.4	5,298	2,090	9.3	7.8	0.6	0.48	0.12	1.2	1,131	849	19.8
2005	3,843	140	3.6	4,561	1,722	8.1	5.6	0.6	0.34	0.10	1.4	890	535	20.1

#### TEIJIN

2008	\$9,125	-\$416	def	\$8,455	\$3,192	def	8.0%	4.0%	def	\$0.05	1.6%	¥441	¥168	def
2007	10,026	122	1.2%	9,827	3,978	3.1%	8.2	3.5	\$0.13	0.08	1.5	682	374	40.1
2006	9,765	330	3.4	9,671	3,944	8.4	7.5	3.5	0.36	0.10	1.3	895	596	20.3
2005	9,073	240	2.6	9,130	3,275	7.3	7.1	3.3	0.26	0.07	1.2	845	447	24.3

#### TORAY INDUSTRIES

2008	\$14,233	-\$158	def	\$14,736	\$4,958	def	6.3%	3.4%	def	\$0.07	1.4%	¥691	¥352	def
2007	15,956	465	2.9%	16,425	6,211	7.5%	8.9	2.8	\$0.33	0.10	1.3	967	567	22.3
2006	14,958	567	3.8	16,195	6,284	9.0	8.2	2.7	0.40	0.10	1.0	1,109	807	22.9
2005	13,807	459	3.3	14,870	5,194	8.8	7.3	2.8	0.33	0.08	1.1	1,010	460	21.8

**NOTE:** Monetary statistics, except share prices, for all years were converted at the 2008 exchange rate of \$1.00 = 103.39 yen. Statistics were prepared on the basis of consolidated results. The fiscal year ends March 31 of the following calendar year, except for Showa Denko's, which ends Dec. 31. **def** = deficit.

## U.S. CAPITAL SPENDING

Most firms boosted spending for a combined increase of 18.6%

\$ MILLIONS	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Air Products & Chemicals (a)	\$771	\$889	\$768	\$708	\$628	\$613	\$706	\$930	\$1,261	\$1,055	\$1,085
Albemarle	77	78	52	50	38	41	58	70	100	99	100
Arch Chemicals	84	59	62	45	35	20	18	18	27	42	53
Cabot (a)	187	166	137	122	146	129	119	186	188	141	199
Chemtura (b)	67	132	155	137	100	88	65	104	128	117	121
Cytec Industries	104	77	77	64	62	94	89	105	103	115	196
Dow Chemical (c)	1,546	1,412	1,349	1,587	1,623	1,100	1,333	1,597	1,775	2,075	2,276
DuPont (d)	2,240	2,055	1,925	1,634	1,280	1,713	1,232	1,340	1,532	1,585	1,978
Eastman Chemical	500	292	226	234	427	230	248	343	289	518	634
FMC Corp. (e)	266	236	240	146	84	87	85	94	116	115	175
H.B. Fuller (f)	62	56	49	31	36	39	31	25	21	21	20
W.R. Grace	101	83	65	63	91	86	63	81	119	137	132
Lubrizol (g)	93	65	86	66	65	88	133	137	131	183	203
Monsanto (h)	979	976	582	382	224	206	210	281	370	509	918
NewMarket Corp. (i)	23	14	14	10	13	12	15	18	26	31	32
PPG Industries	487	490	561	291	238	217	244	288	372	353	383
Praxair	781	653	704	595	498	983	668	877	1,100	1,376	1,611
Quaker Chemical	8	6	6	8	11	13	9	7	12	9	12
Rohm and Haas	229	323	391	401	407	339	322	92	404	417	520
Solutia	158	257	221	94	59	78	61	81	106	150	84
Stepan	44	33	28	34	36	33	34	42	46	40	50
<b>TOTAL (j)</b>	<b>\$8,807</b>	<b>\$8,352</b>	<b>\$7,698</b>	<b>\$6,702</b>	<b>\$6,101</b>	<b>\$6,209</b>	<b>\$5,743</b>	<b>\$6,716</b>	<b>\$8,226</b>	<b>\$9,088</b>	<b>\$10,782</b>

**NOTE:** Figures are for worldwide spending on construction, equipment, and land in consolidated businesses. Prior years are not restated to reflect company revisions. **a** Fiscal year ends Sept. 30. **b** Crompton and Great Lakes Chemical merged in 2005 to become Chemtura. **c** Acquired Union Carbide in 2001. **d** Acquired all of DuPont Merck Pharmaceutical in 1998 and all of Pioneer Hi-Bred in 1999; sold drug operations in 2001. **e** Machinery business split off in December 2001. **f** Fiscal year ends Nov. 30. **g** Acquired Noveon in 2004. **h** Merged with Pharmacia in 1999; spun off from Pharmacia in August 2002. **i** Formerly Ethyl Corp. **j** For companies reporting.

## EUROPE CAPITAL SPENDING

Capital spending among European chemical firms jumped again in 2008

\$ MILLIONS	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Air Liquide (France)	\$2,112	\$1,663	\$1,341	\$1,134	\$1,341	\$1,078	\$1,289	\$1,436	\$1,662	\$2,001	\$2,810
AkzoNobel (Netherlands) (a)	1,206	1,174	1,068	1,211	1,015	856	811	754	779	529	786
Altana (Germany) (b)	ne	ne	ne	ne	ne	ne	ne	ne	110	134	159
Arkema (France) (c)	ne	ne	ne	ne	ne	436	442	490	495	479	493
BASF (Germany)	4,268	4,071	5,348	4,473	3,943	3,377	2,842	2,869	3,551	3,775	3,713
Bayer (Germany)	3,979	3,876	3,898	3,854	3,510	2,102	1,467	2,044	2,561	2,739	2,591
Ciba (Switzerland)	366	247	230	239	231	215	272	254	218	247	230
Clariant (Switzerland)	428	393	495	467	313	278	267	322	331	283	250
DSM (Netherlands)	861	953	906	960	741	638	492	591	738	700	865
Givaudan (Switzerland) (d)	ne	153	120	105	85	146	138	149	156	179	179
Kemira (Finland)	376	247	321	439	358	345	235	166	241	362	222
Lanxess (Germany) (e)	ne	ne	ne	ne	ne	459	411	370	393	418	524
Linde (Germany)	860	1,303	1,442	1,071	1,277	1,261	1,057	1,272	1,430	1,523	2,165
Lonza (Switzerland) (f)	377	257	137	244	322	392	230	251	343	551	575
Merck (Germany)	469	529	629	692	555	414	345	395	373	417	582
Rhodia (France) (g)	495	548	741	711	551	343	293	374	393	376	355
Solvay (Belgium)	943	1,353	1,196	1,062	920	817	831	744	856	1,144	1,944
Syngenta (Switzerland) (h)	ne	ne	185	253	165	211	166	174	217	317	444
Wacker (Germany) (i)	ne	ne	ne	ne	ne	ne	ne	448	713	829	1,100
<b>TOTAL (j)</b>	<b>\$16,738</b>	<b>\$16,767</b>	<b>\$18,055</b>	<b>\$16,915</b>	<b>\$15,326</b>	<b>\$13,368</b>	<b>\$11,588</b>	<b>\$13,103</b>	<b>\$15,560</b>	<b>\$17,003</b>	<b>\$19,988</b>

**NOTE:** Monetary statistics for all years were converted at the 2008 average exchange rate of \$1.00 U.S. = 0.679 euros and 1.0816 Swiss francs. **a** Divested pharmaceuticals in 2007; acquired ICI in 2008. **b** Divested pharmaceuticals in 2006. **c** Spun off from Total in 2006; prior figures are pro forma. **d** Spun off from Roche in 2001; prior figures are pro forma. **e** Spun off from Bayer in 2005; prior figures are pro forma. **f** Became a publicly traded company in 1999; prior figures are pro forma. **g** Spun off from Rhône-Poulenc in 1998. **h** Formed from agrochemicals businesses of Zeneca and Novartis; became a publicly traded company in 2000; prior figures are pro forma. **i** Became a publicly traded company in 2005. **j** For companies listed. **ne** = nonexistent.

## JAPAN CAPITAL SPENDING

With Shin-Etsu leading the retrenchment, most companies spent less on new plants and equipment

\$ MILLIONS	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Asahi Kasei	\$682	\$611	\$669	\$724	\$909	\$836	\$662	\$641	\$816	\$802	\$1,226
DIC (a)	755	897	528	488	417	442	442	407	477	377	425
JSR Corp.	222	119	106	128	155	166	175	226	214	281	185
Kaneka	237	237	237	234	172	222	224	336	344	305	329
Mitsubishi Chemical	1,014	819	835	965	825	671	649	947	1,266	1,645	1,345
Mitsui Chemicals	504	527	595	1,137	665	442	456	787	703	819	784
Shin-Etsu Chemical	712	774	936	789	634	985	1,027	1,159	2,037	2,597	1,542
Showa Denko	474	360	387	312	275	395	289	399	879	671	530
Sumitomo Chemical	654	789	601	706	1,470	1,066	1,217	1,208	1,546	1,378	1,297
Taiyo Nippon Sanso (b)	221	137	116	167	171	72	368	214	347	351	638
Teijin	306	418	477	541	679	513	524	646	732	819	733
Toray Industries	1,170	1,059	581	632	554	472	707	1,007	1,223	1,420	893
<b>TOTAL (c)</b>	<b>\$6,949</b>	<b>\$6,747</b>	<b>\$6,066</b>	<b>\$6,824</b>	<b>\$6,928</b>	<b>\$6,281</b>	<b>\$6,741</b>	<b>\$7,978</b>	<b>\$10,584</b>	<b>\$11,464</b>	<b>\$9,926</b>

**NOTE:** Monetary statistics for all years were converted at the 2008 average exchange rate of \$1.00 U.S. = 103.39 yen. Fiscal year ends March 31 of the following calendar year, except Showa Denko's, which ends Dec. 31. **a** Formerly Dainippon Ink & Chemicals. **b** Nippon Sanso became Taiyo Nippon Sanso when it acquired Taiyo Toyo Sanso in October 2004; for 2003 and earlier, figures are for Nippon Sanso. **c** For companies reporting.



## CANADA CAPITAL SPENDING

Investment spiked in 2008, largely because of Potash's projects

\$ MILLIONS	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Agrium	\$174	\$253	\$179	\$164	\$52	\$99	\$82	\$175	\$209	\$454	\$506
Methanex	178	139	19	91	160	243	157	118	63	278	527
Nova Chemicals (a)	367	620	440	168	71	130	242	419	198	156	166
PotashCorp	190	119	186	514	212	151	221	383	509	607	1198
<b>TOTAL (b)</b>	<b>\$909</b>	<b>\$1,131</b>	<b>\$824</b>	<b>\$937</b>	<b>\$495</b>	<b>\$623</b>	<b>\$702</b>	<b>\$1,095</b>	<b>\$979</b>	<b>\$1,495</b>	<b>\$2,397</b>

**NOTE:** Monetary statistics for all years were converted at the 2008 average exchange rate of \$1.00 U.S. = \$1.066 Canadian. **a** Spun off from Nova Corp. in 1998. **b** For companies reporting.

## U.S. R&D SPENDING

Most chemical firms continued to increase R&D spending, and pharma spending was up on average

### CHEMICAL

\$ MILLIONS	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Air Products & Chemicals (a)	\$112	\$123	\$124	\$123	\$121	\$121	\$127	\$133	\$151	\$140	\$131
Albemarle	30	34	26	22	17	18	31	42	46	63	67
Arch Chemicals	16	18	17	25	23	24	15	21	18	20	22
Cabot (a)	83	73	43	48	48	64	53	59	58	69	74
Chemtura (b)	53	68	85	82	82	52	50	52	66	62	51
Cytec Industries	43	44	39	32	34	35	40	69	74	76	82
Dow Chemical (c)	807	845	892	1,072	1,066	981	1,022	1,073	1,164	1,305	1,310
DuPont (d)	1,308	1,617	1,776	1,588	1,264	1,349	1,333	1,336	1,302	1,338	1,393
Eastman Chemical	185	187	149	160	159	173	154	162	167	156	158
FMC Corp. (e)	158	152	155	100	82	87	93	94	97	95	94
H.B. Fuller (f)	22	21	18	19	18	18	16	16	17	17	17
W.R. Grace	47	42	46	50	52	52	51	59	64	80	83
Lubrizol	78	78	86	88	94	94	190	205	206	219	221
Monsanto (g)	1,263	695	588	560	527	510	511	588	725	780	980
NewMarket Corp. (h)	40	41	40	33	30	28	33	65	70	77	82
PPG Industries	271	284	282	266	289	306	303	309	318	354	451
Praxair	72	67	65	66	69	75	77	80	87	98	97
Quaker Chemical	10	9	9	9	9	10	14	14	13	15	17
Rohm and Haas	207	236	259	230	260	238	265	273	292	296	327
Solutia	62	58	67	58	39	53	44	45	45	45	12
Stepan	12	13	13	14	15	15	15	30	30	31	34
<b>TOTAL (i)</b>	<b>\$4,879</b>	<b>\$4,705</b>	<b>\$4,779</b>	<b>\$4,645</b>	<b>\$4,298</b>	<b>\$4,303</b>	<b>\$4,437</b>	<b>\$4,725</b>	<b>\$5,010</b>	<b>\$5,380</b>	<b>\$5,703</b>

### PHARMACEUTICAL

\$ MILLIONS	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Abbott Laboratories	\$1,339	\$1,194	\$1,351	\$1,578	\$1,562	\$1,734	\$1,697	\$1,821	\$2,255	\$2,506	\$2,689
Bristol-Myers Squibb (j)	1,577	1,843	1,939	2,259	2,218	2,279	2,500	2,746	3,067	3,282	3,585
Eli Lilly & Co.	1,382	1,739	1,784	2,019	2,235	2,350	2,149	3,025	3,129	3,487	3,841
Johnson & Johnson	2,506	2,768	3,105	3,591	2,957	4,684	5,203	6,312	7,125	7,680	7,577
Merck & Co.	1,821	2,068	2,344	2,456	2,677	3,178	4,010	3,848	4,783	4,883	4,805
Pfizer (k)	3,305	4,036	4,435	4,847	5,176	7,131	7,684	7,442	7,599	8,089	7,945
Schering-Plough	1,007	1,191	1,333	1,312	1,425	1,469	1,607	1,865	2,188	2,926	3,529
Wyeth	1,655	1,740	1,688	1,870	2,080	2,094	2,461	2,749	3,109	3,257	3,373
<b>TOTAL (i)</b>	<b>\$14,592</b>	<b>\$16,579</b>	<b>\$17,979</b>	<b>\$19,932</b>	<b>\$20,330</b>	<b>\$24,919</b>	<b>\$27,311</b>	<b>\$29,808</b>	<b>\$33,255</b>	<b>\$36,110</b>	<b>\$37,344</b>

**NOTE:** Prior years are not restated to reflect company revisions except where noted. **a** Fiscal year ends Sept. 30. **b** Crompton & Knowles and Great Lakes Chemical merged in 2005 to become Chemtura; earlier figures are for Crompton & Knowles. **c** Acquired Union Carbide in 2001. **d** Acquired all of DuPont Merck Pharmaceutical in 1998 and all of Pioneer Hi-Bred in 1999; sold drug operations in 2001. **e** Machinery business split off in December 2001; data for 2002 and 2003 are for remaining chemical operations. **f** Fiscal year ends Nov. 30. **g** Merged with Pharmacia in 1999; spun off from Pharmacia in August 2002. **h** Formerly Ethyl Corp. **i** For companies reporting. **j** Acquired DuPont Pharmaceuticals in 2001. **k** Merged with Warner-Lambert in 2000 and with Pharmacia in 2003; prior years are restated for Warner-Lambert but not Pharmacia.

## EUROPE R&D SPENDING

R&D spending increased for the third consecutive year

\$ MILLIONS	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Air Liquide (France)	\$128	\$134	\$140	\$133	\$136	\$139	\$152	\$158	\$171	\$197	\$236
AkzoNobel (Netherlands) (a)	957	1,069	1,163	1,247	1,327	1,306	1,212	1,193	1,303	415	520
Altana (Germany) (b)	ne	ne	ne	ne	ne	ne	ne	ne	100	99	106
Arkema (France) (c)	ne	ne	ne	ne	ne	281	270	259	247	233	221
BASF (Germany)	1,809	1,963	2,247	1,837	1,672	1,627	1,452	1,567	1,881	2,032	1,996
Bayer (Germany)	3,010	3,317	3,524	3,769	3,795	3,293	2,918	2,546	3,383	3,797	3,907
Ciba (Switzerland)	280	237	271	255	272	260	266	278	250	242	213
Clariant (Switzerland)	308	335	383	378	325	285	253	202	191	195	170
DSM (Netherlands)	371	381	389	439	399	395	421	427	197	548	580
Givaudan (Switzerland) (d)	ne	144	172	184	190	201	192	203	227	343	318
Kemira (Finland)	72	71	71	57	68	71	57	63	76	97	105
Lanxess (Germany) (e)	ne	ne	ne	ne	ne	247	186	149	128	130	143
Linde (Germany)	ne	211	268	247	252	253	244	253	296	143	153
Lonza (Switzerland) (f)	98	91	89	96	94	64	66	58	70	82	102
Merck (Germany)	596	733	804	850	895	891	882	1,050	1,108	1,514	1,817
Rhodia (France) (g)	269	261	286	290	296	275	336	152	153	137	108
Solvay (Belgium)	429	508	530	502	585	595	608	695	829	819	831
Syngenta (Switzerland) (h)	ne	769	745	723	697	727	809	822	796	830	969
Wacker (Germany) (i)	ne	ne	ne	ne	ne	ne	ne	216	224	225	240
<b>TOTAL (j)</b>	<b>\$8,328</b>	<b>\$10,223</b>	<b>\$11,083</b>	<b>\$11,008</b>	<b>\$11,003</b>	<b>\$10,911</b>	<b>\$10,324</b>	<b>\$10,292</b>	<b>\$11,631</b>	<b>\$12,077</b>	<b>\$12,734</b>

**NOTE:** Monetary statistics for all years were converted at the 2008 average exchange rate of \$1.00 U.S. = 0.679 euros and 1.0816 Swiss francs. **a** Divested pharmaceuticals in 2007; acquired ICI in 2008. **b** Divested pharmaceuticals in 2006. **c** Spun off from Total in 2006; prior figures are pro forma. **d** Spun off from Roche in 2001; prior figures are pro forma. **e** Spun off from Bayer in 2005; prior figures are pro forma. **f** Became a publicly traded company in 1999; prior figures are pro forma. **g** Spun off from Rhône-Poulenc in 1998. **h** Formed from agrochemicals businesses of Zeneca and Novartis; became a publicly traded company in 2000; prior figures are pro forma. **i** Became a publicly traded company in 2005. **j** For companies listed. **ne** = nonexistent.

## JAPAN R&D SPENDING

R&D expenditures have kept growing, with Sumitomo Chemical and Mitsubishi Chemical far outspending others

\$ MILLIONS	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Asahi Kasei	\$550	\$484	\$481	\$479	\$477	\$351	\$353	\$347	\$361	\$544	\$588
DIC (a)	122	103	116	124	125	145	154	143	150	150	142
JSR Corp.	54	58	50	128	136	146	160	153	168	190	207
Kaneka	97	118	127	127	135	140	152	163	163	161	166
Mitsubishi Chemical	650	644	658	818	881	856	863	867	882	1,084	1,236
Mitsui Chemicals	380	369	353	377	359	318	338	359	357	407	397
Shin-Etsu Chemical	na	261	251	273	264	255	270	310	404	464	359
Showa Denko	230	218	160	149	149	151	170	168	189	168	194
Sumitomo Chemical	575	574	572	645	704	727	756	889	945	1,019	1,268
Taiyo Nippon Sanso (b)	na	39	33	33	24	22	20	22	26	28	38
Teijin	267	275	293	308	289	318	290	302	339	351	364
Toray Industries	367	375	375	360	345	346	371	384	409	443	484
<b>TOTAL (c)</b>	<b>\$3,292</b>	<b>\$3,517</b>	<b>\$3,470</b>	<b>\$3,822</b>	<b>\$3,888</b>	<b>\$3,775</b>	<b>\$3,898</b>	<b>\$4,105</b>	<b>\$4,393</b>	<b>\$5,009</b>	<b>\$5,443</b>

**NOTE:** Monetary statistics for all years converted at the 2008 average exchange rate of \$1.00 U.S. = 103.39 yen. Fiscal year ends March 31 of the following calendar year, except Showa Denko's, which ends Dec. 31. **a** Formerly Dainippon Ink & Chemicals. **b** Nippon Sanso became Taiyo Nippon Sanso when it acquired Taiyo Toyo Sanso in October 2004; for 2003 and earlier, figures are for Nippon Sanso. **c** For companies reporting. **na** = not available.