

Percent change in chemical company capital spending in 2011 in U.S.:

21.1

In Europe:

23.6

In Japan:

11.3

Average percent change in U.S. chemical firms' earnings per share in 2011:

49.1

Percent change in chemical company R&D spending in 2011 in U.S.:

9.2

In Europe:

3.6

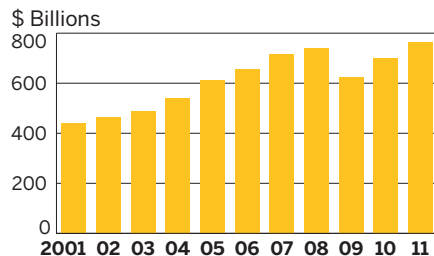
In Japan:

-1.6

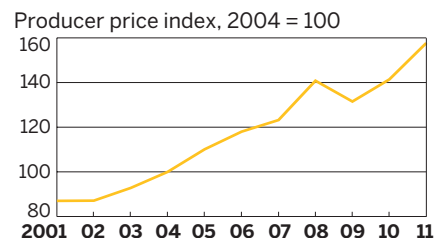
Average percent change in U.S. pharma and biotech firms' earnings per share in 2011:

3.3

U.S. chemical shipments jumped 9.1% in 2011 ...



... while prices increased 11.6%



SOURCE: C&EN calculations using Department of Commerce data

Of chemical firms tracked by C&EN, NewMarket paid the U.S.'s highest dividend per share in 2011 at

\$2.39

Givaudan paid Europe's highest dividend per share in 2011 at

\$24.83

Percent change in shipments of U.S. agricultural chemicals in 2011:

13.4

Percent change in shipments of Canadian agricultural chemicals in 2011:

30.8

Of chemical firms tracked by C&EN:

25 of **26** U.S. companies increased earnings in 2011

9 of **16** European companies increased earnings in 2011

4 of **12** Japanese companies increased earnings in 2011

EARNINGS UP AMID WEAK ECONOMY

As underlying demand wobbled, chemical firms used pricing power to improve **FINANCES**

HAD CHEMICAL INDUSTRY executives counted on 2011 being a second year of growing demand to improve earnings, they would not have posted the successful financial outcomes that this year's Facts & Figures show.

Instead, they put their strategic efforts behind selling new and improved products and selling all goods at higher prices. This strategy provided more than enough additional revenue to make up for tepid demand and to cover increasing energy and raw material costs. In the U.S. and Europe, higher prices boosted earnings considerably, even while produc-

tion growth stalled over the last three quarters.

In the U.S., after a 7.5% increase in 2010, prices for chemicals surged 11.6% in 2011, outpacing the 8.8% hike for all commodities. Prices for industrial chemicals soared by 20.6% last year, and agricultural chemicals, fats and oils, and paint materials also rose above the mean. Similarly, overall chemical prices in Canada climbed by 7.0%.

In the first quarter, the chemical industry was able to complete its long journey back to full production, shrugging off a lingering hangover from the 2008 Great

Recession. Demand for chemicals that go into consumer electronics, automobiles, and agriculture and food markets brought early-2011 volume gains, which together with higher prices pushed earnings to new heights.

That strong start to the year propelled notable increases in the annual value of chemical shipments. In Germany, Europe's largest chemical producer, the value of shipments increased a healthy 7.8%. In the U.S., shipments of all chemicals grew 9.1%—13.5% if pharmaceuticals are excluded. In Canada, chemical shipments, also buoyed by higher prices, increased 7.3%.

But during the rest of 2011, macro-economic factors such as the European debt crisis, the tsunami in Japan, and slowing growth in developing economies put customers on a cautious footing. The production increases vanished. By the fourth quarter, Cabot, Dow Chemical, DuPont, and Eastman Chemical all saw their earnings retreat.

The European debt crisis was—and remains—a cloud over manufacturers'

business confidence. Yet it did not have a large impact on the full-year results of European chemical firms. Companies were able to make the most of economic growth in other regions such as Asia, the Middle East, and even the U.S.

Only two major chemical firms that have headquarters in Europe—Arkema and Givaudan—saw revenues decline in 2011 compared with 2010. But company earnings showed other signs of weakness. Of the 16 European firms tracked by C&EN, seven posted lower earnings compared with the year-ago period. Among them, Arkema posted a loss for the year.

In Japan, only four of 12 firms tracked by C&EN saw earnings increase in 2011, though most on the list remained profitable. Revenues barely budged from 2010. Companies blamed their performance on the weakness

in the Japanese and world economies and on the earthquake and tsunami that struck in March 2011. Still, Shin-Etsu Chemical was able to raise profits slightly despite suffering major earthquake damage at polyvinyl chloride and silicon wafer plants.

MEANWHILE, pharmaceutical firms in the U.S. and Europe had a mixed, but largely positive, year in 2011. With the exception of Pfizer, U.S. drugmakers saw revenues increase. Earnings were down at Eli Lilly & Co., Johnson & Johnson, and biotech firm Amgen. However, Amgen awarded dividends for the first time. Both Merck & Co. and Pfizer rolled back a portion of R&D spending that they had hiked significantly in 2010.

In Europe, Roche and GlaxoSmithKline reported higher earnings despite lower

revenues. Only Novartis posted a decline in profits for the year, and all firms increased dividends.

Although most chemical firms continued to preach the gospel of cost cutting to their recession-weary investors, they did increase capital spending significantly in 2011. U.S. firms increased investments by 21.1%. European firms bested them with a 23.6% hike in capital spending. And in Japan, spending on plants and equipment grew 11.3%.

In contrast, the Japanese firms tracked by C&EN decreased spending on R&D by a combined \$113 million. Europe increased R&D spending slightly, with the largest contributions to that increase provided by Merck, BASF, and Syngenta. In the U.S., 17 chemical firms accounted for a combined total increase in R&D spending of \$532 million, or 9.2%.

U.S. SHIPMENTS

Most categories recovered their prerecession strength, but shipments of pharmaceuticals continued to shrink

\$ BILLIONS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	ANNUAL CHANGE	
												2010-11	2001-11
All chemicals	\$438.4	\$462.5	\$487.7	\$540.9	\$610.9	\$657.1	\$716.2	\$738.7	\$624.4	\$701.2	\$764.8	9.1%	5.7%
Chemicals, excluding pharmaceuticals	308.4	319.5	335.8	383.3	441.6	476.1	527.8	546.6	433.7	515.5	585.1	13.5	6.6
Agricultural chemicals	19.3	19.3	21.3	24.3	27.3	27.1	29.2	36.9	31.9	31.2	35.3	13.4	6.2
Coatings & adhesives	27.7	27.4	28.1	30.3	32.1	33.3	34.1	33.0	29.1	31.3	32.3	3.0	1.5
All other chemicals	261.4	272.8	286.5	328.7	382.3	415.7	464.5	476.7	372.8	453.0	517.5	14.2	7.1
Pharmaceuticals	130.0	143.0	151.9	157.6	169.2	180.9	188.4	192.1	190.6	185.8	179.7	-3.3	3.3

SOURCE: C&EN calculations using Department of Commerce data

CANADA SHIPMENTS

Nearly all sectors of Canadian industry surged in 2011

\$ BILLIONS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	ANNUAL CHANGE	
												2010-11	2001-11
All manufacturing	\$549.5	\$566.3	\$570.0	\$589.3	\$606.0	\$612.4	\$604.5	\$598.8	\$492.3	\$535.9	\$577.7	7.8%	0.5%
Chemical manufacturing	38.8	41.0	43.6	47.6	50.3	49.8	48.2	49.2	41.6	44.4	47.6	7.3	2.1
Basic chemicals	11.6	11.8	12.7	13.5	15.1	16.0	15.0	15.1	10.6	13.0	15.1	15.5	2.6
Petrochemicals	4.5	4.1	4.9	6.1	7.3	8.1	7.3	7.3	3.8	5.6	6.7	20.0	4.1
Resins & synthetic rubber	6.6	7.2	7.6	10.0	10.3	9.3	9.0	8.5	5.3	5.7	6.6	16.1	0.0
Pesticide, fertilizer & other agricultural chemicals	2.5	2.6	3.3	3.7	4.0	3.7	4.2	5.5	4.3	3.9	5.2	30.8	7.4
Pharmaceuticals & medicine	6.9	7.7	8.0	9.0	9.2	9.6	8.9	9.1	10.9	11.6	10.3	-11.3	4.1
Paints, coatings & adhesives	2.6	2.6	2.8	2.8	3.0	3.0	2.8	2.9	3.1	2.5	2.3	-8.0	-1.2
Soaps, cleaners & toilet preparations	3.1	3.1	3.5	3.1	3.0	3.2	3.2	3.0	2.8	2.7	2.9	7.4	-0.7

NOTE: Monetary statistics for all years were converted at the 2011 average exchange rate of \$1.00 U.S. = \$0.9887 Canadian. SOURCE: Statistics Canada

EUROPE SHIPMENTS

European countries posted stronger increases in 2011 than the decade's average annual change

\$ BILLIONS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	ANNUAL CHANGE	
												2010-11	2001-11
Belgium	\$59.0	\$59.6	\$61.6	\$65.9	\$66.9	\$71.3	\$75.2	\$76.1	\$63.0	\$72.7	\$80.9	11.3%	3.2%
Germany	186.5	184.6	190.1	198.0	211.8	224.5	242.0	235.7	202.3	237.9	256.6	7.8	3.2
Netherlands	44.8	45.0	47.3	50.7	55.0	63.3	68.3	69.7	52.9	65.5	80.8	23.4	6.1
Spain	52.2	52.8	54.8	58.0	61.3	65.7	69.3	73.3	66.5	74.1	80.0	8.0	4.4

NOTE: Monetary statistics for all years were converted at the 2011 average exchange rate of \$1.00 U.S. = 0.7178 euros. **SOURCES:** National statistical agencies, trade organizations

U.S. PRICE INDEX

Price increases accelerated in 2011, a second year of improvement

PRODUCER PRICE INDEX, 2004 = 100	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	ANNUAL CHANGE	
												2010-11	2001-11
All commodities	91.5	89.4	94.1	100.0	107.3	112.3	117.7	129.2	117.9	125.9	137.0	8.8%	4.1%
Industrial commodities	91.9	89.7	94.2	100.0	108.5	114.4	118.6	130.3	118.4	126.7	136.9	8.0	4.1
Finished goods	94.7	93.5	96.5	100.0	104.8	108.0	112.2	119.3	116.2	121.1	128.3	6.0	3.1
Chemicals & allied products	87.0	87.1	92.8	100.0	110.1	118.0	123.2	140.8	131.5	141.4	157.7	11.6	6.1
Industrial chemicals	78.9	78.2	87.0	100.0	115.8	130.5	139.1	168.7	143.8	165.4	199.4	20.6	9.7
Prepared paint	93.6	95.0	97.2	100.0	106.9	114.6	118.8	126.9	134.5	134.9	141.2	4.6	4.2
Paint materials	83.4	92.3	96.2	100.0	106.0	110.5	117.6	125.2	121.7	124.4	145.3	16.8	5.7
Drugs & pharmaceuticals	92.0	93.4	96.6	100.0	104.8	109.7	113.6	120.6	128.1	134.8	140.0	3.9	4.3
Fats & oils, inedible	50.5	58.8	80.3	100.0	95.6	96.3	123.3	187.7	136.9	159.0	224.5	41.2	16.1
Agricultural chemicals	90.9	86.0	94.0	100.0	106.3	110.1	126.0	194.0	139.5	141.3	170.7	20.8	6.5
Plastic resin & materials	82.3	80.1	89.6	100.0	118.3	121.6	120.1	131.8	117.0	128.8	140.8	9.3	5.5
Other chemicals & products	97.1	97.1	98.2	100.0	104.9	109.9	112.4	119.9	121.9	122.1	127.6	4.5	2.8

SOURCE: Department of Labor

CANADA PRICE INDEX

Chemical prices increased strongly in 2011, especially those for inorganic chemicals

PRODUCER PRICE INDEX, 2004 = 100	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	ANNUAL CHANGE	
												2010-11	2001-11
All commodities	98.0	98.0	96.9	100.0	101.6	103.9	105.5	110.1	106.3	107.4	112.3	4.6%	1.4%
Chemicals & chemical products	93.7	93.6	96.7	100.0	106.9	108.9	112.5	122.1	115.4	119.8	128.1	7.0	3.2
Inorganic industrial chemicals	94.8	95.2	96.5	100.0	111.0	123.5	159.7	160.3	147.6	145.9	172.2	18.0	6.2
Sulfuric acid	103.1	102.9	98.9	100.0	103.1	111.4	117.1	146.1	124.3	121.3	125.9	3.8	2.0
Caustic soda	130.6	111.6	109.5	100.0	112.3	109.4	106.8	135.3	130.8	131.7	156.7	19.0	1.8
Ammonia	90.9	88.8	97.2	100.0	114.7	100.9	140.9	236.7	202.8	223.8	299.7	33.9	12.7
Organic industrial chemicals	86.8	83.8	91.6	100.0	116.5	117.8	119.8	140.3	115.2	133.6	147.3	10.3	5.4
Benzene-toluene-xylene	57.6	51.6	59.0	100.0	109.1	112.2	154.3	126.4	112.8	139.7	164.9	18.1	11.1
Olefins	85.5	78.3	91.5	100.0	124.0	125.1	125.9	154.6	125.4	149.6	166.7	11.5	6.9
Synthetic resins	96.3	94.7	97.5	100.0	106.4	104.8	97.2	103.4	100.7	102.4	101.5	-0.8	0.5
Polyethylene (a)	98.0	94.2	100.1	100.0	107.2	112.1	109.8	118.9	109.6	115.1	114.5	-0.5	1.6
Polystyrene	89.8	89.4	92.7	100.0	104.2	104.3	105.5	106.7	105.0	112.3	118.7	5.7	2.8
Thermosets	104.5	100.1	100.3	100.0	100.1	101.4	103.4	104.8	104.2	102.7	105.0	2.2	0.0
Agricultural chemicals	98.9	98.9	99.2	100.0	100.1	100.2	100.4	100.7	100.8	100.9	100.9	0.0	0.2
Pharmaceuticals	94.4	98.1	99.2	100.0	100.9	103.7	104.4	105.8	107.6	109.0	110.6	1.4	1.6
Paints & varnishes	93.9	95.6	97.2	100.0	104.9	110.2	111.5	115.8	115.2	116.3	119.9	3.1	2.5
Soaps & cleaners	100.0	100.0	100.0	100.0	100.0	100.2	100.1	99.9	99.5	99.7	100.0	0.3	0.0
Toilet preparations	98.2	99.6	100.8	100.0	98.6	96.8	96.6	98.4	99.8	96.4	93.8	-2.7	-0.5
Pigments, lakes & toners	103.7	101.8	99.8	100.0	105.3	107.1	105.1	104.0	106.9	108.5	116.4	7.3	1.2

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

Most chemical firms saw strong earnings growth, but pharma results were mixed

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)

2011	\$10,082	\$1,253	12.4%	\$13,139	\$4,786	26.2%	13.4%	1.2%	\$5.75	\$2.23	2.5%	\$98.00	\$78.75	15.4
2010	9,026	1,029	11.4	12,306	4,498	22.9	14.4	1.3	4.85	1.92	2.6	85.44	64.13	15.4
2009	8,256	640	7.8	11,850	3,616	17.7	14.3	1.4	3.01	1.79	2.9	80.60	41.46	20.3
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

ALBEMARLE

2011	\$2,869	\$464	16.2%	\$2,800	\$1,275	36.4%	6.7%	2.7%	\$4.82	\$0.56	1.0%	\$71.79	\$38.02	11.4
2010	2,363	324	13.7	2,661	1,069	30.3	3.2	2.5	3.54	0.50	1.1	57.34	34.49	13.0
2009	2,005	178	8.9	2,328	762	23.4	5.0	3.0	1.94	0.50	1.9	37.62	15.54	13.7
2008	2,467	194	7.9	2,427	620	31.3	4.0	2.7	2.09	0.48	1.5	45.90	16.16	14.8

ASHLAND (b)

2011	\$6,502	\$56	0.9%	\$7,541	-\$1,290	def	3.1%	1.4%	\$5.28	\$0.70	1.2%	\$68.34	\$44.14	10.7
2010	5,741	88	1.5	6,190	462	19.0	3.6	1.5	1.82	0.45	0.9	63.28	34.14	26.8
2009	5,220	-240	def	6,206	183	def	3.3	1.8	def	0.30	1.2	44.62	5.60	def
2008	8,381	167	2.0	5,363	2,794	6.0	2.4	0.6	2.65	1.10	2.3	67.41	27.51	17.9

CABOT (a)

2011	\$3,102	\$258	8.3%	\$3,081	\$1,576	16.4%	7.4%	2.1%	\$3.62	\$0.72	2.0%	\$48.77	\$23.75	10.0
2010	2,893	154	5.3	2,843	1,374	11.2	3.7	2.4	2.35	0.72	2.6	34.00	20.95	11.7
2009	2,243	-77	def	2,637	1,095	def	4.7	3.2	def	0.72	3.6	32.00	7.97	def
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

a Fiscal year ends on Sept. 30. **b** Acquired Hercules in 2008 and International Specialty Products in 2011. **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
(Monetary figures, except per-share amounts, are in millions of dollars)														
CELANESE														
2011	\$6,763	\$607	9.0%	\$7,561	\$384	158.1%	5.2%	1.4%	\$3.89	\$0.22	0.5%	\$58.68	\$29.43	11.3
2010	5,918	377	6.4	7,255	-100	def	3.4	1.2	2.42	0.18	0.6	41.74	23.47	13.5
2009	5,082	484	9.5	7,318	-508	def	3.5	1.5	3.30	0.16	0.8	33.41	7.44	6.2
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
CF INDUSTRIES (c)														
2011	\$6,098	\$1,539	25.2%	\$6,910	\$2,869	53.6%	4.1%	ne	\$22.18	\$1.00	0.6%	\$192.70	\$115.34	6.9
2010	3,965	441	11.1	8,756	2,348	18.8	6.5	ne	5.40	0.40	0.3	138.74	92.41	21.4
2009	2,608	449	17.2	2,494	1,728	26.0	9.0	ne	7.54	0.40	0.6	95.13	42.30	9.1
2008	3,921	802	20.5	2,387	1,337	60.0	3.6	ne	12.53	0.40	0.4	172.99	37.11	8.4
CYTEC INDUSTRIES														
2011	\$3,073	\$208	6.8%	\$2,558	\$708	29.4%	3.8%	2.8%	\$4.29	\$0.50	1.1%	\$59.19	\$32.49	10.7
2010	2,748	175	6.4	2,641	704	24.9	4.2	2.6	3.49	0.05	0.1	60.85	36.42	13.9
2009	2,790	123	4.4	2,458	462	26.6	7.0	2.7	def	0.16	0.6	39.20	10.58	def
2008	3,640	284	7.8	2,501	350	81.1	5.4	2.3	def	0.50	1.2	63.77	16.28	def
DOW CHEMICAL (d)														
2011	\$59,985	\$2,402	4.0%	\$51,233	\$5,300	45.3%	4.5%	2.7%	\$2.06	\$0.90	2.9%	\$42.23	\$20.61	15.3
2010	53,674	1,970	3.7	51,091	4,145	47.5	4.0	3.1	1.75	0.60	2.1	34.50	22.42	16.3
2009	44,875	676	1.5	46,857	2,044	33.1	3.1	3.3	0.32	0.60	3.4	29.50	5.89	55.3
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
DUPONT (e)														
2011	\$37,961	\$3,510	9.2%	\$37,666	-\$2,233	def	4.9%	5.2%	\$3.73	\$1.64	3.5%	\$57.00	\$37.10	12.6
2010	31,505	3,054	9.7	35,089	3,957	77.2	4.8	5.2	3.32	1.64	4.0	50.17	31.88	12.4
2009	26,109	1,755	6.7	33,496	2,526	69.5	5.0	5.3	1.92	1.64	6.3	35.62	16.05	13.5
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
EASTMAN CHEMICAL														
2011	\$7,178	\$696	9.7%	\$5,778	\$1,464	47.5%	6.4%	2.2%	\$4.98	\$0.99	2.3%	\$55.36	\$32.45	8.8
2010	5,842	438	7.5	5,611	1,252	35.0	4.2	2.6	6.07	1.79	2.6	84.57	51.10	11.2
2009	5,047	136	2.7	5,200	1,198	11.4	6.1	2.7	1.85	1.76	4.4	61.95	17.76	21.5
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
FMC CORP.														
2011	\$3,378	\$366	10.8%	\$3,330	\$891	41.1%	5.6%	3.1%	\$5.13	\$0.60	0.8%	\$93.00	\$63.81	15.3
2010	3,117	173	5.6	3,126	995	17.4	4.6	3.2	2.38	0.50	0.8	82.03	50.75	27.9
2009	2,826	239	8.5	2,927	924	25.9	5.7	3.3	3.37	0.50	1.1	58.13	34.90	13.8
2008	3,115	322	10.3	2,797	706	45.6	5.6	3.0	4.35	0.48	0.9	80.23	28.53	12.5
H.B. FULLER (f)														
2011	\$1,558	\$89	5.7%	\$986	\$464	19.2%	2.3%	1.3%	\$1.82	\$0.30	1.4%	\$25.41	\$16.92	11.6
2010	1,356	71	5.2	913	394	18.0	2.7	1.4	1.46	0.28	1.3	24.66	18.47	14.8
2009	1,235	84	6.8	856	346	24.3	1.9	1.4	1.70	0.27	1.6	23.06	9.70	9.6
2008	1,392	19	1.4	845	299	6.4	1.4	1.2	0.36	0.26	1.3	27.84	12.23	55.7
GEORGIA GULF														
2011	\$3,223	\$58	1.8%	\$1,384	\$228	25.4%	2.1%	ne	\$1.66	ne	ne	\$40.59	\$12.19	15.9
2010	2,818	43	1.5	1,442	221	19.5	1.6	ne	1.22	ne	ne	24.75	11.11	14.7
2009	1,990	145	7.3	1,570	174	83.3	1.5	ne	9.19	ne	ne	50.00	5.50	3.0
2008	2,916	-258	def	1,405	-345	def	2.1	ne	def	\$0.24	4.8%	9.00	1.01	def
W.R. GRACE														
2011	\$3,212	\$269	8.4%	\$4,349	\$19	1393.8%	4.4%	2.1%	\$3.66	ne	ne	\$52.50	\$30.25	11.3
2010	2,675	207	7.7	4,146	-194	def	4.2	2.2	2.85	ne	ne	36.27	19.63	9.8
2009	2,825	81	2.9	3,850	-418	def	3.3	2.5	0.98	ne	ne	26.17	4.07	15.4
2008	3,317	122	3.7	3,758	-544	def	4.0	2.5	1.68	ne	ne	27.79	3.01	9.2

c Acquired Terra Industries in 2010. d Acquired Rohm and Haas in 2009. e Acquired Danisco in 2011. f Fiscal year ends on Dec. 3. def = deficit. ne = nonexistent.

c Acquired Terra Industries in 2010. d Acquired Rohm and Haas in 2009. e Acquired Danisco in 2011. f Fiscal year ends on Dec. 3. 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)														
HUNTSMAN CORP.														
2011	\$11,221	\$251	2.2%	\$8,543	\$1,662	15.1%	2.9%	1.5%	\$1.04	\$0.40	2.7%	\$21.52	\$8.14	14.3
2010	9,250	-9	def	8,620	1,756	def	2.6	1.6	def	0.40	3.2	16.89	8.17	def
2009	7,665	125	1.6	8,532	1,771	7.1	2.5	1.9	0.49	0.40	5.9	11.57	2.04	13.9
2008	10,056	512	5.1	7,966	1,540	33.2	4.2	1.5	2.62	0.40	2.8	25.71	2.82	5.4
INTERNATIONAL FLAVORS & FRAGRANCES														
2011	\$2,788	\$267	9.6%	\$2,257	\$399	66.9%	4.6%	7.9%	\$3.30	\$1.16	2.0%	\$66.29	\$51.20	17.8
2010	2,623	264	10.1	2,158	289	91.3	4.0	8.3	3.29	1.04	2.2	56.10	39.28	14.5
2009	2,326	196	8.4	1,924	48	408.3	2.9	8.3	2.46	1.00	3.0	41.85	25.30	13.6
2008	2,389	230	9.6	2,023	-154	def	3.6	8.9	2.87	0.96	2.7	47.20	24.90	12.6
MONSANTO (g)														
2011	\$11,822	\$1,607	13.6%	\$15,170	\$7,042	22.8%	4.6%	11.7%	\$3.00	\$1.14	1.8%	\$77.09	\$47.07	20.7
2010	10,502	1,128	10.7	13,220	5,676	19.9	7.2	11.5	2.04	1.08	1.6	87.06	44.61	32.3
2009	11,724	2,109	18.0	13,288	5,467	38.6	7.8	9.4	3.80	1.04	1.1	121.32	63.47	24.3
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
NEWMARKET CORP. (h)														
2011	\$2,138	\$207	9.7%	\$1,153	\$512	40.4%	2.5%	4.9%	\$15.10	\$2.39	1.5%	\$204.92	\$118.83	10.7
2010	1,786	177	9.9	1,016	445	39.8	1.9	5.1	12.12	1.57	1.5	131.76	81.80	8.8
2009	1,530	162	10.6	1,025	275	58.9	2.5	5.6	10.65	1.08	1.5	121.13	27.82	7.0
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
POLYONE (i)														
2011	\$2,864	\$173	6.0%	\$1,341	-\$151	def	1.9%	1.3%	\$1.87	\$0.16	1.2%	\$16.61	\$9.54	7.0
2010	2,622	163	6.2	1,440	284	57.4	1.5	1.3	1.75	ne	ne	13.99	6.93	6.0
2009	2,061	68	3.3	1,157	98	69.1	1.6	1.1	0.73	ne	ne	7.74	1.32	6.2
2008	2,739	-273	def	1,045	-57	def	1.6	1.0	def	ne	ne	6.39	2.33	def
PPG INDUSTRIES (j)														
2011	\$14,885	\$1,095	7.4%	\$10,597	-\$339	def	2.6%	2.9%	\$6.96	\$2.26	2.8%	\$97.81	\$66.43	11.8
2010	13,423	769	5.7	10,988	-154	def	2.5	3.0	4.67	2.18	3.1	84.59	56.96	15.2
2009	12,239	336	2.7	10,040	-278	def	2.0	3.3	2.03	2.13	4.7	62.31	28.16	22.3
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
PRAXAIR														
2011	\$11,252	\$1,672	14.9%	\$13,817	\$3,258	51.3%	16.0%	0.8%	\$5.53	\$2.00	2.0%	\$111.74	\$88.64	18.1
2010	10,116	1,195	11.8	13,076	3,594	33.2	13.7	0.8	3.90	1.80	2.1	96.34	73.13	21.7
2009	8,956	1,254	14.0	12,105	3,436	36.5	15.1	0.8	4.01	1.60	2.3	84.97	53.42	17.3
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
QUAKER CHEMICAL														
2011	\$683	\$44	6.4%	\$416	\$166	26.5%	1.8%	2.8%	\$3.52	\$0.93	2.7%	\$46.02	\$24.11	10.0
2010	544	34	6.3	373	110	30.9	1.7	2.9	2.82	0.93	2.4	45.80	32.30	13.8
2009	451	17	3.8	346	104	16.3	3.1	3.3	1.47	0.92	6.5	23.82	4.65	9.7
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
SIGMA-ALDRICH														
2011	\$2,505	\$457	18.2%	\$2,656	\$1,574	29.0%	4.2%	2.9%	\$3.78	\$0.64	1.0%	\$76.16	\$56.18	17.5
2010	2,271	384	16.9	2,432	1,394	27.5	4.4	2.9	3.17	0.64	1.1	67.76	46.50	18.0
2009	2,148	347	16.2	2,184	1,156	30.0	5.6	2.9	2.80	0.58	1.3	56.29	31.45	15.7
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
SOLUTIA														
2011	\$2,097	\$267	12.7%	\$1,827	-\$780	def	5.0%	1.1%	\$2.19	\$0.04	0.2%	\$26.35	\$17.44	10.0
2010	1,950	82	4.2	1,859	-936	def	3.4	0.9	0.65	ne	ne	23.84	12.14	27.7
2009	1,667	-109	def	1,952	-704	def	2.6	0.6	def	ne	ne	13.76	1.18	def
2008	2,110	786	37.3	2,400	-823	def	4.0	0.6	4.97	ne	ne	17.29	3.64	2.1

g Fiscal year ends on Aug. 31. h Formerly Ethyl Corp. i Acquired GLS, a provider of specialty thermoplastic elastomers, in 2008. j 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
												HIGH	LOW	

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

STEPAN

2011	\$1,843	\$73	4.0%	\$882	\$387	18.9%	4.5%	2.2%	\$6.88	\$1.06	1.4%	\$83.65	\$62.65	10.6
2010	1,431	65	4.5	799	338	19.2	5.2	2.7	6.36	0.98	1.6	79.75	45.99	9.9
2009	1,276	63	4.9	625	281	22.4	3.4	2.8	5.84	0.90	2.0	67.98	22.80	7.8
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

WESTLAKE CHEMICAL

2011	\$3,620	\$259	7.2%	\$3,266	\$1,756	14.7%	4.9%	ne	\$3.89	\$0.27	0.5%	\$66.18	\$32.31	12.7
2010	3,171	221	7.0	2,954	1,505	14.7	2.6	ne	3.35	0.24	0.8	43.59	17.56	9.1
2009	2,326	53	2.3	2,446	1,285	4.1	4.3	ne	0.80	0.22	1.1	28.18	10.40	24.1
2008	3,692	-30	def	2,287	1,239	def	4.7	ne	def	0.21	1.4	17.73	12.45	def

PHARMACEUTICALS & BIOPHARMACEUTICALS

ABBOTT LABORATORIES

2011	\$38,851	\$4,728	12.2%	\$23,768	\$8,820	53.6%	3.8%	10.6%	\$3.03	\$1.92	3.8%	\$56.44	\$45.07	16.8
2010	35,166	4,626	13.2	31,381	6,546	70.7	2.9	10.6	2.98	1.76	3.2	56.79	52.86	18.4
2009	30,765	5,746	18.7	32,924	3,407	168.7	3.5	8.9	3.69	1.60	3.2	57.39	41.27	13.4
2008	29,528	4,734	16.0	27,281	2,341	202.2	4.4	9.1	3.12	1.44	2.6	60.50	49.45	17.6

AMGEN

2011	\$15,295	\$3,683	24.1%	\$37,121	\$7,279	50.5%	3.7%	20.7%	\$4.07	\$0.92	1.6%	\$64.74	\$48.27	13.9
2010	14,660	4,627	31.6	29,922	10,380	44.6	4.0	19.7	4.82	ne	ne	61.14	50.36	11.6
2009	14,351	4,605	32.1	25,727	11,332	40.6	3.7	20.0	4.51	ne	ne	64.41	45.11	12.1
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

BIAGEN IDEC

2011	\$3,836	\$1,267	33.0%	\$7,903	\$5,281	23.9%	5.4%	31.8%	\$5.09	ne	ne	\$120.66	\$64.28	18.2
2010	3,470	1,005	29.0	5,173	2,477	40.6	5.0	36.0	3.98	ne	ne	68.60	45.96	14.4
2009	3,153	977	31.0	7,413	5,123	19.1	5.3	40.7	3.35	ne	ne	54.00	41.75	14.3
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

BRISTOL-MYERS SQUIBB

2011	\$21,244	\$3,709	17.5%	\$27,384	\$10,281	36.0%	1.7%	18.1%	\$2.18	\$1.33	4.4%	\$35.29	\$24.97	13.8
2010	19,484	3,102	15.9	25,843	10,480	29.6	2.2	18.3	1.80	1.28	5.1	27.93	22.44	14.0
2009	18,808	3,239	17.2	22,925	6,702	48.3	3.9	19.4	1.63	1.25	5.8	25.56	17.51	13.2
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

ELI LILLY & CO.

2011	\$24,287	\$4,348	17.9%	\$28,592	\$8,408	51.7%	2.8%	20.7%	\$3.90	\$1.96	5.2%	\$41.75	\$33.63	9.7
2010	23,076	5,069	22.0	26,182	7,594	66.8	3.0	21.2	4.58	1.96	5.6	37.35	32.25	7.6
2009	21,836	4,329	19.8	25,540	7,604	56.9	3.5	19.8	3.94	1.96	5.8	40.57	27.47	8.6
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

JOHNSON & JOHNSON

2011	\$65,030	\$9,672	14.9%	\$97,506	\$40,942	23.6%	4.4%	11.6%	\$3.54	\$2.25	3.6%	\$68.05	\$57.50	17.7
2010	61,587	13,334	21.7	87,614	24,569	54.3	3.9	11.1	4.85	2.11	3.4	65.99	57.02	12.7
2009	61,897	12,266	19.8	63,497	19,403	63.2	3.8	11.3	4.40	1.93	3.5	65.41	46.25	12.7
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

MERCK & CO. (k)

2011	\$48,047	\$6,272	13.1%	\$92,973	\$42,788	14.6%	3.6%	17.6%	\$2.04	\$1.52	4.5%	\$37.90	\$29.47	16.5
2010	45,987	982	2.1	53,947	41,998	2.3	3.6	23.9	0.28	1.52	4.2	41.56	30.70	129.0
2009	27,428	13,024	47.5	52,512	49,569	26.3	5.3	21.3	5.65	0.26	0.9	38.42	16.32	4.8
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

PFIZER (l)

2011	\$67,425	\$10,009	14.8%	\$142,935	\$37,554	26.6%	2.5%	13.5%	\$1.27	\$0.80	4.2%	\$21.90	\$16.63	15.2
2010	67,809	8,257	12.2	93,509	44,318	18.6	2.2	13.9	1.03	0.72	4.2	20.36	14.00	16.7
2009	50,009	8,635	17.3	102,558	48,070	18.0	2.4	15.7	1.23	0.80	5.2	18.99	11.62	12.4
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

k Acquired Schering-Plough in 2009. l Acquired Wyeth in 2009. def = deficit. ne = nonexistent.

EUROPE COMPANY RESULTS

Profits slipped for many European firms in 2011

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 (a)														
2011	\$11,297	\$344	3.0%	\$21,082	\$3,272	10.5%	7.4%	1.9%	\$4.22	\$3.20	2.7%	€111.60	€61.50	28.6
2010	8,302	2,474	29.8	18,869	9,096	27.2	4.8	2.1	30.37	3.20	3.1	81.90	67.80	3.4
2009	11,821	719	6.1	17,147	6,857	10.5	5.4	6.5	8.75	3.06	3.7	77.80	42.00	9.5
2008	13,221	564	4.3	13,752	3,277	17.2	8.0	5.9	13.10	3.06	2.9	97.90	51.45	7.9
FINLAND														
Kemira (b)														
2011	\$3,075	\$189	6.1%	\$2,790	\$971	19.4%	4.5%	1.8%	\$1.24	\$0.74	5.2%	€12.67	€7.80	11.5
2010	3,010	154	5.1	2,592	951	16.2	3.5	1.9	1.02	0.67	4.6	13.19	7.89	14.4
2009	3,483	113	3.2	2,865	709	15.9	3.2	1.9	0.85	0.38	3.5	11.63	3.87	12.7
2008	3,946	-3	def	2,916	292	def	5.3	2.5	def	0.32	2.5	13.43	4.93	def
FRANCE														
Air Liquide														
2011	\$20,141	\$2,138	10.6%	\$26,368	\$6,686	32.0%	12.1%	1.3%	\$7.54	\$3.48	2.8%	€100.65	€80.90	16.8
2010	18,791	1,955	10.4	24,348	5,644	34.6	10.7	1.3	6.92	3.27	2.7	99.15	75.42	17.6
2009	16,684	1,714	10.3	22,216	4,281	40.0	11.8	1.3	6.55	3.13	3.2	84.40	55.03	14.8
2008	18,255	1,700	9.3	22,216	3,106	54.7	14.6	1.2	6.51	3.13	3.0	95.65	55.78	16.2
Arkema														
2011	\$8,220	-\$21	def	\$6,346	\$2,006	def	7.2%	2.2%	def	\$1.81	2.2%	€78.50	€37.40	def
2010	8,227	483	5.9	6,024	2,432	19.9%	5.3	2.4	\$7.90	1.39	2.5	55.30	23.71	7.0
2009	6,191	-240	def	4,826	1,856	def	6.8	3.1	def	0.84	3.0	29.94	9.94	def
2008	7,848	139	1.8	5,582	2,162	6.4	5.9	2.7	2.30	0.84	2.1	45.75	10.93	17.2
GERMANY														
BASF (c)														
2011	\$102,392	\$8,621	8.4%	\$68,621	\$18,760	46.0%	4.6%	2.2%	\$9.38	\$3.48	4.4%	€69.40	€43.66	8.4
2010	88,984	6,349	7.1	65,684	14,505	43.8	4.0	2.3	6.91	3.06	4.3	61.73	39.43	10.2
2009	70,623	1,964	2.8	56,867	11,368	17.3	4.9	2.8	2.15	2.37	5.3	43.95	20.71	21.0
2008	86,799	4,057	4.7	57,079	12,306	33.0	4.0	2.2	4.36	2.72	5.4	52.41	19.95	11.6
Bayer														
2011	\$50,889	\$3,441	6.8%	\$60,748	\$14,086	24.4%	4.4%	8.0%	\$4.17	\$2.30	3.4%	€59.35	€36.82	16.1
2010	48,883	1,812	3.7	59,214	13,784	13.1	4.3	8.7	2.19	2.09	2.9	58.62	44.12	32.7
2009	43,422	1,893	4.4	58,983	14,276	13.3	5.1	8.8	2.37	1.95	3.1	56.45	32.69	26.2
2008	45,860	2,395	5.2	61,109	10,717	22.3	5.3	8.1	3.09	1.95	2.7	65.68	36.83	23.1
Lanxess														
2011	\$12,225	\$705	5.8%	\$9,062	\$2,370	29.7%	7.7%	1.6%	\$8.47	\$1.18	1.8%	€64.08	€31.34	7.8
2010	9,919	528	5.3	7,579	2,138	24.7	7.0	1.6	6.35	0.98	1.6	59.49	25.89	9.4
2009	7,045	56	0.8	6,787	1,740	3.2	5.4	2.0	0.67	0.70	2.6	27.64	11.06	40.3
2008	9,161	255	2.8	6,195	1,663	15.3	5.2	1.5	3.06	0.70	2.2	34.37	10.28	10.1
Linde														
2011	\$19,207	\$1,636	8.5%	\$24,724	\$1,360	120.3%	9.9%	0.7%	\$9.50	\$3.48	2.3%	€125.80	€96.16	16.3
2010	17,927	1,400	7.8	21,709	79	1,763.2	10.1	0.7	8.16	3.06	2.3	115.30	76.70	16.4
2009	15,619	823	5.3	19,178	-1,989	def	10.1	0.8	4.85	2.51	2.6	87.95	49.66	19.8
2008	17,641	999	5.7	19,161	-2,537	def	11.6	0.8	5.91	2.51	2.5	97.90	46.51	17.0

NOTE: Monetary statistics, except stock prices, for all years were converted at the 2011 average exchange rate of \$1.00 U.S. = 0.7178 euros, 0.8862 Swiss francs, and 0.6233 pounds sterling. **a** Sold its pharmaceuticals unit in 2010, changed its accounting procedures in 2010, and bought Rhodia in 2011. **b** Spun off Tikkurila in 2010. **c** Conducted a two-for-one stock split in 2008. Acquired Ciba in 2009 and Cognis in 2010. **def** = deficit.

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)														
Merck (d)														
2011	\$13,800	\$860	6.2%	\$14,427	-\$1,771	def	3.7%	15.3%	\$3.96	\$2.09	2.2%	€78.47	€56.82	23.8
2010	12,439	881	7.1	13,798	-2,943	def	4.4	15.6	4.05	1.74	1.9	72.28	57.62	22.3
2009	10,278	510	5.0	12,697	2,668	19.1%	6.3	18.2	2.34	1.39	1.5	74.37	57.24	39.2
2008	10,529	511	4.9	10,367	1,894	27.0	5.2	16.3	2.35	2.09	2.0	93.79	57.67	44.8
Wacker														
2011	\$6,840	\$491	7.2%	\$8,647	\$3,621	13.6%	15.9%	3.5%	\$9.89	\$3.06	1.9%	€172.80	€57.49	16.2
2010	6,615	684	10.3	7,618	3,362	20.3	13.0	3.5	13.76	4.46	2.7	149.65	87.47	12.0
2009	5,182	-99	def	6,297	2,675	def	20.7	4.4	def	1.67	1.4	122.60	46.60	def
2008	5,988	612	10.2	6,409	2,867	21.3	17.4	3.8	12.32	2.51	1.4	197.70	62.23	14.7
NETHERLANDS														
AkzoNobel (e)														
2011	\$21,868	\$665	3.0%	\$17,382	\$3,275	20.3%	4.5%	2.3%	\$2.81	\$2.02	3.5%	€53.74	€29.25	20.5
2010	20,396	1,050	5.2	17,813	3,066	34.3	3.6	2.3	4.47	1.95	3.3	47.70	37.18	13.2
2009	19,355	397	2.1	16,010	1,194	33.3	3.8	2.4	1.69	1.88	3.7	46.52	26.01	30.0
2008	21,475	-1,513	def	16,108	1,032	def	3.5	2.3	def	2.51	4.5	57.11	22.85	def
DSM														
2011	\$12,807	\$1,134	8.9%	\$13,055	\$5,834	19.4%	4.6%	4.1%	\$6.71	\$2.02	3.7%	€46.82	€30.54	8.0
2010	12,608	706	5.6	13,110	6,279	11.2	4.1	3.7	4.19	1.88	3.7	42.85	30.43	12.2
2009	11,594	469	4.0	11,927	5,514	8.5	4.6	3.7	2.80	1.67	4.6	34.84	16.93	12.9
2008	13,150	804	6.1	11,776	4,869	16.5	5.7	4.2	4.78	1.67	4.2	41.27	15.76	8.3
SWITZERLAND														
Clariant (f)														
2011	\$8,316	\$256	3.1%	\$8,259	\$1,426	18.0%	5.0%	2.4%	\$0.89	\$0.34	2.2%	CHF 19.93	CHF 6.88	17.0
2010	8,034	203	2.5	6,378	1,734	11.7	3.1	1.9	0.82	ne	ne	19.73	10.85	20.9
2009	7,463	-232	def	6,543	1,808	def	2.0	2.3	def	ne	ne	12.22	3.71	def
2008	9,107	-51	def	6,390	1,923	def	3.3	2.3	def	ne	ne	12.64	6.10	def
Givaudan														
2011	\$4,418	\$284	6.4%	\$4,686	\$1,052	27.0%	4.8%	7.5%	\$31.09	\$24.83	2.6%	CHF 1016.00	CHF 703.50	31.2
2010	4,783	384	8.0	4,760	836	45.9	2.8	7.9	42.46	24.26	2.3	1,062.00	821.50	25.0
2009	4,467	225	5.0	4,592	-228	def	2.4	8.2	28.18	23.25	2.9	878.50	567.00	28.9
2008	4,612	125	2.7	4,417	-1,117	def	4.7	8.4	16.78	11.28	1.1	1,071.00	710.00	59.9
Lonza (g)														
2011	\$3,038	\$174	5.7%	\$5,595	\$332	52.4%	9.2%	3.5%	\$3.35	\$2.43	3.3%	CHF 81.70	CHF 46.89	21.6
2010	3,024	328	10.9	4,654	1,956	16.8	10.6	3.7	6.24	2.43	2.7	90.85	66.00	14.2
2009	3,035	183	6.0	4,766	1,883	9.7	18.8	3.8	3.58	1.97	1.8	120.10	71.50	30.2
2008	3,314	474	14.3	5,513	1,347	35.2	21.2	3.7	9.20	1.97	1.4	158.30	83.95	14.9
Syngenta														
2011	\$13,268	\$1,599	12.1%	\$14,372	\$4,634	34.5%	3.6%	8.5%	\$17.31	\$7.90	2.6%	CHF 324.30	CHF 211.10	17.5
2010	11,641	1,397	12.0	14,198	4,362	32.0	3.4	8.9	14.99	6.77	2.3	305.50	222.00	19.9
2009	10,992	1,371	12.5	13,594	4,053	33.8	5.9	8.7	14.62	6.77	2.4	292.10	211.00	19.4
2008	11,624	1,385	11.9	11,501	2,818	49.1	3.8	8.3	14.63	6.77	2.4	342.50	162.90	19.5
PHARMACEUTICALS														
FRANCE														
Sanofi														
2011	\$46,516	\$7,931	17.1%	\$139,544	\$78,558	10.1%	5.3%	14.4%	\$5.98	\$3.69	5.3%	€56.82	€42.85	11.6
2010	42,329	7,616	18.0	118,785	74,238	10.3	5.2	14.5	5.82	3.48	4.9	58.90	44.01	12.3
2009	40,828	7,335	18.0	111,520	67,492	10.9	6.1	15.6	5.61	3.34	5.0	56.78	38.43	11.8
2008	38,406	5,365	14.0	100,288	62,790	8.5	5.8	16.6	4.10	3.06	4.3	66.90	36.06	17.5

NOTE: Monetary statistics, except stock prices, for all years were converted at the 2011 average exchange rate of \$1.00 U.S. = 0.7178 euros, 0.8862 Swiss francs, and 0.6233 pounds sterling. **d** Purchased Millipore in 2010. **e** Acquired ICI in 2008. **f** Purchased Süd-Chemie in 2011. **g** Purchased Arch Chemicals in 2011. **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)

SWITZERLAND

Novartis

2011	\$58,566	\$9,113	15.6%	\$117,496	\$65,940	13.8%	3.7%	16.4%	\$3.78	\$2.54	4.7%	CHF 55.80	CHF 39.99	14.3
2010	50,624	9,794	19.3	123,318	69,769	14.0	3.3	17.9	4.26	2.48	4.0	60.25	50.55	14.7
2009	44,267	8,400	19.0	95,505	57,462	14.6	4.3	16.9	3.69	2.37	4.4	56.90	39.64	14.8
2008	41,459	8,195	19.8	78,299	50,437	16.2	5.1	17.4	3.59	2.26	3.6	66.25	45.62	17.6

Roche

2011	\$47,993	\$10,543	22.0%	\$69,483	\$16,342	64.5%	4.6%	19.6%	\$12.39	\$7.67	4.7%	CHF 167.00	CHF 123.80	13.2
2010	53,569	9,779	18.3	68,856	13,160	74.3	5.6	21.1	11.41	7.45	4.0	191.70	134.30	16.1
2009	55,350	8,784	15.9	84,140	10,623	82.7	6.1	20.1	10.18	6.77	3.8	182.10	130.30	17.3
2008	51,475	10,121	19.7	85,860	60,733	16.7	6.9	19.4	11.54	5.64	2.6	229.50	155.20	18.8

UNITED KINGDOM


AstraZeneca

2011	\$33,591	\$9,983	29.7%	\$52,830	\$23,472	42.5%	2.5%	16.4%	\$7.30	\$2.82	6.1%	£31.94	£25.44	6.3
2010	33,269	8,053	24.2	56,127	23,410	34.4	2.4	16.0	5.57	2.59	5.3	33.85	27.32	8.8
2009	32,804	7,521	22.9	54,920	20,821	36.1	2.9	13.4	5.19	2.27	5.6	29.47	21.47	7.9
2008	31,601	6,101	19.3	46,784	16,060	38.0	3.5	16.4	4.20	2.13	5.7	28.88	17.48	8.9

GlaxoSmithKline

2011	\$43,939	\$9,207	21.0%	\$65,907	\$14,162	65.0%	3.4%	14.3%	\$1.65	\$1.20	5.8%	£14.74	£11.28	12.6
2010	45,551	4,399	9.7	67,752	15,635	28.1	3.6	14.0	0.51	1.04	5.3	13.40	10.95	38.0
2009	45,513	9,859	21.7	68,766	17,234	57.2	5.0	13.9	1.73	0.98	5.3	13.34	9.87	10.7
2008	39,069	8,729	22.3	63,201	13,345	65.4	5.9	14.4	1.41	0.91	4.8	13.85	9.95	13.5

NOTE: Monetary statistics, except stock prices, for all years were converted at the 2011 average exchange rate of \$1.00 U.S. = 0.7178 euros, 0.8862 Swiss francs, and 0.6233 pounds sterling.



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mt of cGMP intermediates produced


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JAPAN COMPANY RESULTS

High profits weren't always part of the equation, but several companies offered attractive return on equity

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)														
ASAHI KASEI														
2011	\$19,739	\$700	3.5%	\$17,698	\$8,743	8.0%	4.9%	4.2%	\$0.50	\$0.18	2.8%	¥565	¥438	12.6
2010	20,055	756	3.8	17,891	8,273	9.1	4.1	3.9	0.54	0.14	2.2	590	415	11.7
2009	17,987	317	1.8	17,176	7,690	4.1	5.9	4.4	0.23	0.13	2.3	513	355	24.0
2008	19,487	60	0.3	17,307	7,517	0.8	8.2	3.9	0.04	0.13	2.1	636	295	137.3
DIC (a)														
2011	\$9,213	\$228	2.5%	\$8,470	\$2,926	7.8%	3.6%	1.2%	\$0.25	\$0.05	2.5%	¥207	¥118	8.2
2010	9,774	198	2.0	8,830	2,744	7.2	2.7	1.5	0.22	0.05	2.2	222	135	10.1
2009	9,509	32	0.3	9,409	1,541	2.1	3.1	1.6	0.04	0.05	2.5	205	118	50.3
2008	11,698	33	0.3	9,265	1,367	2.4	4.7	1.6	0.04	0.08	2.4	367	124	73.3
JSR CORP.														
2011	\$4,391	\$331	7.5%	\$5,404	\$3,567	9.3%	5.6%	5.0%	\$1.37	\$0.40	2.2%	¥1,734	¥1,231	13.5
2010	4,274	346	8.1	4,901	3,332	10.4	3.5	5.0	1.42	0.40	2.0	1,975	1,208	14.1
2009	3,892	171	4.4	4,687	3,139	5.5	5.7	5.9	0.70	0.33	1.7	1,966	1,145	27.8
2008	4,423	175	4.0	4,260	3,071	5.7	5.4	6.1	0.71	0.40	2.0	2,455	801	28.9
KANEKA														
2011	\$5,888	\$68	1.2%	\$5,861	\$3,196	2.1%	7.0%	4.3%	\$0.20	\$0.20	3.2%	¥593	¥398	31.0
2010	5,694	146	2.6	5,711	3,207	4.5	6.4	4.0	0.43	0.20	3.0	617	465	15.8
2009	5,176	105	2.0	5,431	3,131	3.4	5.9	4.0	0.31	0.20	2.7	706	484	24.0
2008	5,641	-23	def	5,251	3,095	def	7.6	3.8	def	0.20	2.5	798	471	def
MITSUBISHI CHEMICAL HOLDINGS (b)														
2011	\$40,253	\$445	1.1%	\$39,824	\$9,670	4.6%	3.6%	4.3%	\$0.30	\$0.13	1.9%	¥612	¥414	21.3
2010	39,734	1,049	2.6	41,330	9,514	11.0	3.7	4.1	0.74	0.13	1.9	641	398	8.8
2009	31,557	161	0.5	42,097	8,451	1.9	4.7	5.4	0.12	0.10	2.1	481	294	41.6
2008	26,224	-843	def	34,390	8,394	def	6.7	6.1	def	0.15	2.3	758	299	def
MITSUMI CHEMICALS														
2011	\$18,244	-\$13	def	\$15,763	\$4,975	def	3.1%	2.3%	def	\$0.08	2.3%	¥306	¥227	def
2010	17,462	312	1.8%	16,256	5,063	6.2%	3.2	2.6	\$0.31	0.08	2.2	332	208	10.9
2009	15,154	-351	def	15,534	4,828	def	4.1	3.2	def	0.04	1.0	382	202	def
2008	18,665	-1,195	def	14,918	4,572	def	5.4	2.8	def	0.11	2.0	685	206	def
SHIN-ETSU CHEMICAL														
2011	\$13,146	\$1,263	9.6%	\$22,708	\$18,235	6.9%	8.3%	3.4%	\$2.97	\$1.25	2.4%	¥4,870	¥3,495	17.6
2010	13,278	1,256	9.5	22,386	17,902	7.0	10.8	3.5	2.96	1.25	2.2	5,700	3,540	19.6
2009	11,504	1,052	9.1	22,197	17,957	5.9	13.2	3.7	2.48	1.25	2.0	6,000	4,200	25.8
2008	15,067	1,941	12.9	21,141	17,140	11.3	13.3	3.1	4.55	1.25	1.9	6,920	3,400	14.2
SHOWA DENKO														
2011	\$10,717	\$213	2.0%	\$11,811	\$3,156	6.8%	4.5%	2.5%	\$0.14	\$0.04	1.8%	¥193	¥139	14.6
2010	10,002	159	1.6	11,600	3,005	5.3	7.3	2.6	0.11	0.04	1.8	208	132	20.0
2009	8,509	-477	def	12,024	3,598	def	5.7	3.1	def	0.04	1.8	217	109	def
2008	12,596	31	0.2	12,070	3,331	0.9	5.5	2.0	0.02	0.06	2.0	386	114	127.6
SUMITOMO CHEMICAL														
2011	\$24,440	\$70	0.3%	\$29,322	\$9,045	0.8%	8.0%	6.3%	\$0.04	\$0.11	2.6%	¥437	¥261	102.0
2010	24,874	307	1.2	29,703	9,522	3.2	5.0	7.0	0.19	0.11	2.2	483	332	27.4
2009	20,338	185	0.9	29,911	10,307	1.8	6.4	7.2	0.11	0.08	1.5	484	325	45.3
2008	22,437	-742	def	25,377	9,732	def	7.5	7.3	def	0.11	1.7	785	264	def

NOTE: Monetary statistics, except stock prices, for all years were converted at the 2011 average exchange rate of \$1.00 = 79.70 yen. Statistics were prepared on the basis of consolidated results. The fiscal year ends on March 31 of the following calendar year, except for Showa Denko's, which ends on Dec. 31. **a** Formerly Dainippon Ink & Chemicals. **b** Holding firm made up of Mitsubishi Chemical, Mitsubishi Rayon, Mitsubishi Tanabe Pharma, and Mitsubishi Plastics. **def** = deficit.

FINANCES

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)														
TEIJIN														
2011	\$10,720	\$150	1.4%	\$9,562	\$3,664	4.1%	3.6%	3.7%	\$0.15	\$0.08	2.0%	¥399	¥216	25.3
2010	10,234	316	3.1	9,555	3,566	8.9	3.6	3.9	0.32	0.06	1.5	423	254	13.2
2009	9,609	-448	def	10,327	3,404	def	4.7	4.4	def	0.03	0.7	335	213	def
2008	11,837	-539	def	10,968	3,834	def	8.0	4.0	def	0.06	1.6	441	168	def
TORAY INDUSTRIES														
2011	\$19,927	\$806	4.0%	\$19,843	\$7,868	10.2%	6.2%	3.2%	\$0.49	\$0.13	1.7%	¥630	¥513	14.5
2010	19,319	727	3.8	19,667	7,439	9.8	3.6	3.4	0.46	0.09	1.4	633	423	14.5
2009	17,059	-178	def	19,533	5,911	def	4.2	3.4	def	0.06	1.0	568	395	def
2008	18,464	-205	def	19,117	6,432	def	6.3	3.4	def	0.09	1.4	691	352	def
TOSOH														
2011	\$8,621	\$118	1.4%	\$8,892	\$2,146	5.5%	2.8%	1.9%	\$0.20	\$0.08	2.2%	¥350	¥205	17.7
2010	8,587	126	1.5	9,108	2,067	6.1	3.6	2.0	0.21	0.08	2.3	304	210	15.4
2009	7,888	86	1.1	9,281	2,039	4.2	4.8	2.2	0.14	0.08	2.4	316	186	21.8
2008	9,203	-317	def	9,571	1,945	def	6.7	2.0	def	0.08	1.9	498	138	def
NOTE: Monetary statistics, except stock prices, for all years were converted at the 2011 average exchange rate of \$1.00 = 79.70 yen. Statistics were prepared on the basis of consolidated results. The fiscal year ends on March 31 of the following calendar year, except for Showa Denko's, which ends on Dec. 31. def = deficit.														

U.S. CAPITAL SPENDING

Chemical firms increased investments by 21.1% in 2011, with biggest percent gains at Eastman, Cabot, and Albemarle

\$ MILLIONS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Air Products & Chemicals (a)	\$708	\$628	\$613	\$706	\$930	\$1,261	\$1,055	\$1,085	\$1,179	\$1,298	\$1,352
Albemarle	50	38	41	58	70	100	99	100	101	76	191
Cabot (a)	122	146	129	119	186	188	141	199	106	108	230
Cytec Industries	64	62	94	89	105	103	115	196	194	116	117
Dow Chemical (b)	1,587	1,623	1,100	1,333	1,597	1,775	2,075	2,276	1,410	2,130	2,687
DuPont (c)	1,634	1,280	1,713	1,232	1,340	1,532	1,585	1,978	1,378	1,501	1,843
Eastman Chemical	234	427	230	248	343	289	518	634	137	243	457
FMC Corp. (d)	146	84	87	85	94	116	115	175	93	142	190
H.B. Fuller (e)	31	36	39	31	25	21	21	20	23	36	21
W.R. Grace	63	91	86	63	81	119	137	132	94	113	142
Monsanto (f)	382	224	206	210	281	370	509	918	916	755	540
NewMarket Corp. (g)	10	13	12	15	18	26	31	32	38	34	54
PPG Industries	291	238	217	244	288	372	353	383	239	341	390
Praxair	595	498	983	668	877	1,100	1,376	1,611	1,352	1,388	1,797
Quaker Chemical	8	11	13	9	7	12	9	12	14	9	12
Solutia	94	59	78	61	81	106	150	84	44	66	105
Stepan	34	36	33	34	42	46	40	50	43	74	83
TOTAL	\$6,053	\$5,494	\$5,674	\$5,205	\$6,365	\$7,536	\$8,329	\$9,885	\$7,361	\$8,430	\$10,211

NOTE: Prior years are not restated to reflect company revisions. **a** Fiscal year ends on Sept. 30. **b** Acquired Union Carbide in 2001 and Rohm and Haas in 2009. **c** Sold drug operations in 2001. Acquired Danisco in 2011. **d** Machinery business split off in 2001. **e** Fiscal year ends on Dec. 31. **f** Spun off from Pharmacia in 2002. Fiscal year ends on Aug. 31. **g** Formerly Ethyl Corp.

EUROPE CAPITAL SPENDING

Spending on equipment last year climbed to its highest level in a decade

\$ MILLIONS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Air Liquide (France)	\$1,072	\$1,268	\$1,020	\$1,219	\$1,358	\$1,572	\$1,893	\$2,658	\$1,966	\$2,020	\$2,445
AkzoNobel (Netherlands) (a)	1,145	960	809	768	713	737	500	744	744	744	986
Arkema (France) (b)	ne	ne	412	418	464	468	453	467	419	439	591
BASF (Germany) (c)	4,231	3,729	3,194	2,689	2,714	3,359	3,571	3,512	3,493	3,550	4,751
Bayer (Germany)	3,646	3,320	1,988	1,388	1,934	2,423	2,591	2,451	2,194	2,109	2,250
Clariant (Switzerland) (d)	570	383	340	326	393	404	345	305	152	253	418
DSM (Netherlands)	908	701	603	465	559	698	538	754	536	515	589
Givaudan (Switzerland)	129	104	178	168	182	191	219	219	107	135	211
Kemira (Finland) (e)	415	339	326	222	157	228	343	210	112	105	137
Lanxess (Germany) (f)	ne	ne	435	389	350	372	396	476	383	698	946
Linde (Germany)	1,013	1,208	1,193	1,000	1,204	1,353	1,441	2,048	1,584	1,814	1,904
Lonza (Switzerland) (g)	298	393	478	281	307	419	673	702	570	322	280
Merck (Germany) (h)	655	525	391	326	373	352	394	550	651	552	510
Solvay (Belgium) (i)	1,004	871	773	786	704	809	1,082	1,063	635	398	839
Syngenta (Switzerland)	253	165	211	166	174	217	317	444	652	396	479
Wacker (Germany) (j)	ne	ne	ne	ne	424	674	784	1,041	1,073	860	1,088
TOTAL (k)	\$15,339	\$13,964	\$12,353	\$10,611	\$12,008	\$14,275	\$15,540	\$17,643	\$15,273	\$14,910	\$18,424

NOTE: Monetary statistics for all years were converted at the 2011 average exchange rate of \$1.00 U.S. = 0.7178 euros and 0.8862 Swiss francs. **a** Divested pharmaceuticals in 2007 and purchased ICI in 2008. **b** Spun off from Total in 2006; prior figures are pro forma. **c** Acquired Engelhard in 2006. Purchased Ciba in 2009 and Cognis in 2010. **d** Purchased Sud-Chemie in 2011. **e** Spun off Tikkurila in 2010. **f** Spun off from Bayer in 2005; prior figures are pro forma. **g** Purchased Arch Chemicals in 2011. **h** Purchased Millipore in 2010. **i** Sold its pharmaceuticals unit in 2010, bought Rhodia in 2011, and changed accounting procedures beginning in 2010. **j** Became a publicly traded company in 2005. **k** For companies reporting. **ne** = nonexistent.

JAPAN CAPITAL SPENDING

Led by Sumitomo, investment increased 11.3% in 2011

\$ MILLIONS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Asahi Kasei	\$939	\$1,179	\$1,084	\$859	\$832	\$1,059	\$1,040	\$1,590	\$1,054	\$828	\$973
DIC (a)	633	541	574	574	528	619	489	552	296	261	334
JSR Corp.	166	201	215	228	293	277	365	239	222	148	248
Kaneka	303	223	288	290	436	446	396	426	305	367	415
Mitsubishi Chemical Holdings (b)	1,252	1,071	870	842	1,228	1,642	2,134	1,744	1,493	1,478	1,457
Mitsui Chemicals	1,476	863	574	591	1,021	912	1,062	1,017	615	566	562
Shin-Etsu Chemical	1,023	823	1,278	1,333	1,503	2,643	3,369	2,000	1,521	1,429	1,094
Showa Denko	405	357	513	375	517	1,140	870	688	485	728	487
Sumitomo Chemical	916	1,907	1,383	1,578	1,567	2,006	1,788	1,683	1,295	1,239	1,946
Teijin	702	881	665	679	838	950	1,062	951	456	367	386
Toray Industries	820	718	612	917	1,306	1,586	1,842	1,159	716	702	1,234
Tosoh	211	152	267	569	406	1,007	912	617	377	310	242
TOTAL	\$8,846	\$8,917	\$8,323	\$8,837	\$10,476	\$14,286	\$15,329	\$12,665	\$8,837	\$8,423	\$9,378

NOTE: Monetary statistics for all years were converted at the 2011 average exchange rate of \$1.00 U.S. = 79.70 yen. Fiscal year ends on March 31 of the following calendar year, except Showa Denko's, which ends on Dec. 31. **a** Formerly Dainippon Ink & Chemicals. **b** Holding firm made up of Mitsubishi Chemical, Mitsubishi Rayon, Mitsubishi Tanabe Pharma, and Mitsubishi Plastics.

U.S. R&D SPENDING

Chemical firms raised spending by \$532 million; in pharma, spending fell after sharp cuts at Merck

CHEMICALS

\$ MILLIONS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Air Products & Chemicals (a)	\$123	\$121	\$121	\$127	\$133	\$151	\$140	\$131	\$116	\$115	\$119
Albemarle	22	17	18	31	42	46	63	67	61	58	77
Cabot (a)	48	48	64	53	59	58	69	74	71	70	66
Cytec Industries	32	34	35	40	69	74	76	82	75	73	85
Dow Chemical (b)	1,072	1,066	981	1,022	1,073	1,164	1,305	1,310	1,492	1,660	1,646
DuPont (c)	1,588	1,264	1,349	1,333	1,336	1,302	1,338	1,393	1,378	1,651	1,956
Eastman Chemical	160	159	173	154	162	167	156	158	137	152	158
FMC Corp. (d)	100	82	87	93	94	97	95	94	93	101	105
H.B. Fuller (e)	19	18	18	16	16	17	17	17	17	19	21
W.R. Grace	50	52	52	51	59	64	80	83	70	60	69
Monsanto (f)	560	527	510	511	588	725	780	980	1,098	1,205	1,386
NewMarket Corp. (g)	33	30	28	33	65	70	77	82	86	91	54
PPG Industries	266	289	306	303	309	318	354	451	403	408	430
Praxair	66	69	75	77	80	87	98	97	74	79	90
Quaker Chemical	9	9	10	14	14	13	15	17	15	16	19
Solutia	58	39	53	44	45	45	45	12	10	18	24
Stepan	14	15	15	15	30	30	31	34	36	38	41
TOTAL	\$4,220	\$3,839	\$3,895	\$3,917	\$4,174	\$4,428	\$4,739	\$5,082	\$5,232	\$5,814	\$6,346

PHARMACEUTICALS

\$ MILLIONS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Abbott Laboratories	\$1,578	\$1,562	\$1,734	\$1,697	\$1,821	\$2,255	\$2,506	\$2,689	\$2,744	\$3,724	\$4,129
Bristol-Myers Squibb (h)	2,259	2,218	2,279	2,500	2,746	3,067	3,282	3,585	3,647	3,566	3,839
Eli Lilly & Co.	2,019	2,235	2,350	2,149	3,025	3,129	3,487	3,841	4,327	4,884	5,021
Johnson & Johnson	3,591	2,957	4,684	5,203	6,312	7,125	7,680	7,577	6,986	6,844	7,548
Merck & Co. (i)	2,456	2,677	3,178	4,010	3,848	4,783	4,883	4,805	5,845	10,991	8,467
Pfizer (j)	4,847	5,176	7,131	7,684	7,442	7,599	8,089	7,945	7,845	9,413	9,112
TOTAL	\$16,750	\$16,825	\$21,356	\$23,243	\$25,194	\$27,958	\$29,927	\$30,442	\$31,394	\$39,422	\$38,116

NOTE: Prior years are not restated to reflect company revisions. **a** Fiscal year ends on Sept. 30. **b** Acquired Union Carbide in 2001 and Rohm and Haas in 2009. **c** Sold drug operations in 2001; acquired Danisco in 2011. **d** Machinery business split off in 2001. **e** Fiscal year ends on Dec. 3. **f** Spun off from Pharmacia in 2002. Fiscal year ends on Aug. 30. **g** Formerly Ethyl Corp. **h** Acquired DuPont Pharmaceuticals in 2001. **i** Acquired Schering-Plough in 2009. **j** Purchased Pharmacia in 2003. Acquired Wyeth in 2009.

EUROPE R&D SPENDING

European firms as a whole increased research outlays for the seventh consecutive year

\$ MILLIONS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Air Liquide (France)	\$126	\$128	\$131	\$143	\$149	\$162	\$187	\$223	\$224	\$243	\$259
AkzoNobel (Netherlands) (a)	1,180	1,255	1,236	1,147	1,128	1,233	393	492	471	465	496
Arkema (France) (b)	ne	ne	266	255	245	234	220	209	189	194	184
BASF (Germany) (c)	1,737	1,581	1,539	1,374	1,482	1,779	1,923	1,888	1,948	2,079	2,236
Bayer (Germany)	3,565	3,590	3,115	2,760	2,409	3,200	3,592	3,696	3,826	4,253	4,085
Clariant (Switzerland) (d)	462	397	348	309	246	234	238	208	169	152	199
DSM (Netherlands)	415	378	373	398	404	187	518	549	425	471	531
Givaudan (Switzerland)	225	232	245	235	248	278	419	388	368	379	332
Kemira (Finland) (e)	54	64	67	54	60	71	92	99	65	59	55
Lanxess (Germany) (f)	ne	ne	234	176	141	121	123	135	141	162	201
Linde (Germany)	234	238	240	231	240	280	135	145	124	131	137
Lonza (Switzerland) (g)	117	115	78	80	71	86	100	124	116	112	106
Merck (Germany) (h)	804	847	843	834	993	1,048	1,432	1,719	1,873	1,946	2,114
Solvay (Belgium) (i)	475	553	563	575	658	784	775	786	773	174	217
Syngenta (Switzerland)	723	697	727	809	822	796	830	969	960	1,032	1,127
Wacker (Germany) (j)	ne	ne	ne	ne	205	212	212	227	228	230	241
TOTAL (k)	\$10,117	\$10,077	\$10,005	\$9,381	\$9,501	\$10,704	\$11,188	\$11,857	\$11,901	\$12,081	\$12,518

NOTE: Monetary statistics for all years were converted at the 2011 average exchange rate of \$1.00 U.S. = 0.7178 euros and 0.8862 Swiss francs. **a** Divested pharmaceuticals in 2007. Purchased ICI in 2008. **b** Spun off from Total in 2006; prior figures are pro forma. **c** Acquired Engelhard in 2006. Purchased Ciba in 2009 and Cognis in 2010. **d** Purchased Süd-Chemie in 2011. **e** Spun off Tikkurila in 2010. **f** Spun off from Bayer in 2005; prior figures are pro forma. **g** Purchased Arch Chemicals in 2011. **h** Purchased Millipore in 2010. **i** Sold its pharmaceuticals unit in 2010, bought Rhodia in 2011, and changed accounting procedures beginning in 2010. **j** Became a publicly traded company in 2005. **k** For companies reporting. **ne** = nonexistent.

JAPAN R&D SPENDING

Total expenditures by Japanese firms decreased by about \$113 million

\$ MILLIONS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Asahi Kasei	\$622	\$619	\$456	\$457	\$450	\$468	\$705	\$763	\$789	\$782	\$832
DIC (a)	161	162	188	200	186	195	194	184	156	148	115
JSR Corp.	166	176	189	208	199	218	246	268	228	215	220
Kaneka	164	175	181	198	212	212	208	216	205	230	251
Mitsubishi Chemical Holdings (b)	1,061	1,142	1,111	1,119	1,124	1,144	1,406	1,604	1,717	1,641	1,738
Mitsui Chemicals	489	466	413	438	466	464	529	514	478	454	417
Shin-Etsu Chemical	354	342	330	350	402	524	602	466	421	468	448
Showa Denko	194	194	196	221	218	245	218	251	260	259	271
Sumitomo Chemical	837	914	943	981	1,153	1,226	1,322	1,645	1,472	1,733	1,535
Teijin	400	375	412	377	391	440	455	472	419	395	399
Toray Industries	467	447	448	482	498	530	575	627	580	652	646
Tosoh	123	130	129	128	139	159	171	181	173	168	162
TOTAL	\$5,038	\$5,142	\$4,997	\$5,158	\$5,437	\$5,825	\$6,632	\$7,191	\$6,898	\$7,146	\$7,033

NOTE: Monetary statistics for all years were converted at the 2011 average exchange rate of \$1.00 = 79.70 yen. Fiscal year ends on March 31 of following calendar year, except Showa Denko's, which ends on Dec. 31. **a** Formerly Dainippon Ink & Chemicals. **b** Holding firm made up of Mitsubishi Chemical, Mitsubishi Rayon, Mitsubishi Tanabe Pharma, and Mitsubishi Plastics.