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GLOBAL TOP 50

SALES TUMBLE as C&EN's ranking shows the full force of the recession

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ANYONE SEEKING to describe what 2009 was like for the chemical industry could dust off a copy of Charles Dickens' "A Tale of Two Cities" and recite the opening line: "It was the best of times, it was the worst of times ..." The contrast for the chemical industry isn't Dickens' light and darkness or wisdom and foolishness, although those metaphors might hold for the economy in general. The contradiction for the chemical industry was solid profitability in the face of plummeting sales.

The financial crisis and ensuing recession had devastating effects on chemical sales. Starting in the fourth quarter of 2008, shipments ground to a halt and prices for chemicals collapsed. The industry's customers, such as plastics converters, stopped buying raw materials. Instead, they processed the inventories they had or slowed production, selling off stocks of their own products.

C&EN's survey of the Global Top 50 chemical companies, which is based on 2009 data, reflects a year that began on the lowest of notes. And although conditions

improved from the depths of the crisis, the industry still hasn't fully recovered.

Together, chemical revenues at the 50 firms declined by 21.0% compared with 2008 to \$697 billion. All but four—South Korea's LG Chemical, India's Reliance Industries, the U.S.'s Mosaic, and South Africa's Sasol—posted sales declines in 2009.

Interestingly, profits held up better than sales did. Fifteen companies actually managed to increase chemical profits in 2009. And overall, the 46 companies that publicly disclose operating income posted \$49 billion in profits, a decline of only 6.2%. The same companies posted a sales decrease of 19.0%.

A few factors explain the relative strength of profitability. At the same time that chemical makers were watching sales decline, the prices of energy and raw materials were dropping as well. Plus, chemical

companies cut costs by laying off workers and restricting administrative budgets.

The sales decline had an impact on the companies making the ranking and the slots they occupy, but most of the familiar names are present. BASF swallowed a 17.8% sales decline in 2009, but the \$54.8 billion it took in was enough to put it at the top of C&EN's survey for the seventh consecutive year. Dow Chemical again came in second despite a 22.0% drop in sales.

Among the top firms, the biggest gainer was Sinopec (China Petroleum & Chemical Corp.), which jumped from number seven to number three. Its sales decline of only 13.4% allowed it to advance compared with companies that saw sales decline more sharply. Similarly, Taiwan's Formosa Plastics rose from 10th last year to seventh in the current ranking.

"Slow growth is probably where we are headed in the next few years."

GLOBAL TOP 50

Of the world's 50 leading chemical companies, 46 saw sales decline in 2009

RANK		COMPANY	CHEMICAL SALES (\$ MILLIONS)	CHANGE FROM 2008	CHEMICAL SALES AS % OF TOTAL SALES	HEAD-QUARTERS COUNTRY	CHEMICAL OPERATING PROFITS ^a (\$ MILLIONS)	CHANGE FROM 2008	PROFITS AS % OF TOTAL OPERATING PROFIT	OPERATING PROFIT MARGIN ^b	IDENTIFIABLE CHEMICAL ASSETS (\$ MILLIONS)	ASSETS AS % OF TOTAL ASSETS	RETURN ON CHEMICAL ASSETS ^c
2009	2008		2009	2008	2009	2009	2008	2008	2008	2008	2008	2008	2008
1	1	BASF	\$54,817	-17.8%	77.6%	Germany	\$1,934	-47.0%	37.7%	3.5%	\$59,876	83.8%	3.2%
2	2	Dow Chemical	44,875	-22.0	100.0	U.S.	1,741	-19.8	100.0	3.9	65,937	100.0	2.6
3	7	Sinopec	31,312	-13.4	15.9	China	1,993	nm	16.1	6.4	18,788	14.6	10.6
4	3	Ineos Group ^d	28,600	-39.1	100.0	England	na	na	na	na	na	na	na
5	5	ExxonMobil ^e	26,847	-30.1	8.9	U.S.	2,309	-21.9	12.0	8.6	24,161	10.4	9.6
6	8	DuPont ^d	25,960	-14.6	99.4	U.S.	2,474	-11.8	74.1	9.5	18,469	98.5	13.4
7	10	Formosa Plastics Group ^f	25,437	-14.7	61.9	Taiwan	1,666	21.3	55.6	6.5	31,381	70.1	5.3
8	11	Royal Dutch/Shell ^g	24,586	-43.5	8.8	Netherlands	na	na	na	na	na	na	na
9	6	SABIC	23,096	-32.9	84.0	Saudi Arabia	5,910	-41.8	77.4	25.6	65,658	82.9	9.0
10	9	Total	20,521	-26.9	11.2	France	771	nm	3.7	3.8	na	na	na
11	4	LyondellBasell	19,993	-40.0	64.9	Netherlands	616	nm	213.9	3.1	na	na	na
12	12	Bayer	19,551	-13.0	45.0	Germany	741	-63.4	17.7	3.8	22,655	31.9	3.3
13	13	AkzoNobel	19,360	-9.9	100.0	Netherlands	1,145	13.9	100.0	5.9	26,310	100.0	4.4
14	14	Mitsubishi Chemical	16,742	-18.5	62.4	Japan	-67	def	def	def	21,433	59.8	def
15	15	Air Liquide	15,303	-8.7	91.7	France	na	na	na	na	24,213	94.1	na
16	16	Evonik	14,030	-13.5	77.0	Germany	2,232	0.1	79.1	15.9	na	na	na
17	23	Sumitomo Chemical	13,121	-12.4	75.8	Japan	243	nm	44.2	1.8	14,566	57.2	1.7
18	19	Mitsui Chemicals	12,892	-18.8	100.0	Japan	-101	def	def	def	13,216	100.0	def
19	24	LG Chem	12,625	8.1	100.0	South Korea	1,752	69.0	100.0	13.9	3,973	100.0	44.1
20	26	Toray Industries	12,450	-9.0	85.8	Japan	347	8.5	81.1	2.8	14,396	86.6	2.4
21	20	Linde	12,447	-6.1	79.7	Germany	3,314	-1.6	99.7	26.6	29,661	87.3	11.2
22	27	Reliance Industries	12,240	4.8	27.9	India	1,788	24.4	46.4	14.6	9,476	177	18.9
23	21	PPG Industries	11,390	-18.3	93.1	U.S.	1,225	-19.4	103.3	10.8	10,722	75.3	11.4
24	22	DSM	10,962	-15.4	100.0	Netherlands	1,497	-1.0	100.0	13.7	13,397	100.0	11.2
25	34	Mosaic	10,298	4.9	100.0	U.S.	2,445	-13.8	100.0	23.7	12,676	100.0	19.3
26	28	Shin-Etsu Chemical ^d	9,782	-23.7	100.0	Japan	1,251	-49.7	100.0	12.8	18,885	100.0	6.6
27	18	Yara	9,763	-30.8	100.0	Norway	1,177	-30.7	100.0	12.1	9,802	100.0	12.0
28	38	Asahi Kasei	9,452	-7.5	61.8	Japan	326	nm	53.0	3.5	8,730	57.1	3.7
29	29	Praxair	8,956	-17.0	100.0	U.S.	2,762	-4.5	100.0	30.8	14,317	100.0	19.3
30	44	Sasol	8,954	10.5	54.6	South Africa	-267	def	def	def	7,182	41.8	def
31	39	Syngenta	8,420	-8.1	76.6	Switzerland	1,930	-9.0	101.8	22.9	10,379	62.2	18.6
32	25	Chevron Phillips	8,406	-33.5	100.0	U.S.	707	76.3	100.0	8.4	7,418	100.0	9.5
33	40	DIC	8,090	-18.7	100.0	Japan	297	9.7	100.0	3.7	8,005	100.0	3.7
34	31	Solvay	7,935	-16.2	67.1	Belgium	419	-36.4	31.6	5.3	na	na	na
35	32	Air Products	7,766	-22.2	94.1	U.S.	1,162	-23.4	96.5	15.0	11,602	97.2	10.0
36	30	Huntsman Corp.	7,763	-24.0	100.0	U.S.	63	-72.4	100.0	0.8	8,626	100.0	0.7
37	35	Braskem	7,633	-15.1	100.0	Brazil	706	-14.7	100.0	9.2	11,112	100.0	6.4
38	36	Lanxess	7,047	-23.1	100.0	Germany	327	-46.0	100.0	4.6	7,062	100.0	4.6
39	—	Tosoh ^d	6,711	-14.3	100.0	Japan	139	nm	100.0	2.1	7,896	100.0	1.8
40	33	Borealis	6,569	-29.6	100.0	Austria	33	-85.3	100.0	0.5	6,711	100.0	0.5
41	43	Arkema	6,193	-21.1	100.0	France	56	-84.0	100.0	0.9	5,497	100.0	1.0
42	47	Clariant	6,090	-18.1	100.0	Switzerland	226	-50.3	100.0	3.7	5,610	100.0	4.0
43	49	Rhodia	5,617	-15.4	100.0	France	301	-42.6	100.0	5.4	5,945	100.0	5.1
44	41	ENI	5,525	-32.9	4.8	Italy	-941	def	def	def	3,599	2.5	def
45	46	Showa Denko	5,489	-33.6	75.8	Japan	24	-93.0	-45.5	0.4	7,232	70.7	0.3
46	—	Merck KGaA	5,348	-8.9	52.0	Germany	965	-42.7	67.8	18.1	na	na	na
47	—	Dow Corning	5,093	-6.6	100.0	U.S.	na	na	na	na	10,840	100.0	na
48	—	Celanese	5,082	-25.5	100.0	U.S.	459	-27.8	100.0	9.0	8,410	100.0	5.5
49	—	Eastman Chemical	5,047	-25.0	100.0	U.S.	517	-5.8	100.0	10.2	5,515	100.0	9.4
50	—	Hitachi Chemical	4,860	-6.8	100.0	Japan	409	92.3	100.0	8.4	4,554	100.0	9.0

NOTE: Some figures converted at 2009 average exchange rates of \$1.00 U.S. = 1.9976 Brazilian reais, 6.83 Chinese renminbi, 0.7176 euros, 48.33 Indian rupees, 93.68 Japanese yen, 1274.63 Korean won, 6.2908 Norwegian krone, 3.75 Saudi riyals, 1.086 Swiss francs, 33.02 Taiwan dollars. **a** Operating profit is sales less administrative expenses and cost of sales. **b** Chemical operating profit as a percentage of chemical sales. **c** Chemical operating profit as a percentage of identifiable assets. **d** Sales include a significant amount of nonchemical products. **e** Profits and profitability ratios are after-tax. **f** C&EN estimates. **g** Sales include chemical feedstock trading. **def** = deficit. **na** = not available. **nm** = not meaningful.

A few companies near the top suffered big declines. Ineos saw a 39.1% drop in sales to \$28.6 billion, pushing it down one place to fourth. Saudi Basic Industries Corp.'s sales declined by 32.9% to \$23.1 billion, knocking it to ninth from sixth place last year.

AS A RULE, the sharp declines in petrochemical and fertilizer prices in 2009 caused companies that make such commodities to suffer a steeper drop in sales than did companies that are oriented toward specialties. Case in point is ExxonMobil Chemical, which saw a 30.1% drop in revenues in 2009. It retained its number five ranking, but it barely edged out DuPont, which experienced only a 14.6% decline.

The impact of the recession was even more dramatic toward the bottom of the ranking. Last year, the number 50 position was inhabited by Israel Chemicals, with \$6.9 billion in sales. This year, it is Japan's Hitachi Chemical, with \$4.9 billion in sales.

Hitachi is one of six firms in this year's ranking that didn't appear in C&EN's previous Global Top 50. The others are Tosoh,

Merck KGaA, Dow Corning, Celanese, and Eastman Chemical.

Conversely, six companies that were in last year's ranking don't appear this year. PetroChina, ranked 17th last year, is off the list because it started combining refining and chemical results. National Petrochemical Co. of Iran didn't provide financial figures this year. Rohm and Haas was acquired

by Dow Chemical. Sales declines at Israel Chemicals, Potash Corp., and Nova Chemicals pushed them off the list.

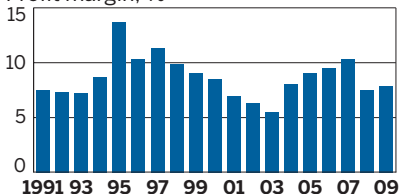
The economic recovery will determine what will happen to chemical sales, and thus the Global Top 50, in 2010 and subsequent years. One worry is that the U.S. will slip back into a recession.

Frederick M. Peterson, president of

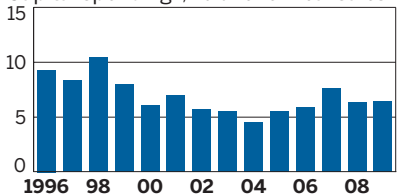
IMPROVEMENT

Profit margins and rates of capital and R&D spending rose in 2009

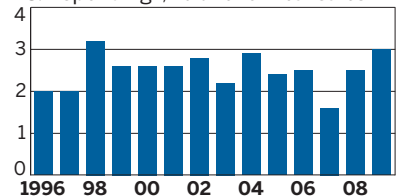
Profit margin, %



Capital spending^a, % of chemical sales



R&D spending^a, % of chemical sales



NOTE: Based on C&EN's annual listing of the Global Top 50 chemical producers. ^a For companies reporting.

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Hanover, N.H.-based consulting firm Probe Economics, thinks the talk by pundits of a double-dip recession is overblown, although he does warn that the economy will have

some soft spots. With high taxes, greater frugality, and tighter credit, Peterson predicts, U.S. gross domestic product growth will be an anemic 2.0 to 2.5% in the near

term. "Slow growth is probably where we are headed in the next few years," he says.

Another big influence on C&EN's ranking is merger and acquisition (M&A) activity, which slowed as a consequence of the financial crisis. The two largest deals since then, Dow's purchase of Rohm and Haas and BASF's buy of Ciba, were announced in 2008, before the full gravity of the crisis became clear.

M&A has picked up since the recession ended. Last month, BASF announced a \$3.8 billion deal to buy personal care ingredients maker Cognis. Air Products & Chemicals is pursuing a hostile takeover of Airgas for \$7.2 billion. Bain Capital bought Dow's Styron styrenic polymers unit for \$1.6 billion. And Rhodia agreed to buy Chinese surfactants maker Feixiang for \$489 million.

Alasdair Nisbet, global head of chemicals at the investment bank Lazard, says the climate favors small to midsized deals in the \$100 million to \$500 million range over blockbuster mergers. "There is a general willingness to do deals now," he says, "but the industry is unlikely to see many multi-billion-dollar transactions in the near future."

Nisbet explains that most of the businesses available for purchase are assets that were bought by private equity firms before the downturn. "Most of them have had a fairly challenging 2008 and 2009," he says. "Anybody who has been through that is very keen to take profits."

Meanwhile, chemical companies that cut costs and conserved money during the crisis are finding themselves with more cash on their balance sheets than they really need now that the economy is improving. "They feel that their cash balances provide acquisition currency," Nisbet says.

The primary drivers behind the choice of acquisition targets, Nisbet says, are regional product consolidation and geographic diversification. Western companies are looking at purchasing assets in Asia to follow customers into growing markets. At the same time, Indian and Chinese firms are increasingly interested in buying operations in the U.S. and Europe. "I have no doubt that, in the next two years, you are going to see some major acquisitions by Chinese firms of Western businesses, divisions, and maybe even entire companies," he says.

But smaller acquisitions don't do much to the relative size of multi-billion-dollar companies. Readers might have to wait a year or two before they see deals large enough to have an impact on the Global Top 50. ■

SPENDING

The economy forced companies to pull back on expenditures for the future

	CHEMICAL CAPITAL SPENDING			CHEMICAL R&D SPENDING		
	2009 (\$ MILLIONS)	% CHANGE FROM 2008	% OF CHEMICAL SALES	2009 (\$ MILLIONS)	% CHANGE FROM 2008	% OF CHEMICAL SALES
Air Liquide	\$1,957	-24.9%	12.8%	\$304	-2.7%	2.0%
Air Products	1,179	8.7	15.2	116	-11.5	1.5
AkzoNobel	744	0.0	3.8	471	-4.2	2.4
Arkema	419	-10.1	6.8	190	-9.3	3.1
Asahi Kasei	587	-31.8	6.2	na	na	na
BASF	6,912	118.5	12.6	1,930	3.0	3.5
Bayer	1,196	-25.1	6.1	1,198	-1.1	6.1
Borealis	429	-30.8	6.5	110	-11.2	1.7
Braskem	415	-40.9	5.4	29	-17.9	0.4
Celanese	176	-35.8	3.5	75	-6.3	1.5
Chevron Phillips	164	-59.3	2.0	38	-5.0	0.5
Clariant	124	-50.0	2.0	138	-18.5	2.3
DIC	252	-46.4	3.1	132	-15.6	1.6
Dow Chemical	1,410	-38.1	3.1	1,492	13.9	3.3
DSM	537	-28.8	4.9	548	-0.3	5.0
DuPont	1,378	-30.3	5.3	1,378	-1.1	5.3
Eastman Chemical	137	-78.4	2.7	137	-13.3	2.7
ENI	202	-31.6	3.7	na	na	na
Evonik	700	-30.9	5.0	418	-3.5	3.0
ExxonMobil	3,148	11.7	11.7	na	na	na
Formosa Plastics Group	730	-39.8	2.9	na	na	na
Hitachi Chemical	224	-41.7	4.6	na	na	na
Huntsman Corp.	189	-54.8	2.4	145	-5.8	1.9
Lanxess	383	-19.6	5.4	141	4.1	2.0
Linde	1,434	-29.1	11.5	92	-9.6	0.7
LyondellBasell	1,180	51.3	5.9	145	-25.3	0.7
Merck KGaA	389	-2.6	7.3	394	-1.2	7.4
Mitsubishi Chemical	715	-16.0	4.3	na	na	na
Mitsui Chemicals	524	-39.5	4.1	407	-7.1	3.2
Mosaic	781	109.9	7.6	na	na	na
PPG Industries	239	-37.6	2.1	403	-10.6	3.5
Praxair	1,352	-16.1	15.1	74	-23.7	0.8
Reliance Industries	106	-96.7	0.9	na	na	na
Rhodia	233	-30.7	4.1	102	0.0	1.8
Royal Dutch/Shell	1,988	-4.7	8.1	na	na	na
Sasol	404	7.2	4.5	na	na	na
Shin-Etsu Chemical	1,294	-23.9	13.2	359	-9.6	3.7
Showa Denko	311	-40.3	5.7	na	na	na
Sinopec	1,255	1.3	4.0	na	na	na
Solvay	833	-25.5	10.5	194	2.2	2.4
Sumitomo Chemical	808	-25.7	6.2	na	na	na
Syngenta	517	78.3	6.1	512	-7.9	6.1
Toray Industries	575	-40.9	4.6	na	na	na
Tosoh	321	-38.9	4.8	147	-4.5	2.2
Total	879	-41.2	4.3	na	na	na
Yara	677	30.0	6.9	14	-30.2	0.1

na = not available.