

ICIS

TOP

100

Chemical Companies

The ICIS Top 100 Chemical Companies saw the good times roll in 2007, but 2008 brings a more challenging environment, testing their mettle

NIGEL DAVIS/LONDON

RIDING THE rollercoaster of soaring energy and commodity prices, global chemical industry players performed remarkably well in 2007. Most of the sector continued to bask in good times, with demand growth still high, but the US downturn began to bite, and, for some, life was harder.

In this issue, *ICIS Chemical Business* casts a sharp eye over the financial performance of the leading players in the industry – from the broad-based to the focused makers of chemicals, fertilizers and industrial gases.

The ICIS Top 100 Chemical Companies includes all chemical firms with annual sales greater than \$2.5bn (€1.8bn). It charts the fortunes of a geographically diverse group of players that supply vitally important materials to the world's growing industries.

The ICIS Top 100 analysis captures a broad set of financial data for the world's leading chemical companies.

A total of 18 financial metrics are collected from the companies themselves, from annual reports and other sources. An array of ratios is generated from this data. The analysis looks at the 100 leading companies by sales, but data are also collected for smaller players to facilitate regional analyses.

We gather corporate, rather than divisional data for most firms to help with a broader ratio analysis. But for the major oil and energy producers, we look at the chemical operations only.

In 2007, the sector benefited from continued strong demand growth, particularly from the fast-developing economies in Asia, most notably China. Chemical demand from Central and Eastern Europe and from Latin America was also robust.

Much has been written about the impact on the sector of the sharp economic slowdown in the US, and in North America as a whole. The sharp downturn in the vitally important US home construction and auto sectors hit the industry hard, and continues to do so.

But the impact, largely in the second half of the year, was masked, to a great extent, by product and geographical diversity.

The analysis demonstrates clearly that the world's major chemical producers continued to grow strongly in 2007. It is not so readily apparent, however, that the momentum behind that growth has weakened.

Companies captured volume increases alongside all-important price gains. Shifting

currency exchange rates also had an impact on the reported results, particularly the weakening of the US dollar and the strengthening of the euro.

The ICIS Top 100 table shows company results in US dollars, with year-on-year comparisons made in local currencies. Financial year-end exchange rates are used throughout.

Given the significant weakening of the US dollar in 2007, however, for the first time, this year, sales changes are given in the table in local currencies.

The average increase in sales in the diverse chemical sector was 10.8% in 2007 in local currency terms and 18.1% when converted back to US dollars.

The most impressive gains were made by the fertilizer and agrochemical majors, as might be expected, given the significant run-up in food and fertilizer prices over the course of the year.

Those commodity price increases colored the analysis for 2007 and underpin the main features of the industry performance analysis to be published in the September 29 issue of *ICIS Chemical Business*.

The world's largest processed phosphate fertilizer producer, US-based Mosaic, reported one of the strongest year-on-year sales increases for its financial year ended on May 31, 2008. The company's results overall demonstrated the fact that the fertilizer upturn continued strongly into 2008.

Norway's Yara, Saudi Arabia's SABIC, and Switzerland's Givaudan were among the companies to have grown most strongly in 2007, the latter two boosted by acquisitions.

SABIC acquired US-based GE Plastics later in the year, while Givaudan had earlier acquired Quest, the UK-based ICI's fragrances business.

It was, however, volume and, to a greater extent, price that drove the top line of most firms over the course of the year.

Chemical demand globally continued to be strong in 2007. And although growth

Volume and, to a greater extent, price... drove the top line of most firms

slowed markedly in the US later in the year, demand remained buoyant in Europe and especially strong in the BRIC (Brazil, Russia, India and China) nations. The year was colored by the sharply rising cost of oil.

Oil-based feedstock costs rose sharply, as did the burden of energy costs on all players. Companies were quick to pass on these higher costs, particularly those operating at the top of the chain and closest to fast-rising and volatile feedstock naphtha. Natural gas prices also climbed throughout the year, putting a burden on producers of olefins and other materials.

The momentum gained in the industry in recent years was also widely apparent in 2007 profit performance. Operating profits in the sector climbed by more than 12%. Net profits significantly improved.

Many companies were able to push

stronger cash flows down to the bottom line. Dividend payouts increased and more firms used excess cash to pay down debt and/or to accelerate share buybacks.

The year was one in which more companies had more room to maneuver and were able not so much to flex financial muscle in terms of acquisitions, but to be astute in terms of growth, investment, and regard for shareholders. Despite the still good times, players continued to focus on efficiencies in 2007, illustrating the more cautious mind set of management. As costs rose, they were mindful of the prospects of an industry downturn.

MOUNTAIN OF NEW CAPACITY

The upstream petrochemical business and commodity polymer makers expect soon to face the consequences of a mountain of new production capacity due on stream in the Middle East and in Asia.

The center of gravity of this end of the business, as well as many more specialized chemical segments, is shifting eastward as chemical demand growth patterns change, and as new producers tap into sources of low-cost gas-based feedstocks.

The emergence of lower-cost capacities, in particular, will affect the performance of all olefins and polyolefins players. Less efficient facilities will be hard pressed to make money as sector operating rates are lowered. They are also likely to be saddled with high and volatile feedstock and energy costs.

The petrochemical firms were exposed in 2008 and particularly in the second quarter, as oil prices topped \$147/bbl.

WHERE ARE THEY NOW?

TOP 10 IN 2002

Company	Sales	
	\$ m	% change
BASF	33,778	-0.9
Bayer	31,061	-2.2
Dow Chemical	27,434	-1.3
DuPont	24,006	-2.9
Atofina	20,626	-1.5
ExxonMobil	20,310	5.2
Akzo Nobel	14,681	-0.8
Mitsubishi Chemical	14,224	6.0
BP	12,507	10.9
Degussa	12,336	-0.8

SOURCE: ICIS

Just how much has the chemical industry changed over the past five years? The answer is a great deal, and there is likely to be more to come. The industry Top 10 has been shape-shifted by sector restructuring and the emergence of new players. Producers from the Middle East, China and India have become more important and certainly bigger in a global sense.

The chemical industry was in a very different place in 2002. Companies started the year on something of a high note, but were soon mired in difficulties.

This quotation from our Top 100 report at the time is apposite: "If 2002 demonstrated anything, it showed that many companies would have to continue to do a great deal in terms of cost control and restructuring to squeeze more from less. As the year progressed, it rapidly became clear that earlier economic growth and manufacturing industry optimism were not sufficient to carry the day."

The year 2007 was markedly different, and the past few years have demonstrated just what chemical companies can do in terms of performance. Yet, as further features in our Top 100 analysis series will show, times continue to change – and fast.

The rapid and unprecedented run-up in the price of oil has hit the sector hard. The credit crunch and US economic downturn are having a global knock-on effect. There are great uncertainties for players in chemicals that are exposed to strong global forces. In 2008, companies are challenged to continue to perform in trying and, once again, difficult times.

THE ICIS TOP 100

THE ICIS TOP 100															
Company	Sales			Operating profit		Net profit		Total assets		R&D		Capital spending		Employees	
	\$m	% change	local currency	\$	% change	\$m	% change	\$m	% change	\$m	% change	\$m	% change	Number	% change
1 BASF	85,353	10.2	22.9	10,775	20.9	5,987	41.1	68,932	15.3	2,033	20.3	6,517	-50.8	95,175	-0.1
2 Dow Chemical	53,513	8.9	8.9	4,229	-14.9	2,887	-22.5	48,801	7.1	1,305	12.1	2,075	16.9	45,856	7.7
3 ExxonMobil ^b	53,417	9.1	9.1	5,546	-3.3	4,563	4.1	21,418	9.6	273	8.3	1,782	135.7	12,965	0.2
4 Shell ^b	45,911	12.7	12.7	2,447	106.8	2,051	92.8	20,310	14.9	-	-	1,419	61.8	8,500	0.0
5 LyondellBasell Industries ^c	44,735	n/a	24.0	1,826	-3.2	168	-69.5	-	-	-	-	-	-	16,000	-9.1
6 INEOS	40,527	3.5	15.5	1,783	46.5	488	221.1	14,153	8.9	127	22.7	-	-	16,600	10.7
7 SABIC	33,724	46.2	46.5	10,968	33.2	7,221	33.4	68,474	54.1	-	-	-	-	31,000	63.2
8 Sinopec ^b	32,999	12.0	19.7	-	-	-	-	16,655	17.6	-	-	2,219	37.0	70,712	-8.4
9 Mitsubishi Chemical ^d	29,532	11.7	34.0	1,260	16.7	1,654	96.2	27,880	43.1	1,130	47.5	1,714	55.9	39,305	17.5
10 DuPont	29,378	7.1	7.1	3,743	12.4	2,988	-5.1	34,131	7.4	1,338	2.8	1,585	3.5	60,000	1.7
11 Total ^b	29,170	3.6	15.6	1,701	6.0	1,248	6.9	-	-	-	-	-	-	45,810	2.5
12 Bayer ^e	25,890	2.0	13.8	2,342	22.4	-	-	35,580	5.0	1,293	12.5	1,912	24.5	54,700	0.2
13 AkzoNobel ^f	21,271	-	-	1,361	-	1,172	-	37,192	-	-	-	-	-	42,600	-
14 Evonik ^f	21,253	2.2	14.0	1,367	76.7	1,290	-6.6	29,162	5.4	452	13.0	1,520	23.1	43,057	-7.3
15 Yara International	19,420	52.0	52.0	-	-	-	-	-	-	-	-	-	-	8,173	15.8
16 Sumitomo Chemical ^d	19,117	6.0	27.1	1,032	-12.0	636	-19.4	23,778	21.7	1,062	29.4	1,437	7.0	25,588	3.6
17 Mitsui Chemicals ^d	18,010	5.8	27.0	778	1.0	250	-43.1	14,810	17.7	424	36.9	854	39.8	12,814	2.4
18 Linde ^g	17,614	15.2	28.5	3,762	29.1	-	-	-	-	143	17.6	1,632	47.3	45,214	2.0
19 ChemChina (CNCC) ^q	17,400	69.6	69.6	-	-	-	-	-	-	-	-	-	-	100,000	0.0
20 Air Liquide	17,381	7.8	20.2	2,648	63.9	1,654	25.0	26,941	25.2	-	-	-	-	40,000	8.4
21 Asahi Kasei ^d	17,104	4.5	25.4	1,287	19.8	705	22.4	14,368	17.1	566	28.5	836	17.8	23,854	0.6
22 Toray ^d	16,629	6.7	28.0	1,043	21.1	485	-1.5	17,118	21.7	-	-	1,495	47.7	38,565	5.5
23 Johnson Matthey ^d	14,961	21.9	24.1	586	18.7	-	-	5,199	27.0	-	-	-	-	7,800	11.4
24 Shin-Etsu ^d	13,874	5.5	26.6	2,894	42.9	1,850	43.0	19,339	23.7	483	37.8	2,706	52.9	20,241	5.5
25 Reliance Industries ^{dj}	13,210	14.0	14.0	1,773	17.2	-	-	-	-	-	-	126	18.9	-	-
26 DSM	12,898	4.8	17.0	1,212	10.0	632	-12.5	14,475	8.6	548	19.6	700	16.0	23,254	5.0
27 Chevron Phillips Chemical	12,534	5.9	5.9	820	-43.2	719	-46.7	7,232	1.6	42	5.0	314	64.4	5,000	-2.9
28 LG Chem	11,551	16.3	14.1	817	122.7	734	113.0	7,543	19.1	-	-	-	-	10,000	0.0
29 BP	11,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 DIC (was Dainippon Inks & Chemicals) ^d	10,865	6.1	26.1	488	11.9	313	64.2	9,861	17.2	-	-	-	-	25,167	-1.8
31 Braskem	10,646	11.0	33.8	854	132.5	321	485.3	-	-	-	-	-	-	5,000	0.0
32 Merck KGaA	10,394	12.3	25.3	1,438	-1.5	-	-	21,978	105.5	1,514	86.5	417	24.8	30,968	21.3
33 Solvay ^e	10,282	2.7	14.6	1,233	42.8	-	-	-	-	208	13.2	1,037	19.5	19,162	0.0
34 Polimeri Europa ⁱ	10,213	1.6	13.4	298	31.0	334	45.5	-	-	-	-	214	63.4	6,534	8.4
35 PPG Industries ^k	10,177	13.6	13.6	1,266	1.5	-	-	-	-	354	10.3	-	-	24,900	-9.5
36 Air Products ^o	10,038	14.7	14.7	1,408	33.3	1,036	43.3	12,660	13.2	140	-7.3	-	-	22,100	6.8
37 Mosaic ^l	9,813	70.0	70.0	2,807	35.6	2,083	39.6	10,118	15	-	-	-	-	7,000	-13
38 LANXESS	9,733	-4.8	6.2	317	-36.2	165	-36.6	5,964	7.4	128	10.3	418	18.7	14,610	-11.4
39 Sekisui Chemical ^d	9,664	3.5	24.2	434	14.3	245	14.2	7,892	6.8	258	25.4	316	3.4	18,907	0.0
40 Huntsman	9,651	10.5	10.5	536	-16.9	-172	n/a	-	-	145	26.1	665	20.9	13,000	-7.1
41 Praxair	9,402	13.0	13.0	1,786	17.6	1,177	19.1	13,382	20.5	98	12.6	1,376	25.1	27,992	3.5
42 Borealis	9,353	10.6	23.4	664	42.5	362	-16.2	6,821	40.7	72	21.5	673	117.9	5,060	10.0
43 Syngenta	9,240	14.8	14.8	1,464	76.6	1,109	74.9	13,280	12.1	830	4.3	317	46.1	21,200	8.7
44 Rohm and Haas	8,897	8.1	8.1	2,467	-0.6	661	-10.1	10,208	6.9	296	3.5	417	3.2	15,710	-0.7
45 NPC (Iran) ^d	8,388	69.8	69.8	1,184	71.6	235	-15.0	27,624	29.4	36	9.1	2,255	27.2	18,079	6.4
46 Arkema	8,358	0.2	11.8	326	128.3	183	194.3	6,534	10.1	233	4.9	479	7.9	15,200	-10.6
47 Tosoh ^d	8,340	5.9	27.0	596	17.6	254	6.1	8,235	24.3	-	-	733	957.3	11,088	5.5
48 Sherwin-Williams	8,005	2.5	2.5	-	-	616	6.9	4,855	-2.8	37	0.0	166	-21.0	31,572	2.6
49 SK Energy ^l	7,938	35.3	32.7	543	10.7	-	-	-	-	-	-	171	-24.3	-	-
50 Clariant	7,581	5.3	14.1	479	-1.4	4	-106.9	6,472	9.7	187	10.4	277	-5.6	20,931	-3.8

THE ICIS TOP 100 continued

Company	Sales			Operating profit		Net profit		Total assets		R&D		Capital spending		Employees	
	\$m	% change	local currency	\$	% change	\$m	% change	\$m	% change	\$m	% change	\$m	% change	Number	% change
51 Rhodia	7,484	5.6	17.8	660	39.2	193	121.4	6,595	-3.1	141	4.0	477	16.2	15,500	-3.1
52 Formosa Chemicals & Fibre ⁿ	7,398	n/a	32.5	-	-	1,558	48.5	11,554	26.2	-	-	-	-	5,620	-3.6
53 Repsol YPF ⁱ	7,255	3.1	15.0	340	-27.0	-	-	-	-	-	-	-	-	3,258	1.4
54 Eastman Chemical	6,830	0.8	0.8	504	-22.9	300	-26.7	6,009	-2.0	156	0.6	518	33.2	10,800	-1.8
55 PKN Orlen ^{bj}	6,741	1.2	20.4	537	46.6	-	-	-	-	-	-	261	54.1	-	-
56 NOVA Chemicals	6,732	3.3	3.3	553	n/a	347	n/a	4,836	18.6	50	-2.0	156	-21.2	2,820	-14.5
57 Sasol ^{hp}	6,708	19.2	34.7	282	n/a	-	-	-	-	-	-	-	-	6,848	-11.1
58 Celanese	6,444	11.5	11.5	748	20.6	426	4.9	8,058	2.1	73	12.3	288	18.0	8,400	-5.6
59 Hexion	5,810	11.6	11.6	302	5.6	-65	-31.6	4,006	14.2	70	1.4	122	0.0	6,400	-7.2
60 Ciba	5,795	2.7	11.2	386	1.7	211	n/a	7,807	4.8	233	5.1	238	23.0	13,319	-5.7
61 Formosa Plastics ⁿ	5,598	n/a	23.7	-	-	1,562	58.6	10,479	19.9	-	-	-	-	4,927	0.4
62 Wacker-Chemie	5,569	13.3	26.4	959	58.6	622	51.4	5,771	34.2	225	11.9	1,030	48.5	15,044	2.6
63 Pemex ⁱ	5,296	92.5	90.6	-1,204	n/a	-1,356	-24.5	-	-	-	-	-	-	-	-
64 Agrium	5,270	25.7	25.7	715	89.3	441	123.6	5,839	78.8	-	-	454	117.2	6,618	1.0
65 Mitsubishi Gas Chemical ^d	5,235	7.6	29.1	477	34.6	405	20.5	6,062	18.3	-	-	-	-	2,151	-0.4
66 Potash Corp. of Saskatchewan	5,234	38.9	38.9	-	-	988	56.3	9,717	56.3	-	-	607	19.3	5,003	2.7
67 Cognis	5,181	4.3	16.4	272	0.2	-177	n/a	3,689	5.9	134	8.0	194	47.3	7,585	-1.7
68 Kaneka ^d	5,070	6.3	27.5	360	17.0	190	22.9	4,562	16.3	-	-	318	6.5	7,498	0.9
69 Dow Corning	4,943	12.5	12.5	-	-	690	3.3	7,199	20.5	-	-	-	-	10,000	11.1
70 K+S	4,925	13.1	26.1	-157	n/a	-137	n/a	4,367	16.8	23	23.5	253	47.0	12,033	1.3
71 Orica ^o	4,910	3.1	22.7	722	47.0	434	7.7	5,511	29.2	28	13.5	-	-	14,174	5.3
72 Honeywell ^r	4,866	5.1	5.1	-	-	658	15.8	-	-	-	-	215	15.6	-	-
73 Sibur ^j	4,846	11.8	20.1	1,282	15.7	-	-	-	-	-	-	267	28.8	-	-
74 Occidental Chemical ^b	4,664	-3.1	-3.1	-	-	601	-33.7	3,814	0.3	-	-	-	-	3,100	-1.9
75 Lubrizol	4,499	11.3	11.3	283	57.6	283	172.1	4,644	5.8	219	6.6	183	39.6	6,921	2.6
76 Cementhai Chemicals	4,374	6.2	27.1	462	-6.2	570	15.7	4,139	34.9	-	-	-	-	-	-
77 Showa Denko ^s	4,275	15.7	22.7	241	33.3	-	-	3,391	5.3	-	-	95	-24.8	2,078	-8.6
78 Kemira	4,139	11.4	24.3	211	-17.8	99	-32.8	4,165	13.9	97	44.4	473	-22.5	10,007	7.3
79 JSR ^d	4,102	11.2	33.5	605	30.3	373	31.9	4,203	22.3	-	-	-	-	5,122	9.1
80 Israel Chemical	4,100	25.8	25.8	715	33.4	536	43.3	4,633	28.4	39	11.4	195	35.4	9,914	6.5
81 ALPEK (Grupo Alfa)	4,007	17.5	17.5	177	-25.6	80	-51.5	3,057	18.6	-	-	182	-42.4	4,166	3.5
82 Ashland ^{ho}	3,923	17.6	17.6	191	81.9	-	-	-	-	50	4.2	125	-10.1	-	-
83 Nalco	3,913	8.6	8.6	207	24.4	129	30.3	5,979	5.7	-	-	115	23.7	11,500	3.6
84 Petronas ⁱ	3,844	14.4	14.4	-	-	-	-	-	-	-	-	246	95.2	-	-
85 Chemtura	3,747	8.4	8.4	59	108.0	3	n/a	4,416	0.4	62	1.6	117	-8.6	5,144	-17.0
86 Kuraray ^{ds}	3,720	8.4	14.9	429	26.9	2	-98.9	4,369	2.2	-	-	380	20.1	6,770	-0.6
87 Givaudan	3,671	42.0	53.8	-	-	84	-75.3	7,016	81.9	-	-	-	-	8,776	44.9
88 RPM ^l	3,644	9.1	9.1	-	-	48	-76.9	3,764	12.9	-	-	72	2.9	9,400	0.0
89 Tessenderlo Group	3,544	7.5	19.9	224	135.5	190	n/a	2,479	10.1	40	7.6	145	-7.6	8,121	-0.0
90 Quattor Participacoes ^c	3,536	n/a	n/a	-	-	282	n/a	-	-	-	-	-	-	-	-
91 Solutia	3,535	26.5	26.5	190	118.4	-208	n/a	2,640	28.2	37	0.0	150	42.9	6,000	17.6
92 Cytec Industries	3,504	5.2	5.2	324	6.2	192	14.3	4,062	6.0	76	2.7	115	12.0	6,800	1.5
93 Ube ^d	3,293	9.4	31.2	330	55.7	-	-	-	-	-	-	-	-	11,058	2.1
94 Valspar ^u	3,249	9.1	9.1	310	0.8	172	-1.7	3,452	8.2	90	8.4	-	-	9,946	4.1
95 Asahi Glass ^b	3,219	3.8	24.6	126	90.4	-	-	2,857	16.7	-	-	262	20.4	4,857	0.5
96 Westlake Chemical	3,192	28.5	28.5	271	-31.6	115	-40.9	2,569	23.4	7	16.3	136	0.0	2,120	3.1
97 W.R. Grace	3,115	10.2	10.2	-	-	80	338.8	3,869	6.4	80	21.2	137	15.1	6,500	-1.5
98 Denki Kagaku Kogyo (Denka)	2,933	6.9	13.4	266	21.5	140	8.6	3,653	4.5	-	-	-	-	4,696	-0.9
99 IRPC ^{jm}	2,822	17.1	40.2	-	-	173	36.4	1,182	25.8	-	-	-	-	-	-
100 Hanwha Chemical	2,659	12.0	9.9	179	43.4	228	1.9	3,884	16.8	27	35.9	-	-	1,875	1.1

THE ICIS TOP 100 – BUBBLING UNDER

Company	Sales			Operating profit		Net profit		Total assets		R&D		Capital spending		Employees	
	\$m	% change	local currency	\$	% change	\$m	% change	\$m	% change	\$m	% change	\$m	% change	Number	% change
101 PolyOne	2,643	0.8	0.8	34	-82.2	11	-91.1	1,583	-11.1	22	10.0	43	4.9	4,800	2.8
102 FMC	2,633	12.2	12.2	228	-9.1	132	0.8	2,733	-0.3	95	-2.1	115	-0.9	5,000	0.0
103 Cabot ^o	2,616	2.9	2.9	187	48.4	129	46.6	2,636	4.0	69	19.0	141	-25.0	4,300	0.0
104 PTT Chemical (PTTCH)	2,590	4.5	25.1	773	20.2	644	25.5	4,485	43.4	-	-	-	-	2,451	2.7
105 Lonza	2,550	-1.5	6.6	363	28.4	267	46.8	4,398	37.0	79	26.8	-	-	7,711	25.5
106 Momentive Performance Materials	2,500	3.6	3.6	82	-18.7	-254	586.5	-	-	79	-1.8	-	-	5,000	0.0
107 Honam Petrochemical	2,413	3.4	1.4	-	-	-	-	-	-	-	-	-	-	-	-
108 Albemarle	2,336	-1.4	-1.4	-	-	233	15.9	2,831	11.9	63	37.0	-	-	4,100	17.1
109 IFF	2,277	8.7	8.7	-	-	247	9.1	2,727	10.0	199	7.0	-	-	5,315	4.5
110 Hercules	2,136	5.0	5.0	264	6.0	179	-25.1	2,678	-4.6	44	12.8	108	14.9	4,661	5.2
111 Mexichem ^j	2,115	121	119	399	72.6	169	53.2	-	-	-	-	-	-	-	-
112 Compania Espanola de Petroleos	2,105	-6.5	4.3	-	-	-	-	-	-	-	-	-	-	9,000	0.0

FOOTNOTES TO TABLES

a Key financial year-end exchange rates used for 2007 data (2006 in parentheses): \$/€ 1.473 (1.32), Yen/\$ 99.2 (119.0), \$/£ 1.995 (1.959)
 b Chemical segment figures only. Includes intersegment revenues, e.g. revenue for sales to other divisions of by-products. For ExxonMobil, intersegment revenue was \$16.591bn in 2007 and \$14.846bn in 2006. Sinopec = external sales with intersegment sales. Total restated figures to exclude the contribution from Arkema
 c Pro forma results for 2007. Lyondell and Basell completed a \$19.4bn (€13.6bn) merger. 2006 figures based on the sum of Lyondell and Basell. AkzoNobel = pro forma results. AkzoNobel acquired ICI in January 2008. Quattor Participacoes = a joint venture between Unipar and Petrobras launched on June 12, 2008.
 d Financial year end March 31, 2008
 e Bayer data excludes HealthCare division, with 2007 sales of €14.8bn. Solvay data excludes pharmaceutical business, with €2.6bn sales in 2007

f Evonik was formerly known as Degussa
 g Linde gas & engineering figures only. Prior year 2006 figures include 12 months of BOC
 h Financial year end June 30, 2007
 i Estimated figures, as BP does not segment chemical data
 j Petrochemical figures only
 k PPG Industries includes performance, industrial, commodity and glass segment figures (does not include optical figures)
 l Financial year end May 31, 2008
 m IRPC was formerly known as Thai Petrochemical
 n Net profit is pretax
 o Financial year end September 30, 2007
 p Sasol turnover figures from polymers, solvents, olefins and surfactants added together
 q Estimated as data not published by ChemChina
 r Specialty materials figures used
 s Petrochemical and chemical segment figures used
 t Ashland excludes distribution business
 u Valspar financial year end October 31, 2007

Companies excluded and reason

Koch Does not segment chemical data
OMV Includes petrochemical operations in its refining and marketing segment
Shanghai Petrochemical Majority owned by Sinopec
Samsung Total Petrochemicals \$4bn sales equity accounted in Total and Samsung figures
China Bluestar Chem Majority owned by ChemChina
Formosa Plastic Corp. USA Not segmented in Formosa reports
Formosa Petrochemical Corp. Does not segment chemicals from refining business
Nan Ya Plastics Sales are for both chemicals and processed items
Yeocheon NCC Results included with Hanwha and Daelim
Daelim Below top 100 in sales as Yeocheon NCC accounted as equity company
Samsung Does not consolidate various chemical company interests into one area
PTT Group Results included as IRPC and PTTCH businesses

In 2008, global GDP forecasts and subsequently chemical sector forecasts were also lowered. The industry has come off its plateau of earnings performance and is facing an increasingly tough global operating environment.

First-half 2008 performance has held up relatively well, particularly for the more specialized players and those not overly exposed to the US. The second-half outlook, however, is not strong.

EFFICIENCY DRIVES GAINS

In 2007, sales per employee in the industry improved by more than 9%, reflecting sales growth but also the focus of many firms on employee costs. Selling, general and administrative costs for the group of companies for which the data were available increased only slightly.

The drive to greater efficiencies was reflected in the overall improvement in profits ratios. Net returns in 2007 in the Top 100 improved by 11%. Operating profit data were available for fewer companies on the list but the average operating return increase

was 5.5%. Operating margins increased markedly for US-based specialty chemical firm Chemtura and fertilizer producers Agrium in Canada, as well as Mosaic in the US. French chemical giant Arkema's operating return more than doubled.

M&A AND THE CREDIT CRUNCH

Mergers and acquisitions (M&A) reached a peak in 2007 in value terms, if not in total number of deals. The credit crunch took its toll, but chemical deals have continued.

Some of the largest in recent history took place in 2007, including the SABIC/GE Plastics deal, and the merger between Netherlands-based Basell and US-based Lyondell Chemical. Other focused acquisitions reinforced the strength of companies such as UK chemical firm INEOS.

The year 2007 was one of consolidation for the sector. M&A has been less pronounced in 2008 but the industry is still enlivened by the moves of major players such as US-based Dow Chemical to focus on value-added specialty areas of business and move away from commodities.

The top players in chemicals are focused on lifting value added by operating more efficiently and delivering greater value to customers. The commodity players do that by maintaining plant efficiencies and logistics networks. The specialty chemical companies work more closely with customers.

The analysis also looks at capital expenditures and research and development (R&D) spending. Not surprisingly, capital spending was higher in 2007 than in 2006, as profitability improved.

Research spending varied greatly in the sector, with R&D/sales ratios of between 0.5% and close to 9%.

The increase in spending in 2007 by some of the biggest companies in the industry is noteworthy as greater emphasis was placed on organic growth in changing industry times.

The ICIS Top 100 table is based upon the ICIS annual analysis of the performance of the world's leading chemical companies. Further details of this analysis are available from Lara McNamee: lara.mcnamee@icis.com