



The ICIS Top 100 Chemical Companies listing, sponsored by The Valence Group, highlights the top players in the global chemical industry. Most chemical companies found it difficult to generate top line and profit growth in 2012 following a strong performance in 2011. Margins were under pressure from higher oil-based feedstock costs and it was once again a tale of two halves, with early optimism fading as the year progressed. BASF, Sinopec and ExxonMobil led the pack in sales.

#### **SLIGHT SHUFFLE IN TOP 100**

**28** Positions in the ICIS Top 100 deck of chemical producers were generally only lightly shuffled in 2012 as global economic growth stalled and with it chemicals demand.

#### **ICIS TOP 100 RANKING**

**31** Key financial statistics on the ICIS Top 100 Chemical Companies. See who made the cut and also those “bubbling under” down to number 124.

#### **TOP 100 SALES DOWN**

**36** The ICIS Top 100 Chemical Companies posted sales totalling \$1.39 trillion in 2012, a 0.7% fall from 2011.

Some reshuffling in the Top 100



# Global economy hits chemicals

Many companies struggled to maintain revenues and profitability during 2012 in the tough global economic environment

NIGEL DAVIS LONDON

**P**ositions in the ICIS Top 100 deck of chemical producers were only lightly shuffled in 2012 as global economic growth stalled and with it chemicals demand.

A handful of new companies entered the listing and there were some movements in the rankings among the major players – the Top 100 cut-off now is just over \$3.5bn in annual sales – driven by merger and acquisition (M&A) activity and internal business realignments.

The rankings show that most producers struggled to push sales higher against the backdrop of the difficult economic environment. Margins were under pressure from higher oil-based feedstock costs.

BASF remains the world's largest producer of chemicals although its performance in 2012 rested heavily on its oil & gas segment, the figures for which are retained in the ICIS analysis.

The Top 10 producers in 2012 reflect the diversity of the sector.

The giant petrochemical and polymers producers represented here are diversified chemical players who have in recent years focused on more specialised and often higher value product lines.

Pushing for growth in so-called specialties, and in chemicals aligned to specific end-uses sectors such as food and agriculture, some companies have retained their place among the largest in the sector.

Meanwhile, growth in basic petrochemicals and plastics, driven by industrial and consumer demand has pushed some of the major petrochemical and polyolefin producers higher.

Positions in the table show how investments in high growth markets and in low feedstock cost regions have paid off.

## SINOPEC'S GROWTH

The chemicals operations of China's Sinopec, for instance, have grown significantly over the past 10 years, lifting the company from 29th in the ICIS rankings for 2002 to the number two slot for 2012.

Saudi Arabia's SABIC has moved from 14th to 5th position over the same period.

Among the players to hold their Top 10 slot in the league table are BASF, Dow Chemical, DuPont, ExxonMobil and Mitsubishi Chemical.

Apart from ExxonMobil, the companies have tended to diversify from petrochemicals towards agriculture (and nutrition in DuPont's case), and towards more consumer-oriented chemical intermediates and materials.

Nevertheless, strong petrochemical and polymer growth over the past decade has helped lift the chemical operations of ExxonMobil in the rankings, while there has been strong sales growth for chemicals at Shell and

at Total, which 10 years ago was represented by Atofina.

Slower demand growth from China hit most of the larger producers.

Tapping into China's growth has been a major strategic challenge for many players in the chemical industry in recent years. And since the 2008-2009 crash, they have relied heavily on government-stimulus driven China demand growth for chemicals to help boost their own sales.

Chemicals demand growth in the US has been lacklustre against the backdrop of a slowly recovering economy and a troubled housing sector. Demand growth in Europe has been weak as countries in the region have struggled out of recession and implemented austerity measures to help manage high debt levels and the eurozone crisis.

### CHEMICALS OUTPUT SLOWS

Industry data show that the growth of total shipments of chemicals and pharmaceuticals dropped to 1.1% in 2012 from 2011, having grown sharply (by 19.8%) the previous year. Those shipments were worth \$4.97 trillion in 2012.

The data, collated by the American Chemistry Council and drawing on numbers from global chemical trade associations and other bodies, showed that chemical shipments were lower in North America, Latin America, western and eastern Europe in 2012, flat compared with 2011 in the Middle East and only higher in Asia-Pacific.

A calendar year of two halves, 2012 saw early optimism for continued strong growth away from the depths of the 2008-2009 recession give way to increased nervousness about further economic expansion.

That nervousness has persisted into 2013 with most producers finding the going difficult enough to modify their earlier more optimistic outlooks for the full year.

By the second half of 2012, the full impact of political indecision in the face of the eurozone crisis clearly was being felt by producers located in Europe and those with subsidiaries there.

The US economy continued to struggle through 2012.

Slower China growth was recognised early on and would prove to be a critical factor in the 2012 financial outcome for many firms.

Industry CEOs described 2012 thus:

"The world continued its rocky recovery in 2012, with volatility and uncertainty proving to be the new normal," Dow Chemical's Andrew Liveris told shareholders in the firm's annual report. "Persistent weakness in Europe was a continued drag on global GDP growth, while dramatic declines in China, Brazil and other emerging geographies introduced new risks to a sustained recovery," he added.

BASF's CEO and executive board chair-

### THE VALENCE GROUP

## A MESSAGE FROM OUR SPONSOR

**The Valence Group is pleased to be the sponsor for the ICIS Top 100 Chemical Companies.**

The Valence Group is the only global M&A adviser focused exclusively on the chemicals and related materials industries. We are the most active chemicals M&A firm in the world, having advised on 30 closed M&A transactions worth approximately \$10bn since our formation in 2008. Our offices in New York, London and Shanghai have acted as M&A adviser to many leading companies in the chemicals sector, including Arkema, Cytec, DSM, Eastman, ExxonMobil, INEOS, PolyOne, Solutia, Solvay and Tessenderlo.

Our overarching belief is that the \$2.5tr chemicals industry – with its multiple product and application sub-sectors, each with their

own complexities and dynamics – requires an investment bank with in-depth specialist knowledge and expertise. Consequently, our team combines experienced investment bankers, industry and strategy consultants and former senior executives from the chemicals industry. This equates to a collective experience of more than 350 years in chemicals M&A, covering more than 80 chemicals sub-sectors in both public and private transactions. This level of depth gives us an unparalleled understanding of chemicals M&A. Furthermore, we are conflict-free, as we are solely dedicated to providing M&A advisory services.

We also strive to produce a level of analysis of the chemicals sector that is both informative and valuable to our clients. We created the Valence Indices

to track share price evolution in 33 chemicals sub-sectors in order to more accurately represent performance and trends on a sub-sector, rather than an industry-wide basis.

Additionally, we regularly publish in-depth analysis of valuation drivers, profitability dynamics, sector share price correlations, regional M&A trends and sector revenue maps for the industry.

In the last 10 years, global chemicals M&A activity has continued to increase, despite recent economic downturns. Therefore, although already having the broadest insight and senior-level contacts in the industry, we are committed to serving our global client base further, and will be expanding our team and office network further in 2013/2014. ■

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## METHODOLOGY

In the ICIS Top 100 ranking of the leading chemical companies, ICIS lists the major producers globally by sales and collates a substantial amount of financial information for the sector.

The Top 100 table published here is based on performance in the most recent financial year, which for most companies was calendar 2012. The data shown are collected from public, private and state-

controlled chemical companies including the chemicals operations of the major oil companies, industrial gases and fertilizer producers.

The aim is to present an as comprehensive picture as possible of major sector companies, to illustrate trends in profitability as well as top line performance. Group figures are collected for most producers to achieve a comprehensive data set and the additional financial

information collected by ICIS for its Top 100 analysis is available on request.

The data illustrate profits as well as sales growth across the sector, debt levels, capital and research and development (R&D) spending and, where available, other measures. In our analytics feature (see page 36) we look at some of the trends in sales growth and profitability that the numbers reveal. ■

man, Kurt Bock said that 2012 had been a mixed year for the chemicals industry generally. "Growth in worldwide chemical production (excluding pharmaceuticals) slowed from 3.8% in 2011 to 2.6%. The emerging markets of Asia showed markedly weak growth in the first half of the year. The upswing in demand expected for the second half of the year failed to materialise." Oil prices had remained high and it had not been possible to increase chemicals sales volumes.

BASF said that the slump in chemicals pro-

duction growth last year was the result of weak growth in Asia's emerging markets in the first half. An upturn was expected in the second six months of the year, but deep uncertainty persisted and it did not materialise.

Petrochemical markets in Europe and Asia had continued to be subdued with industry sentiment remaining cautious, INEOS said of the 2012 fourth quarter. By contrast, business in North America had been strong with the continuing benefit of its current feedstock advantage, it said. >>

► In petrochemicals and polymers particularly but also in certain other product lines, the ethane cost advantage in North America, driven by increased production of shale gas, was a feature of 2012. That feedstock advantage is driving a new wave of cracker investment in the region while companies are also planning investments in ammonia, methanol and other gas based processes.

Commenting on the performance of its highly integrated (upstream and downstream) chemical business, oil giant ExxonMobil said that worldwide chemical demand had been relatively flat in 2012.

However, ExxonMobil is optimistic about future growth for its petrochemical intermediates, plastics and specialty chemical operations.

"We anticipate this to strengthen over time, linked to the growth of the broader economy," it said.

"Asia Pacific has accounted for more than two-thirds of global demand growth since 2000, and we expect this trend to continue. Over the next decade, we expect global chemical demand to grow by 50 percent, driven by improving prosperity in developing countries," it added.

That longer term optimism is prompting significant investment in high growth parts of the world.

Chinese players are adding considerable methanol to olefins (MTO) and methanol to propylene (MTP) capacities, for example.

Capacities are increasing also for a range of chemical intermediates that will be needed to continue to fuel China's growing manufacturing economy and to help meet its infrastructure needs even though demand for such products is likely to grow at a slightly reduced rate.

Olefins capacities are also expected to increase in Asia and in the Middle East.

The shift in emphasis from low cost gas feedstock to a broader gas and liquids feed-

stock slate means that the impact of players from the Middle East will eventually be more widely felt.

Influencing the industry's development in the Americas is the shale gas revolution and the increased usage of low-cost natural gas liquids (NGLs) feedstocks from gas and oil exploration.

Petrochemical producers active in North America have lifted profitability on the back of cheap ethane and propane and significant capacity additions are planned. And producers of ethylene-based plastics have been targeting export markets given still relatively slow-growing domestic demand.

### The shift in emphasis from low cost gas feedstock to a broader gas and liquids feedstock slate means that the impact of players from the Middle East will eventually be more widely felt

The ICIS Top 100 sales total is 0.8% lower for 2012 compared with 2011 and down 4.0% for the top 10 companies, facts which illustrate the global pressure on growth for the industry. The top 10 together account for 37% of the Top 100 sales total.

Both petrochemical and specialty chemical producers struggled with slower global growth in 2012 and in many instances weaker chemical prices. Once again, however, the industrial gases producers and fertilizer makers bucked the chemicals trend and enjoyed healthier growth and margins.

There are a number of new additions to the top 100 listing including the Australian ferti-

lizer and explosives producer, Incitec Pivot, and the world's largest producer of polystyrene and other styrene-based polymers, newly formed Styrolution.

The sales of Styrolution are not consolidated in the figures shown for either of the joint venture's owners, BASF or INEOS.

The sales numbers used to list chemical companies in the ICIS Top 100 represent unconsolidated sales where possible and under 50:50 joint ventures are accounted for by the equity method. Footnotes explain the placing of companies in the table.

Merger and acquisition (M&A) activity has played a role in moving some players in the Top 100 2012 table.

Specialties group Ecolab, for example, acquired water chemicals maker Nalco at the end of 2011 and has risen in the Top 100 2012 rankings.

Chemicals distributor and chemicals maker Ashland has climbed in the listing following its acquisition of speciality chemicals group ISP.

We report on Spain's CEPSA, which is now wholly owned by the Abu Dhabi state investment fund IPIC. CEPSA acquired polyethylene terephthalate (PET) producer Artenius San Roque in 2011.

Specialty chemicals producer Lonza acquired Arch Chemicals of the US in 2011 and has risen in the ICIS Top 100 rankings for full year 2012.

Thailand's Indorama saw the acquisition of polypropylene (PP) and PET based hygiene products maker FiberVisions in early 2012 as something of a coup. The company also integrated vertically with the acquisition of US ethylene oxide (EO) and monoethylene glycol (MEG) producer, Old World Industries. ■

To access the 2013 ICIS Top 100 chemical companies listing package online, visit [icis.com/top100chem](http://icis.com/top100chem)

## FOOTNOTES

\* 2012 figures are restated after initial 2012 financial data publication

<sup>b</sup> Chemical segment figures. Includes intersegment revenues, e.g. revenue for sales of by-products to other divisions. For ExxonMobil, intersegment revenue was \$22.2bn in 2012 and \$22.8bn in 2011. For Sinopec = external sales with intersegment sales. Ube figures = Chemicals & Plastics + Specialty Chemicals & Products.

<sup>c</sup> Financial year-end March 31, 2013

<sup>d</sup> Net sales includes intersegment sales, data excludes HealthCare division (2012 sales €18.6bn; 2011 sales €17.2bn)

<sup>e</sup> Announced in December 2012 divestment of the North American Decorative Paints business in 2013.

Financials for 2011 restated to present Decorative Paints North America as a discontinued operation

<sup>f</sup> Excludes real estate and energy business areas

<sup>g</sup> 2011 figures restated to reflect revaluation of Rhodia and to present Solvay Indupa, announced to be divested in Q4 2012, as a discontinued operation

<sup>h</sup> Petrochemical figures. For SK Energy, the sales revenue figure includes intersegment sales

<sup>i</sup> Optical segment and glass segment figures have not been included

<sup>j</sup> Asahi Kasei excludes homes, healthcare segments and critical care segments

<sup>k</sup> Financial year-end June 30, 2012 – chemical cluster only (polymers, sol-

vents, olefins & surfactants, other chemical businesses

<sup>l</sup> Financial year-end May 31, 2013. For RPM the following relate to pre-tax profit, EBIT, EBITDA, net profit, EPS. (i) revised cost estimates and exit costs related to unprofitable contracts to the industrial segment totalling \$11.0 million; (ii) the write-off of the company's various investments in Kemrock Industries and Exports Ltd totalling \$78.6 million; (iii) the loss on the proposed settlement between Building Solutions Group and the GSA for \$65.1 million; (iv) the strategic repositioning of certain operations in Brazil for \$6.1 million; and (v) restructuring expense for \$23.9 million

<sup>m</sup> ICIS estimates for revenue and operating profit. BP Petrochemicals figures only. Revenue represents third-party sales and other operating revenues, and excludes sales made by joint ventures which are equity accounted. BP's underlying replacement cost profit, excluding joint venture interests in Europe

<sup>n</sup> Net sales figure. The total of NPC and its associated companies in 2012 is \$21bn.

<sup>o</sup> Adhesive Technologies segment only

<sup>p</sup> Net profit is pre-tax

<sup>q</sup> Momentive companies listed separately as FY2012 financials for the Momentive holding company have not been filed

# THE ICIS TOP 100

Rank 2012	Company	Sales		Operating profit		Net profit		Total assets		R&D		Capital spending		Employee numbers		
		\$m		\$m		\$m		\$m		\$m		\$m				
		% Change		% Change		% Change		% Change		% Change		% Change				
		2012	reporting currency	2012	2011	2012	2011	2012	Change	2012	Change	2012	Change	2012	Change	
1	BASF <sup>a</sup>	95,100	-1.9	-0.2	8,889	11,127	6,354	8,019	84,813	7.0	2,284	9.8	5,470	23.8	110,782	-0.3
2	Sinopec <sup>b</sup>	64,894	-2.3	-1.3	59	4,018			23,055	1.7			3,048	27.8		
3	ExxonMobil <sup>b</sup>	60,885	-5.9	-5.9	4,885	5,875	3,898	4,383	26,124	-3.6			997	-31.2		
4	Dow Chemical	56,786	-5.3	-5.3	1,665	3,601	842	2,402	69,605	0.6	1,708	3.8	2,614	-2.7	54,000	4.4
5	SABIC	50,390	-0.5	-0.5	10,916	13,023	6,590	7,797	90,141	1.6			2,871	1.2	40,000	0.0
6	Shell <sup>b</sup>	45,757	-2.6	-2.6			1,374	2,054					875	38.0		
7	LyondellBasell Industries	45,352	-5.9	-5.9	4,676	4,337	2,848	2,147	24,220	6.0	172	-12.2	1,060	1.0	13,500	-3.6
8	DuPont <sup>a/aa</sup>	34,833	3.5	3.5	3,115	3,781	2,788	3,474	49,736	2.6	2,067	8.2	1,793	-2.7	70,000	0.0
9	Mitsubishi Chemical <sup>c</sup>	32,782	-3.7	-15.3	958	1,576	197	428	35,109	-8.3	1,430	-14.5	1,403	0.1	55,131	2.1
10	INEOS	29,908	17.0	19.1	783	1,590									11,883	-8.0
11	Bayer <sup>d</sup>	27,370	7.7	9.6	2,381	1,242			34,710	-0.2	1,386	8.7	1,619	18.4		
12	Total <sup>b</sup>	26,050	1.4	3.2												
13	LG Chem	21,837	2.6	11.5	1,793	2,434	1,414	1,873	15,565	17.9			1,790	-5.6		
14	Sumitomo Chemical <sup>c</sup>	20,724	0.2	-11.8	478	733	-542	67	26,239	-7.0	13	-10.1	1,232	-34.2	30,396	1.9
15	AkzoNobel <sup>e</sup>	20,291	5.4	7.2	1,640	1,484	1,975	1,079	23,684	-8.1	510	12.8	1,089	27.7	50,600	-11.6
16	Air Liquide	20,207	6.0	7.9	3,340	3,158	2,122	1,989	32,967	5.5	339	3.7	2,647	16.4	49,500	7.1
17	Linde Group	20,146	10.8	12.8	4,654	4,160	1,648	1,521	44,138	17.8	133	4.9	2,357	32.2	61,965	22.9
18	PTT Global Chemical	18,396	12.5	16.0			1,111	952	14,253	20.6						
19	Evonik <sup>b/f</sup>	17,654	-5.2	-3.6	2,372	2,499			21,970	0.1	518	9.5	1,342	37.0	32,681	0.8
20	Braskem	17,333	9.3	-0.7	751	1,004	-360	-262	20,091	0.1	52	-2.7	1,363	12.7	7,365	2.8
21	Toray <sup>c</sup>	16,900	0.2	-11.8	886	1,300	515	775	18,382	-3.7	566	-9.0	1,040	-8.6	42,584	5.9
22	Agrium	16,686	7.9	7.9	2,222	2,223	1,498	1,375	15,977	21.6			1,282	93.4	14,500	-2.0
23	Solvay <sup>g</sup>	16,395	66.8	69.7	1,618	750	792	384	24,165	-4.2	344	72.4	1,035	32.7	29,103	-0.1
24	Johnson Matthey <sup>c</sup>	16,314	-10.8	-15.3	579	694	419	505	5,372	2.8						
25	Reliance Industries <sup>c/h</sup>	16,095	7.8	1.0	1,319	1,781			9,006	8.0			1,498	246.9		
26	Yara International	15,187	5.2	13.0	2,007	2,215	1,905	2,018	14,602	18.1	20	-3.9	641	32.3	8,052	5.6
27	Lotte Chemical Corporation <sup>bb</sup>	14,928	1.3	10.1	349	1,269	297	978	9,736	4.9	27	8.9	561	-30.3	2,484	46.2
28	Mitsui Chemicals <sup>c</sup>	14,926	-3.3	-14.9	46	260	-86	-12	14,202	-6.3			601	11.1		
29	Syngenta	14,202	7.0	7.0	2,292	2,051	1,875	1,599	19,401	12.5	1,253	5.2	508	6.1	27,262	3.5
30	Merck KGaA	14,161	8.4	10.3	1,271	1,467	763	800	28,536	-0.5	1,992	1.5	434	-8.6	38,847	-4.5
31	Chevron Phillips Chemical	13,307	-4.5	-4.5			2,403	1,970	9,409	9.0						

<sup>a</sup> Financial year-end September 30, 2012. For Cabot the Supermetals business was divested in 2012. Includes the acquisition of Norit, completed July 31, 2012

<sup>b</sup> Performance Materials and Technologies figures used

<sup>c</sup> Figures are for petrochemicals and fertilizers only

<sup>d</sup> Excludes Winchester segment

<sup>e</sup> Financial year end October 28, 2012

<sup>f</sup> Formerly known as Cementai Chemicals

<sup>g</sup> Georgia Gulf is currently known as Axiall Corporation due to a merger with the chemicals business of PPG Industries on January 28, 2013

<sup>h</sup> Net profit reflects a \$365 million non-

cash charge recorded to adjust the company's asbestos related liability in 2012

<sup>i</sup> Yule Catto & Co plc is now known as Synthomer plc

<sup>aa</sup> 2011 figures restated

<sup>bb</sup> Honam Petrochemical now known as Lotte Chemical Corporation

<sup>cc</sup> Figures include the acquisition of FiberVisions, Old World Industries and Old World Transportation

## Reasons for exclusions

**PetroChina** – Does not segment chemicals from refining business

**Repsol** – Repsol no longer discloses its chemical figures.

**Koch** – Does not segment chemical data

**OMV** – Includes petrochemical operations

in its refining and marketing segment

**Shanghai Petrochemical Corp** –

Majority owned by Sinopec

**Samsung Total** – Sales equity accounted in Total and Samsung figures

**ChemChina** – Accounts not made public by the company.

**China Blue Star Chem** – Majority owned by ChemChina

**Formosa Plastics Corp USA** – Not segmented in Formosa reports

**Formosa Petrochemical Corp** – Does not segment chemicals from refining business

**Nan Ya Plastics** – Sales a mixture of chemicals and processed items

**Yeochoon NCC** – Results included with Hanwha and Daelim

**Daelim** – Below Top 100 in sales as

Yeochoon NCC accounted as equity company

**Samsung** – Does not consolidate various chemicals company interests into one area

**Flint Group** – Accounts not made public by the company

**Lubrizol** – Acquired by Berkshire Hathaway on September 16, 2011.

Lubrizol business not segmented

**PICT** – Accounts not made public by the company.

## Exchange rate

Key financial exchange rates used for 2012 data (2011 in parentheses): €//\$ 1.318 (1.296) based on December 31 year-end, \$/Yen 94.2 (82.9) based on March 31 year-end.

Rank 2012	Company	Sales		Operating profit		Net profit		Total assets		R&D		Capital spending		Employee numbers		
		\$m	% Change	\$m	\$m	\$m	\$m	\$m	%	\$m	%	\$m	%	2012	%	
		2012	reporting currency	\$	2012	2011	2012	2011	2012	Change	2012	Change	2012	Change	2012	Change
32	PPG Industries <sup>l/x</sup>	12,966	2.7	2.7												
33	DSM	12,039	-0.7	1.1	581	1,203	380	1,055	15,777	9.1	505	2.3	904	46.3	23,498	5.7
34	LANXESS	11,990	3.6	5.4	1,068	1,006	678	656	9,914	11.2	253	35.7	918	4.3	17,177	4.8
35	Ecolab	11,839	74.1	74.1	1,289	754	704	463	17,572	-3.7	183	90.6	575	68.1	40,860	1.6
36	SK Energy <sup>h</sup>	11,801	-16.5	-9.2	706	669			2,948	-2.3						
37	Sasol <sup>k</sup>	11,588	14.4	-5.5	795	1,289										
38	Praxair	11,224	-0.2	-0.2	2,437	2,468	1,692	1,672	18,090	10.6	98	8.9	2,180	21.3	26,539	1.4
39	Huntsman	10,964	-0.7	-0.7	845	606	363	247	8,884	2.6	152	-8.4	412	24.8	12,000	0.0
40	Sekisui Chemical <sup>o</sup>	10,958	7.0	-5.9	633	659	320	339	9,569	-4.1					22,202	6.5
41	Henkel (Adhesive segment) <sup>o</sup>	10,885	6.6	8.4	1,570	1,299							349	64.4	24,237	0.5
42	Shin-Etsu <sup>o</sup>	10,884	-2.1	-13.9	1,667	1,806	1,122	1,214	20,389	-6.6	400	-7.3	857	-11.5	17,712	9.6
43	Asahi Kasei <sup>o/j</sup>	10,559	-0.7	-12.6	343	594							848	3.2		
44	Mosaic <sup>l</sup>	9,974	-10.2	-10.2	2,210	2,611	1,889	1,930	18,086	8.4			1,588	-3.1	8,400	5.0
45	Borealis	9,948	6.3	8.2	208	369	633	657	9,171	15.5	127	7.3	421	34.1	5,339	3.5
46	Formosa Chemicals & Fibre (Taiwan) <sup>p</sup>	9,886	6.6	6.6			245	1,206	13,200	9.5					5,448	3.6
47	BP <sup>m</sup>	9,858	-9.0	-9.0	166	1,120										
48	Air Products <sup>r</sup>	9,612	-0.6	-0.6	1,282	1,508	1,167	1,224	16,942	18.5	126	6.4	1,521	16.2	21,300	12.7
49	Sherwin-Williams	9,534	8.8	8.8	907	742	631	442	6,235	19.2	45	7.0	157	2.2	34,154	3.5
50	NPC (Iran) <sup>o/n</sup>	9,017	-13.1	-13.1	1,563	1,381	916	1,155	15,879	-32.9	4	20.0	908	29.5	18,643	63.5
51	Versalis (part of ENI) <sup>h</sup>	8,462	-1.1	0.6	-901	-550	-521	-267					227	-19.0	5,668	-2.3
52	Arkema	8,432	8.4	10.3	858	929	290	-25	7,306	5.7	195	14.1	632	14.9	14,000	8.2
53	Ashland <sup>r</sup>	8,206	26.2	26.2	302	130	26	414	12,524	-3.4	137	71.3	298	48.3	15,000	0.0
54	Eastman Chemical	8,102	12.9	12.9	800	937	437	646	11,619	87.9	198	24.5	465	1.8	13,500	35.0
55	Potash Corp	7,927	-9.0	-9.0	3,019	4,306	2,079	3,081	18,206	12.0			2,133	-2.0	5,779	1.3
56	Teijin <sup>o</sup>	7,915	-12.7	-23.2	131	410	-309	145	8,092	-12.0	352	-8.2	329	-1.3	16,637	-1.1
57	Styrolution	7,911	-9.1	-7.5												
58	DIC <sup>o</sup>	7,470	-4.2	-15.7	409	422	202	219	7,355	-9.7			242	-15.5		
59	ALPEK (Grupo Alfa)	7,417	6.1	14.1	577	544	338	314	4,759	6.8			117	178.5	4,700	4.4
60	Tosoh <sup>o</sup>	7,095	-2.7	-14.4	260	286	179	113	7,802	-8.8	129	-16.8	255	9.1		
61	Orica <sup>r</sup>	6,928	8.0	15.0	680	1,002	418	626	7,914	6.5	49	4.7	609	-5.8	15,000	7.1
62	Indorama Ventures <sup>aa/cc</sup>	6,890	13.3	16.8	243	391	158	489	5,572	20.5			355	62.9		
63	ICL (Israel Chemicals Ltd)	6,672	-5.6	-5.6	1,577	1,926	1,301	1,512	7,747	6.4	77	6.9	668	34.6	12,280	3.1
64	SCG Chemicals <sup>w</sup>	6,653	5.5	8.8			88	355	5,780	3.6						
65	Clariant	6,594	8.4	11.1	433	460	260	267	10,402	7.2	191	28.1	340	-13.8	21,202	-4.3
66	Hanwha Chemical	6,535	-12.3	-4.7												
67	Compania Espanola de Petroleos (CEPSA) <sup>h</sup>	6,440	53.8	56.4												
68	Celanese	6,418	-5.1	-5.1	511	690	605	607	9,000	5.7	102	6.3	361	3.4	7,550	-0.7
69	PKN Orlen <sup>b</sup>	6,332	11.0	23.3	389	4							154	-17.5		
70	Honeywell <sup>s</sup>	6,184	9.3	9.3	1,154	1,042			6,396	18.4			328	16.3		
71	Dow Corning	6,119	-4.8	-4.8			188	806	13,301	-5.7					12,000	0.0
72	Wacker-Chemie	6,111	-5.6	-4.0	449	792	149	457	8,346	3.3	230	2.7	1,243	22.8	16,292	-5.1
73	CF Industries	6,104	0.1	0.1	2,959	2,791	1,849	1,539	10,167	13.3			524	111.8	2,500	4.2
74	Sojitz <sup>b/c</sup>	6,063	-17.0	-27.0	93	159	21	69	2,822	-14.1						
75	Formosa Plastics <sup>p</sup>	5,939	-4.1	-4.1			563	1,339	11,804	5.6					6,003	12.0
76	Styron	5,500	-8.3	-8.3											2,100	0.0
77	EuroChem	5,453	26.8	32.9	1,317	1,371	1,067	1,001	7,772	21.4			922	24.0	20,000	-3.9
78	Petronas <sup>h</sup>	5,428	2.2	5.9	1,421	1,626										
79	K+S	5,189	-1.5	0.2	1,066	1,174	881	732	8,753	11.5	26	16.1	526	58.9	14,362	0.2
80	Kaneka <sup>o</sup>	5,057	1.5	-10.7	168	159	99	65	5,142	-8.8			337	-8.8		
81	NOVA Chemicals	5,055	-3.5	-3.5	859	1,007	544	615	609	-9.6	45	9.8	265	67.7	2,500	2.0
82	Taiyo Nippon Sanso <sup>o</sup>	4,971	-1.9	-13.7	264	375	-22	256	6,536	-10.8						
83	Mitsubishi Gas Chemical <sup>o</sup>	4,967	3.5	-9.0	121	110	-83	149	6,516	-9.3			320	-23.5		
84	Airgas <sup>o</sup>	4,958	4.4	4.4	596	556	341	313	5,618	5.6			326	-8.7	15,000	0.0

Rank 2012	Company	Sales			Operating profit		Net profit		Total assets		R&D		Capital spending		Employee numbers	
		\$m	% Change		\$m	\$m	\$m	\$m	\$m	%	\$m	%	\$m	%	2012	%
		2012	reporting currency	\$	2012	2011	2012	2011	2012	Change	2012	Change	2012	Change	2012	Change
85	Mexichem	4,890	34.0	44.2			315	364	7,720	78.1			289	34.6		
86	Tasnee	4,778	-8.8	-8.8	1,096	1,442	470	651	12,151	14.1			273	-1.7		
87	Momentive Specialty Chemicals <sup>a</sup>	4,756	-8.7	-8.7	202	368	324	118	3,325	7.0	69	-1.4	133	-4.3	5,100	-3.8
88	Givaudan	4,649	8.7	11.5	663	472	449	268	6,935	-3.1	441	-4.8	170	-14.5	9,124	2.4
89	Occidental Chemical <sup>b</sup>	4,580	-4.9	-4.9	720	861							357	52.6		
90	SIBUR	4,443	1.0	5.9	367	654										
91	Lonza	4,287	45.8	49.4	366	278	199	164	7,754	3.1	127	26.5	316	19.4	10,789	-1.9
92	RPM <sup>i</sup>	4,079	8.0	8.0	251	396	99	216	4,116	15.6	49	8.9	91	26.4	10,500	8.2
93	Valspar <sup>v</sup>	4,021	1.7	1.7	482	-40	292	-139	3,627	3.6	117	1.4	89	33.8	9,500	-5.2
94	JSR <sup>c</sup>	3,943	6.2	-6.6	374	434	321	319	5,126	-1.4			296	48.0		
95	Kuraray <sup>c</sup>	3,921	0.1	-11.9	522	661	306	380	6,232	-1.3			459	3.2		
96	Daicel Chemical Industries <sup>c</sup>	3,805	4.8	-7.8	278	247	163	143	4,898	1.9						
97	FMC	3,748	11.0	11.0	658	587	416	366	4,374	16.8	118	12.0	207	9.0	5,700	14.0
98	Showa Denko <sup>b</sup>	3,676	-16.4	-20.0	-21	67			3,749	-5.7			141	23.2		
99	Incitec Pivot	3,634	-1.2	5.2	739	605	527	455	7,280	6.7	9	19.8	650	3.2	5,242	6.8
100	Denki Kagaku Kogyo (Denka) <sup>c</sup>	3,626	-6.3	-17.6	200	250	119	137	4,409	-9.2						

## BUBBLING UNDER

Rank 2012	Company	Sales			Operating profit		Net profit		Total assets		R&D		Capital spending		Employee numbers	
		\$m	% Change		\$m	\$m	\$m	\$m	\$m	%	\$m	%	\$m	%	2012	%
		2012	reporting currency	\$	2012	2011	2012	2011	2012	Change	2012	Change	2012	Change	2012	Change
101	Westlake Chemical	3,571	-1.3	-1.3	615	447	386	259	3,412	4.4			387	118.9	2,000	10.4
102	Rockwood Holdings	3,507	-4.4	-4.4	453	567	384	411	5,974	30.2	62	4.9	286	2.3	9,700	0.0
103	Industries Qatar <sup>t</sup>	3,445	16.1	16.2												
104	Georgia Gulf <sup>x</sup>	3,326	3.2	3.2	238	125	121	58	1,801	9.5			80	20.5	6,000	60.3
105	Cabot <sup>t</sup>	3,300	6.4	6.4	409	354	388	236	4,399	40.1	73	10.6	281	22.2	4,826	17.7
106	W.R. Grace <sup>y</sup>	3,156	-1.8	-1.8			94	269	5,090	13.3	65	-5.8	139	-3.8	6,500	3.2
107	PolyOne	2,993	4.5	4.5	167	233	72	173	2,128	2.4	42	13.6	57	6.1	5,000	6.4
108	Ube <sup>b/c</sup>	2,976	-5.0	-16.5	66	342										
109	Asahi Glass <sup>b</sup>	2,972	3.5	-7.8	168	235			3,403	2.3			380	50.3		
110	Kemira	2,955	1.5	3.3	36	218	28	182	3,282	-5.4	55	7.6	176	38.4	4,857	-3.0
111	Nippon Shokubai <sup>c</sup>	2,861	-16.0	-26.1	107	375	89	257	3,740	-13.0	113	-15.9	312	23.8	3,938	4.2
112	Makhteshim-Agan Industries	2,835	5.3	5.3	282	243	123	121	3,975	5.6	30	14.9	100	6.8	4,502	10.6
113	IFF	2,821	1.2	1.2	487	428	254	267	3,250	9.6	234	6.4	126	-1.1	5,700	1.0
114	Tessenderlo Group	2,808	0.2	1.9	100	136	-260	-124	1,698	-5.0	16	2.6	150	8.9	7,005	-6.1
115	Tata Chemical <sup>c</sup>	2,771	8.2	1.4	300	347	74	165								
116	Albemarle	2,745	-4.3	-4.3	406	518	330	420	3,437	7.3	79	2.6	281	47.4	4,000	-6.1
117	Pemex <sup>h</sup>	2,731	-18.5	-12.3	-806	-394	-869	-448	9,273	-1.7			223	28.2	13,487	-0.4
118	Methanex	2,673	2.5	2.5	-47	344	-35	228	3,545	4.4			135	7.1		
119	Zeon <sup>c</sup>	2,662	-4.6	-16.1	252	388	157	231	3,720	-1.2						
120	Chemtura	2,629	0.9	0.9	211	196	101	119	3,030	6.1	44	15.8	149	-3.2	4,600	2.2
121	Petkim Petrokimya Holding	2,436	11.8	18.5	-6	86	10	54	1,496	1.1	1	6.0	56	-35.8	2,401	-7.2
122	SQM	2,429	13.2	13.2	901	753	657	554	4,416	14.1			446	-11.0	5,643	
123	Samsung Cheil Industries	2,423	8.4	17.8	303	224	50	46	1,594	29.9	541	19.7	372	37.1	1,084	-6.1
124	Fuchs Petrolub	2,398	10.1	12.1	386	342	273	237	1,462	14.5	38	7.3	94	95.2	3,754	0.9

# Global weakness weighs on Top 100

After a fantastic year of recovery for chemicals in 2011, 2012 proved to be much tougher

FAHEEM BEHARDIEN LONDON

**S**luggish global petrochemical demand in 2012 has left the participants of the ICIS Top 100 listing feeling deflated following the celebrations of a record 2011 sales year.

The most recent instalment of the listing registered a sales total of \$1.39 trillion (€1.05 trillion), a 0.7% fall on the \$1.40 trillion accomplished in the previous financial period. The fall reflects a negative growth rate for only the second time since 2000, with the only other occasion being at the pinnacle of the 2008-2009 global recession.

Clearly a challenging year for the industry, 2012 had many obstacles impacting on global markets, none more so than the eurozone crises. The decline in sales of the listing reflects the lower global chemical production over the 2012 period. According to the American Chemistry Council (ACC), chemical production (excluding pharmaceuticals) dropped by 0.53% to \$3.88 trillion.

## HEADS AND TAILS

Through intelligent portfolio management and exploitation of varying market conditions around the world, the elite companies have managed to tread turbulent waters and have maintained their dominance at the top of the listing. However, the

scars are there to be seen, with eight of the top 10 achieving lower sales numbers (in reporting currency) compared with 2011.

Despite a 1.9% dip in sales, BASF has extended its innings at the head of the pack and has increased its advantage over Sinopec to \$30.2bn. The state-owned Chinese number one has consolidated its runner-up position in the global listing after relinquishing Dow Chemical of that position in 2011. Familiar faces remain at the top as positions 1 through 4 are unchanged. SABIC has moved up one spot to complete the top five. DuPont and INEOS are the only companies with increased revenue, in this part of the table, for the term. The former owed most of its improvement on better performing agriculture, nutrition and health and industrial biosciences segments, which were offset by a decline in the performance chemicals subsidiary.

After considering a 4.0% fall, the top 10 impressively maintains a 37.2% share of total sales. The bottom 50 has improved its share by more than 1% to 20.7% aided by new entrants from last year's bubbling under section. On the whole, shares are similar to 2011, displaying how companies at the top and the lower end of the table have equally been affected by global conditions.

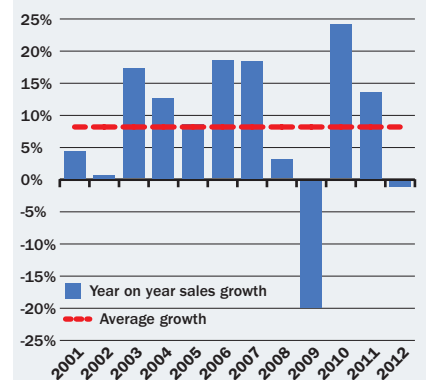
Positions 90-100 are made up of mainly downstream sellers and most notably five Japanese companies. These companies, especially

plastic producers, have felt the full effects of buyers staying away from the market and evidence of this lower demand relates further upstream in global ethylene production. The ICIS Worldwide Ethylene Plant Report shows a decrease in olefin production across the major producing regions (North America, Europe, Japan and China) in 2012.

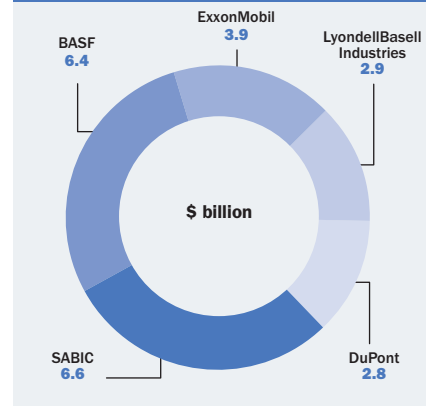
## LOWER PRICES AS DEMAND DWINDLES

If the record sales figure in 2011 was primarily the result of higher chemical prices, conversely lower sales volumes paired with reduced prices was the theme in 2012.

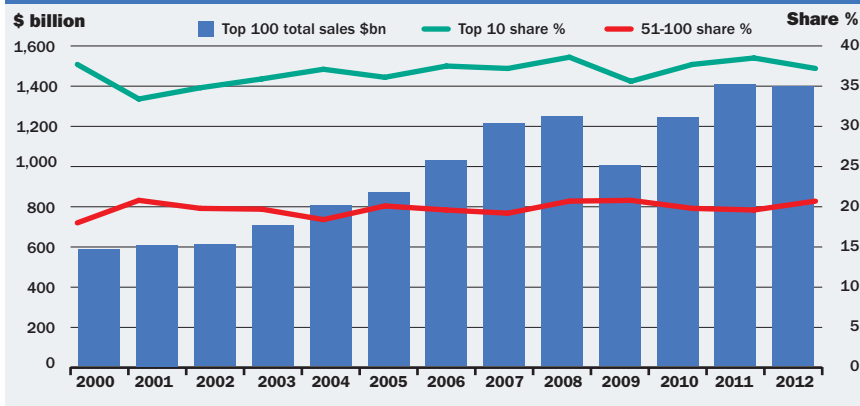
## TOP 100 SALES GROWTH



## TOP FIVE NET PROFITS



## HEADS AND TAILS





» The ICIS Petrochemical Index (IPEX), a pricing index that comprises a basket of 12 key petrochemicals in the US, northeast Asia and western Europe, is in-line with lower demand and chemical production.

Dollar-based prices fell for most of the 12 petrochemicals with global butadiene prices seeing the biggest drop at 17.7%. The suffering auto industry impacted the tyre market, which is the primary user of butadiene.

Lower PVC prices are also symptomatic of the slower emergence of China, which has had its smallest gain in GDP in over a decade. Despite the region having the world's biggest PVC market, the impact from the damaged construction sector has been felt further upstream.

**OPERATING MARGINS**

Average operating margins were about 1.0% lower compared with 2011, with the lower sales values having an impact on this figure. The top end of the graphic is once again dominated by companies with fertilizer ties due to the improved scope within the industry since 2010. It is worth mentioning that the world potash sector has recently been disrupted due to the break-up of one of its biggest exporting organisations, which may result in lower prices in the near future. On the other end of the table is evidence of the slower growth of the Asian emerging markets. Despite compiling the second highest sales total, Sinopec is surprisingly third from bottom following a 98.5% fall in operating profit (in reporting currency).

**COST CUTTERS**

Companies looked to reduce costs to compensate for the reduction in sales and a common expense targeted would be selling, general and administration (SG&A) costs. The total percentage SG&A of sales amongst the top 100 has remained relatively flat, indicating how overheads rarely decrease. Lyondell-Basell has maintained SG&A as a percentage of revenue at 2.0% from last year and leads the group.

Extracting the best out of the workforce is imperative in pushing efficiency. Lotte Chemical (formerly Honam Petrochemical) has remained in the top position even after considering a \$1.6m lower value per employee. Eight of the players remain unchanged in the top 10 and a good period for Yara, which enters at the number 8 spot. The average sales/employee for the total listing of 2012 (of declared data) is down about 6%, at \$930,000 per employee. This is, however, an improvement on the 2010 number of \$730,000 per employee and illustrates the continued emphasis companies place on efficiency.

The fertilizer industry also was not exempt

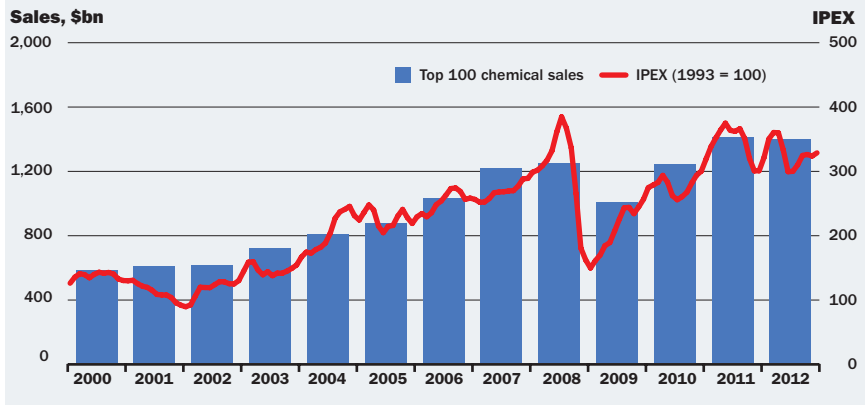
from the global financial challenges with most companies registering lower sales volumes in 2012. Farming conditions played a part in the performance of the industry in 2012 with one of the worst droughts hitting North America in recent times. Buyers also stayed away from the market as stock from the previous period was utilised well into the first half of the year.

There has been a move by most fertilizer

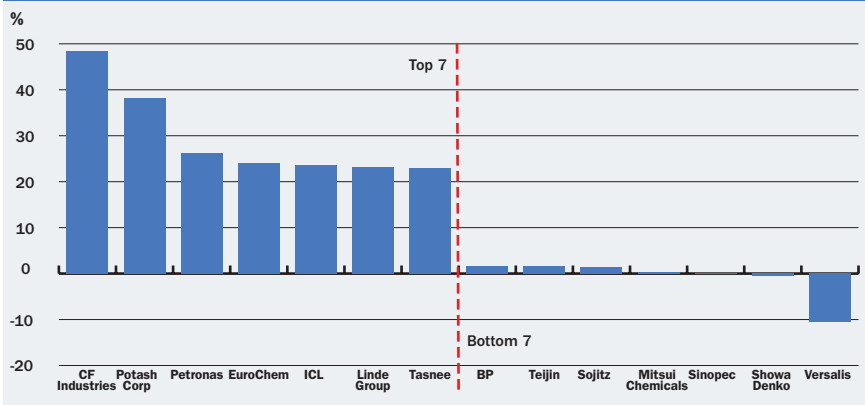
companies to invest in expansion as there is a real need to increase the global food capacity. This is in line with the Zero Hunger challenge launch in July 2012 by the United Nations which has been welcomed by governments around the world.

The general feeling is that the demand for more crops is inevitable and companies would spend to increase capacity in order to cope when the time comes. ■

**LOWER PRICES AS DEMAND DWINDLES**



**BEST & WORST RETURN ON SALES 2012**



**LOWEST SELLING, GENERAL AND ADMINISTRATION EXPENSE 2012**

