Nigel Peters/RBI

Major shifts in sales from break-ups, mergers and acquisitions (M&A) and new capacity additions lead to dynamic changes among geographic leaders

JOSEPH CHANG NEW YORK

It was a challenging 2018 for the ICIS Top 100 Chemical Companies with headwinds from the US-China trade war and severe inventory destocking taking hold in the back half of the year.

The break-up of US-based DowDuPont into three separate companies paved the way for a new overall leader - China's Sinopec - which also dominates the Asia leaders table.

In this issue, we break out the top companies by headquarters in key geographic regions - North America, Europe, Asia, Middle East & Africa, and Latin America, and discuss movements up and down the regional rankings.

North America saw big changes with the new Dow taking the top spot, followed by LyondellBasell. Major capacity additions helped lift ExxonMobil Chemical into the #3 position. The US shale gas cost advantage continues to provide producers with not only a cushion for any economic slowdown, but also impetus to continue investing in multi-billion dollar projects in petrochemicals and downstream.

In the Middle East, SABIC dominates and after a planned combination with Saudi Aramco, the combined Aramco should stand out not only among the Middle East leaders, but in the global rankings. We await Aramco's disclosure of its chemical sales.

In Europe, sales growth was hard to come by, but Germany's BASF maintains its lead, followed by INEOS. Evonik at #3 leads among Europe's specialty players. ■

NORTH AMERICA SEES MAJOR SHUFFLE AS CAPACITY BOOST DRIVES REVENUES

The break-up of DowDuPont creates two formidable leaders in the Top 10. New start-ups and M&A boost sales for others

JOSEPH CHANG NEW YORK

The big change in the North American chemical leaders landscape was the break-up of US-based DowDuPont into three major companies and two in the Top 10.

The new Dow takes the #1 spot with $60.3bn in pro forma 2018 sales, a 9% boost from a year ago, while the new DuPont places at #4 with $26.3bn in sales, lifted by an 8% year on year gain. The former DowDuPont posted $79.6bn in sales in 2017.

Capacity additions for the major commodity chemical companies, driven by low-cost shale gas, helped boost revenues for Dow, LyondellBasell, ExxonMobil Chemical and Chevron Phillips Chemical. The ethylene and derivatives capacity wave continues into 2019 and beyond with further start-ups of crackers and derivative units, particularly in polyethylene (PE).

The US is becoming a greater powerhouse in global PE exports, though hampered by tariffs from China in the US-China trade war. The two grades of PE under 25% tariff by China - high density (HDPE) and linear low density PE (LLDPE) - have seen major declines in volumes of exports to China, while exports of the one grade not under tariff - low desnity PE (LDPE) - have surged. However, China plans to slap 10% tariffs on LDPE starting on 15 December, further limiting US exports to China.

This year, we bring LyondellBasell into the North America leaders listing as its worldwide headquarters are in Houston, Texas. The company had been in the European leaders ranking previously, as it is incorporated in the Netherlands. With a 13% sales gain to $39.0bn, aided by the acquisition of US-based compounding company A. Schulman in August 2018, LyondellBasell takes the #2 spot among North American leaders.

Mergers and acquisitions (M&A) also boosted sales for US-based paints and coatings giant Sherwin-Williams. Its acquisition of US-based coatings firm Valspar in June 2017 helped drive 2018 sales up 17% to $17.5bn for the #5 position.

US-based coatings competitor PPG continues to make bolt-on acquisitions in coatings as well as adhesives, giving Sherwin-Williams a run for its money. It weighs in at #6 among North American chemical companies with a 4% increase in sales to $15.4bn.

Chevron Phillips Chemical grew sales the fastest in 2018 - up 25% to $11.3bn - on the back of major capacity additions in ethylene and PE in the US. The company is evaluating yet another world-scale cracker in the US with partner Qatar Petroleum. It would be the largest cracker in the world with ethylene and PE capacities of 2m tonnes/year each.

ExxonMobil Chemical already has a US cracker and PE units under construction with Saudi-Arabia's SABIC.

2019 is shaping up to be a challenging year, with the US-China trade war weighing on business sentiment - not just in the US and China but in the rest of the world as well. The manufacturing PMIs (Purchasing Managers Indexes) for the US, China and Eurozone are all pointing down, with the Eurozone and China in contraction territory.

A trade deal between the US and China would give a much needed jolt to business confidence, but it's not something to count on. ■

NORTH AMERICA LEADERS ($M)

Rank	Company	Sales	% Change	Operating profit	% Change	Net Income	% Change	Capex	% Change
1	Dow[1]	60,278	8.6	7,036	86.4	4,633	678.7	2,538	-19.3
2	LyondellBasell	39,004	13.1	5,231	-4.2	4,690	-3.8	2,105	36.1
3	ExxonMobil Chemical	32,443	13.1	-	-	3,351	-25.8	2,235	-40.7
4	DuPont[1]	26,279	8.0	-4,462	-	-5,018	-	1,311	17.8
5	Sherwin-Williams	17,534	17.0	1,470	-27.4	1,109	-35.8	251	12.6
6	PPG	15,374	4.2	1,788	-14.4	1,341	-15.9	411	14.2
7	Ecolab	14,668	6.0	1,947	-0.2	1,440	-5.2	847	-2.5
8	Chevron Phillips Chemical	11,310	24.8	-	-	2,069	43.1	-	-
9	Eastman Chemical	10,151	6.3	1,552	1.4	1,084	-21.9	528	-18.6
10	Huntsman	9,379	12.2	1,038	22.8	650	-12.3	313	11.0

NOTE: Please refer to the main Top 100 listing in the 30 August issue for footnotes

BASF ECLIPSED BY SINOPEC AS ASIA GIANTS INCREASE GLOBAL POWER

Tough conditions in second half 2018 have persisted through 2019 while Sinopec blasts ahead with 25% hike in sales

WILL BEACHAM BARCELONA

The big news for Europe petrochemicals is BASF's number two position in the main Top 100 listing, thanks to Sinopec's rise to number one globally after an impressive 25% rise in sales.

BASF's was also number two last year, but only thanks to the newly-merged DowDuPont which temporarily hit number one before it was split up again. This time BASF's position signals the rising power and influence of Chinese and Asian players in the global chemicals landscape.

Although BASF managed a slight increase in sales last year, profitability plunged by double figures as petrochemicals margins fell away, especially in the second half. This year, the company continues to suffer from poor demand as the US-China trade war hurts sentiment and helps to lower economic growth across all regions.

In Europe, Brexit uncertainty has added to woes in the company's core market, with purchasing managers indices pointing to contraction for several months in 2019.

BASF was forced to issue a string of profit warnings in 2019 so the company – like many of its peers - looks set to have another challenging year.

INEOS moves up one place to number two in Europe after our decision to move LyondellBasell into the North America leaders.

INEOS also suffered a fall in profitability in 2018 on a small rise in sales. The group continues with its ambitious investment plans, most recently a $1bn+ investment for a US ethylene oxide and derivatives plant. It is planning a seventh alkoxylation plant (AO 7) which will almost certainly be built in Antwerp.

Last year, the company said it would start a feasibility study on plans to build a world-scale Ethylidene Norbornene (ENB) plant to join the one in Antwerp which has already undergone a debottleneck. It also has a vinyl acetate monomer (VAM) project in Hull, UK.

The major project in Europe for INEOS is its planned shale gas cracker for Antwerp – Project 1. It is also part of the Styrenics Circular Solutions partnership which aims to set up the first commercial-scale polystyrene (PS) chemical recycling facility in Europe.

In March, INEOS agreed to acquire Saudi Arabian firm Cristal's North American titanium dioxide (TiO2) business for $700m.

There was structural change for AkzoNobel in 2018 as it sold its specialty chemicals business, Nouryon, to private equity player The Carlyle Group and sovereign wealth fund GIC. It leaves AkzoNobel as a more pure play coatings group, with less capital intensity.

In February, Belgium's Solvay announced an action plan to increase its global soda ash production by 500,000 tonnes over the next two years, while at the same time onstreaming a biomass boiler at its Rheinberg plant in Germany. This uses waste wood to fuel production processes, cutting CO2 emissions at the site by over 30%.

In July, Germany's Evonik completed the €3bn sale of its methacrylates business to US firm Advent. The business has 15 production sites and 3,900 employees worldwide, with 2016-2018 annual sales of about €1.8bn and generates average earnings before tax, depreciation and amortisation (EBITDA) of about €350m. ■

EUROPE LEADERS ($M)

Rank	Company	Sales	% Change	Operating profit	% Change	Net Income	% Change	Capex	% Change
1	BASF	71,797	2.4	7,278	-16.9	5,392	-22.6	4,007	-6.3
2	INEOS	31,284	2.1	3,629	-9.3	-	-	-	-
3	Evonik	17,211	4.5	1,566	11.6	1,093	30.7	1,203	-2.6
4	Merck KGaA	16,995	2.2	1,978	-28.7	3,890	29.9	1,068	-7.9
5	Covestro	16,743	0.0	2,956	-8.1	2,088	-9.3	798	36.9
6	Johnson Matthey	13,711	4.6	678	47.9	527	38.6	412	48.8
7	Solvay	12,944	2.9	1,130	1.0	1,028	-19.6	814	-0.7
8	Henkel Adhesive Technologies	10,772	0.2	1,912	-5.2	-	-	729	-50.7
9	DSM	10,616	7.4	1,426	47.2	1,236	-39.4	647	25.8
10	AkzoNobel	10,603	-3.7	693	-26.7	521	-11.0	183	-36.0

NOTE: Please refer to the main Top 100 listing in the 30 August issue for footnotes

SINOPEC'S STELLAR CHEMICALS GROWTH CATAPULTS IT TO TOP POSITION

Company's double-digit sales growth for two years running is impressive in the light of the problems China's economy faced, especially since the US China trade war kicked off in the second half of 2018

WILL BEACHAM BARCELONA

Sinopec's growth trajectory is astonishing. Chemicals sales ballooned by 25% in 2018, following stellar 30% growth the year before. This rapid expansion has pushed the Chinese company into top position as the world's largest chemical company for the first time.

Sinopec's growth is even more astonishing when you look at China's economic backdrop. Like many of its Asian peers, Sinopec faced challenging conditions in the latter half of 2018 and throughout 2019 as the US-China trade war heated up. With tariffs on exports of chemicals, polymers and finished goods now up to 30%, trade is more challenging. Economic growth has also slowed in China, hurting chemicals demand growth.

Indeed polyethylene (PE) could be overstocked by 1m tonnes, according to ICIS analysis in August. Spreads against feedstock naphtha were at their lowest level since 2012 from January to June 2019.

Sinopec's production of ethylene fell by 0.8% in 2018 while overall chemical sales volumes rose by 10% to 86.6m tonnes. It attributed this to increased volumes and higher pricing.

In 2018, Sinopec also benefitted from Chinese yuan (CNY) 26,320m ($3.67bn) in from its $1.68bn acquisition of BP's 50% share in the Shanghai SECCO Petrochemical Company (SECCO). The deal completed on 26 October, 2017.

SECCO has capacity to produce 3.2m tonnes/year of petrochemicals including ethylene, propylene, polyethylene (PE), polypropylene (PP), styrene, polystyrene (PS), acrylonitrile (ACN), butadiene (BD), benzene, toluene and by-products.

According to Amber Liu, ICIS Head of Petchem Analytics, Asia, Sinopec is also pushing hard into distribution: "It signed contracts with local producers as a distributor to integrate domestic resources and optimize the marketing channel. It looks like Sinopec has been ambitious to strengthen its distributing ability in recent years."

In October 2018, Sinopec signed a memorandum of understanding with BASF to build an additional steam cracker in Nanjing, China, with 1m tonnes/year of ethylene capacity. The partners also aim to expand capacity at the BASF-YPC site and explore new opportunities in China's battery materials market.

Sinopec has also had some success with e-commerce. In April 2017 it launched Global Epec, an online marletplace which it claims had done $15.5bn of business by March 2018.

Sinopec has three major chemicals projects underway. The Hainan Refining and Chemical expansion consists of a refinery plus 1m tonne/year ethylene plant and an aromatics project. This was due onstream in June 2019 but has been delayed until year-end.

The Zhongke project consists of a refinery plus 800,000 tonnes/year ethylene unit, due onstream in June 2020.

Finally, the Zhenhai Refining and Chemicals expansion which includes a refinery and 1.2m tonne/year ethylene project. Construction should finish at the end of 2021 with the project due on stream in 2022, according to ICIS data. ■

ASIA LEADERS ($M)

Rank	Company	Sales	% Change	Operating profit	% Change	Net Income	% Change	Capex	% Change
1	Sinopec	79,486	24.9	3,926	0.1	-	-	2,846	-15.0
2	LG Chem	25,310	9.7	2,017	-23.3	1,364	-24.9	-	-
3	Reliance Industries	24,720	37.3	4,622	51.9	-	-	-	-
4	Mitsubishi Chemical Holdings	22,247	5.1	1,820	-17.4	-	-	-	-
5	Toray	21,773	8.3	1,289	-9.6	723	-17.2	-	-
6	Sumitomo Chemical	21,133	5.8	1,668	-27.1	1,390	-14.4	1,473	1.8
7	SK Innovation	20,782	15.2	1,417	-16.1	-	-	-	-
8	PTT Global Chemical	16,048	17.9	1,450	-6.1	1,246	-4.4	809	67.3
9	Lotte Chemical	14,858	4.2	1,767	-32.8	1,475	-28.1	-	-
10	Shin-Etsu Chemical	14,529	10.6	3,680	19.9	2,818	16.1	2,193	36.5

NOTE: Please refer to the main Top 100 listing in the 30 August issue for footnotes

SABIC TO BECOME LARGER FOLLOWING PLANNED MERGER WITH ARAMCO

Middle East will become a far more formidable player in global petrochemicals when massive new capacity comes on line

JOSEPH CHANG NEW YORK

Saudi Arabia's SABIC continues to dominate the Middle East & Africa leaders with a 12% gain in 2018 sales to $42.2bn, and stands to become part of an even larger entity with planned merger with Saudi Aramco.

The combination would create a global powerhouse in petrochemicals and potentially a new world leader. Saudi Aramco currently does not break out its chemical sales but more details should emerge as it moves closer to an initial public offering (IPO).

Both Aramco and SABIC continue to invest heavily in new petrochemical projects. Aramco and SABIC are planning a massive crude oil-to-chemicals (COTC) complex in Yanbu, Saudi Arabia to produce 9m tonnes/year of chemicals and base oils using one or more Aramco proprietary technologies to bypass the refinery step.

RAPID PROJECT

Aramco is also about to bring up the massive RAPID refining and petrochemical project with partner PETRONAS in Malaysia later this year. And it is building a $5bn new cracker complex with France-based Total in Jubail, Saudi Arabia and teaming with Abu Dhabi National Oil Company (ADNOC) and a consortium of Indian oil companies to build a $44bn refinery and petrochemical complex in Raigad, India.

Aramco is planning another refinery and cracker project in Liaoning, China, with partners NORINCO and Panjin Sincen. It is unmatched in resources and ambitions to expand its reach internationally.

SABIC has two major cracker complex projects - one with US-based ExxonMobil Chemical under construction in San Patricio, Texas, US, and another planned with Fuhaichuang Petrochemical in Zhangzhou, China.

Qatar Petroleum, while not in the listing, is also making big moves. It is teaming with partner US-based Chevron Phillips Chemical to build two of the world's largest crackers - one in Las Raffan, Qatar at 1.9m tonnes/year with downstream polyethylene (PE) capacity, and one on the US Gulf Coast with 2m tonnes/year of ethylene and PE capacity.

The expansions, slated to start up in 2024 in the US and in 2025 in Qatar, mark the first major projects for Qatar Petroleum in years.

FORMIDABLE

It's clear the Middle East will become a far more formidable player in global petrochemicals when massive new cost competitive capacity comes on in 2025 and beyond, providing major competition to US producers.

Middle East leaders will be well positioned to supply European and Asian markets given their geographic proximity and advantaged feedstock position.

We should get better visibility on sales from major players going forward, especially with the Saudi Aramco planned IPO and merger with SABIC.

South Africa-based Sasol is also bringing on additional petrochemical capacity as it starts up its Lake Charles, Louisiana, US cracker and derivatives complex this year. The project has been beset with cost overruns but should significantly boost the company's sales once it ramps up. ■

MIDDLE EAST & AFRICA LEADERS ($M)

Rank	Company	Sales	% Change	Operating profit	% Change	Net Income	% Change	Capex	% Change
1	SABIC[2]	42,213	12.1	9,600	17.6	-	-	-	-
2	Petro Rabigh	10,933	19.8	271	-40.4	178	-53.0	781	12.5
3	Persian Gulf Petrochemical Industries Company (PGPIC)	10,199	2.7	3,231	44.5	3,079	25.8	3,041	104.2
4	Sasol[2,4]	7,456	4.2	610	-43.9	-	-	-	-
5	Tasnee	3,050	6.0	733	69.2	475	53.9	240	2.7
6	ICL (Israel Chemicals)[2]	1,296	8.6	350	15.5	-	-	50	2.0
7	Industries Qatar[2]	1,198	-0.8	-	-	-	-	-	-

NOTE: Please refer to the main Top 100 listing in the 30 August issue for footnotes

BRASKEM HOLDS ON TO TOP SPOT IN LATIN AMERICA AMID CHALLENGES

Brazil's Braskem remains independent while Mexichem will change its name to Orbia Advance to reflect global presence

JOSEPH CHANG NEW YORK

Brazil-based petrochemical and polymers giant Braskem stays on top of the Latin American chemical leaders by a large margin, with an 18% gain in sales to $14.9bn in 2018.

Through much of 2018 and into 2019, the company's controlling shareholder, industrial conglomerate Odebrecht, had been in talks to sell Braskem to US-based LyondellBasell. The deal would have brought LyondellBasell a significant presence in Latin America, particularly Brazil and Mexico, adding to its substantial manufacturing footprints in the US and Europe. However, in June 2019, the parties ended discussions.

Braskem has been beset with challenges stemming from the Lava Jato corruption scandal in Brazil involving controlling shareholder Odebrecht where both agreed to pay billions of dollars in fines. The company also faces repurcussions from damage caused by its salt mine operations in Brazil.

ENVIRONMENTAL DAMAGE

In August 2019, Brazil's Federal Public Ministry (MPF) filed a public civil action requesting that Braskem should be responsible for societal and environmental damage worth at least real (R)20.5bn ($5.07bn).

The salt mine at the centre of the MPF's petition had caused subsidence and fissures in the neighbourhoods of Pinheiro, Mutange and Bebedouro in the city of Maceio in Alagoas state.

Braskem has since suspended operations at the mine, causing a chain of shutdowns.

The mine provided brine to a chlor-alkali plant that also was shut down, as well as a downstream ethylene dichloride (EDC) unit.

Financial results in 2018 were challenging as well. Despite a robust 18% increase in sales, operating profit declined 29% and net income fell by 30%.

The company continues to make selective capital investments. In the US, Braskem is building a new 450,000 tonne/year polypropylene (PP) project in La Porte, Texas, scheduled to start up in 2020.

MEXICHEM NAME CHANGE

Mexico-based Mexichem takes the #2 spot with a 24% increase in 2018 sales to $7.2bn. The global polyvinyl chloride (PVC) caustic soda and fluorine chemicals producer announced on 29 August that it is changing its name to Orbia Advance, in line with the operational reorganisation of its global businesses.

The name change comes as the company is focusing on a five-year transformation plan. "This is a big-time transformation that goes well-beyond the superficial level of what a name-change could be perceived as," said Daniel Martinez-Valle, Mexichem's CEO.

DANIEL MARTINEZ-VALLE
CEO, Mexichem

"We have accomplished work on a number of overarching initiatives"

REVITALISATION

The name change from Mexichem reflects the fact that other regions bring in most of the company's sales - Europe 37%, the US 31%, while Mexico only brings in 9%.

"This should make it clear why changing our name makes sense," Martinez-Valle said earlier in July.

Mexichem is seeking to revitalise the company to prepare for global competitive challenges. While it had strong results in 2018, this year is proving to be more challenging.

"Since we kicked off our transformation in March 2018 to evolve into a purpose-driven, future fit organisation, we have accomplished work on a number of overarching initiatives including restructuring our Go-to-Market organisation to enhance customer centricity; prioritising capital allocation to continue improving ROIC (return on invested capital); and executing company-wide efforts on talent, human-centered innovation, digital readiness, operational excellence and the circular economy," said Martínez-Valle. ■

LATIN AMERICA LEADERS ($M)

Rank	Company	Sales	% Change	Operating profit	% Change	Net Income	% Change	Capex	% Change
1	Braskem	14,945	17.7	1,558	-29.4	749	-29.7	697	19.0
2	Mexichem	7,198	23.5	935	32.1	483	125.7	283	-2.1
3	Alpek	6,849	35.9	1,079	-	760	-	101	-55.2

NOTE: Please refer to the main Top 100 listing in the 30 August issue for footnotes