



# ICIS TOP CHEMICAL MERGERS & ACQUISITIONS

**JOSEPH CHANG** NEW YORK

We present the ICIS Top Mergers & Acquisitions, comprising a listing of the top global deals completed in 2016, along with extensive coverage of the M&A market outlook.

The three listings are by closing date (starting from most recent in 2016), by price and by sales of the target business.

The most recent proposed HuntsmanClariant merger of equals is

an interesting case. Much like the imminent closing of DowDuPont, there appears to be little overlap and vertical integration. Investors appear sceptical, judging from the action in Huntsman's and Clariant's stock prices but time will tell.

Investment bankers expect a robust M&A market going forward as demand for assets remains high. 2017 is poised to break records in deal-making.

# Top Chemical M&A

SARAH CRESWELL LONDON AND  
JOSEPH CHANG NEW YORK

Selected global chemical industry mergers and acquisitions  
in 2016 by closing date, purchase price and sales of target

ICIS TOP M&A MAIN LISTING – 2016 DEALS BY CLOSING DATE									
Completed	Buyer	Target	Seller	Price, local	Price (\$)	Sales (target)	Sales (target, \$)	Countries (Buyer/Target HQ)	Business
28-Dec-16	Unipar Carbocloro	Solvay Indupa (70.6% stake)	Solvay	\$202.2m	\$202.2m			Brazil/Belgium	Polyvinyl chloride (PVC), caustic soda
27-Dec-16	Evonik	METEX technology for methionine fermentation	METabolic Explorer (METEX)	€45m	\$47.4m			Germany/France	Fermentative production of methionine
27-Dec-16	Neogen	Rogama Industria e Comercio						US/Brazil	Rodenticides and insecticides
21-Dec-16	Maroon Group	Cadence Chemical						US/US	Distribution of specialty intermediates for chemical processing, water treatment, CASE
21-Dec-16	RPM International	SPS Group				\$60m	\$60m	US/Netherlands	Decorative and specialty coatings
15-Dec-16	AkzoNobel	Industrial coatings business	BASF	€475m	\$501m	€300m	\$316m	Netherlands/Germany	Industrial coatings
14-Dec-16	BASF	Chemetall	Albermarle	\$3.2bn	\$3.2bn	\$845m	\$845m	Germany/US	Specialty chemicals and surface treatment for corrosion protection
14-Dec-16	Sika	Rmax Operating				\$75m	\$75m	Switzerland/US	Polysiocyanurate insulations
12-Dec-16	Wind Point Partners	Paragon Films						US/US	Stretch films for securing transit loads
9-Dec-16	Ferro	Cappelle Pigments		\$54m	\$54m	\$70m	\$70m	US/Belgium	Inorganic and organic pigments used in coatings, inks and plastics
9-Dec-16	Evonik	J.M. Huber's silica business	J.M Huber	\$630m	\$630m	\$300m	\$300m	Germany/US	Silicas
8-Dec-16	LINTEC	MACTac Americas	Platinum Equity			\$304m	\$304m	Japan/US	Adhesive printing papers and films
7-Dec-16	Ravago Holdings	Pacific Coast Chemicals (PCC)						Luxembourg/US	Distribution of pigments, light stabilisers, TiO2, polyurethane dispersions, silicones
6-Dec-16	Edgewater Capital Partners	DanChem Technologies	Ensign-Bickford Industries					US/US	Custom manufacturing of fine and specialty chemicals
1-Dec-16	Arkema	Den Braven		€485m	\$511m	€350m	\$369m	France/Netherlands	Adhesives, sealants and foams for construction and industrial
1-Dec-16	Celanese	SoFter Group						US/Italy	Compounding of thermoplastic elastomers (TPEs) and engineered thermoplastics (ETPs) such as nylon
1-Dec-16	Gurit	BASF's PET structural foam business	BASF					Switzerland/Germany	Polyethylene terephthalate (PET) structural foam
30-Nov-16	LIVIA Corporate Development	Provion Basic Chemicals (PBC)						Belgium/Belgium	Phthalic anhydride and phthalate esters
30-Nov-16	Quaker Chemical	Lubricor		C\$16m	\$11.9m	\$10m	\$10m	US/Canada	Metalworking fluids
28-Nov-16	OpenGate Capital	Umicore Zinc Chemicals	Umicore	€142.4m	\$150.1m	€400m	\$421m	US/Belgium	Zinc chemicals
28-Nov-16	Mexichem	Vinyl Compounds Holdings (VCHL)						Mexico/UK	PVC compounds
21-Nov-16	Koch Industries	Guardian Industries (remaining 55.5% stake)						US/US	Coatings on plastics for the auto and commercial truck industries, specialty building products
4-Nov-16	IPL (One51)	Encore Industries		\$35m	\$35m			Ireland/US	Rigid plastic packaging products for industrial uses
3-Nov-16	Saudi Aramco	Novomer		\$100m	\$100m			Saudi Arabia/US	CO2-based polyols for coatings, adhesives, sealants and elastomers
2-Nov-16	Calgon Carbon	Arkema's activated carbon business	Arkema	€140.7m	\$148m			US/France	Activated carbon and filter aids
2-Nov-16	Saint-Gobain	h-old	Arcadia Small Cap					France/Italy	Specialty adhesive tape
2-Nov-16	Sonoco	Plastic Packaging		\$64.5m	\$64.5m	\$42m	\$42m	US/US	Flexible packaging
1-Nov-16	Ferro	Electro-Science Laboratories (ESL)		\$75m	\$75m			US/US	Thick-film pastes and ceramic tape systems for electronics packaging
1-Nov-16	DyStar	Carolina Chemical, Hilton Davis, Foam Control	Emerald Performance Materials					Singapore/US	Specialty chemicals, polymer additives, nitrides
1-Nov-16	INEOS	WL Plastics						Switzerland/US	High density polyethylene (HDPE) pipe
Oct-16	Brenntag	NOCO's lubricants distribution business	NOCO	\$36.7m	\$36.7m	\$209m	\$209m	Germany/US	Lubricants distribution

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18-Oct-16	Sika	Ronacrete (Far East)						Switzerland/China	Repair mortars, tile adhesives and other specialty products
12-Oct-16	Solenis	Nopco Paper Technology						US/Norway	Defoamers, collecting agents, deposit control agents and insolubilisers for pulp and paper, industrial and recycling
5-Oct-16	GTM Holdings	Peruquimicos						Guatemala/Peru	Chemical distribution
5-Oct-16	HIG Capital	Dominion Colour						US/Canada	High performance colour pigments for the coatings, plastics and specialty ink industries
4-Oct-16	Compass Minerals	Produquimica (remaining 65% stake)		\$320m	\$320m			US/Brazil	Specialty plant nutrients, ag chemicals, water treatment chemicals, specialty chemicals
3-Oct-16	Clariant	Kel-Tech, X-Chem						Switzerland/US	Oilfield production chemicals
3-Oct-16	Manali Petrochemicals	Notedome		£13.5m	\$16.6m			India/UK	Neuthane polyurethane cast elastomers, propylene glycol (PG), propylene oxide (PO)
3-Oct-16	Chase	Resin Designs		\$30.4m	\$30.4m	\$11m	\$11m	US/US	Adhesives and sealants for electronics, including semiconductors
Sep-16	Tesoro	Virent						US/US	Renewable fuels and aromatics
Sep-16	Brenntag	Mayes County Petroleum Products		\$15.5m	\$15.5m	\$37m	\$37m	Germany/US	Lubricants, fuels and chemical distribution
28-Sep-16	Trelleborg	CoorsTek's precision seals business	CoorsTek			SKr115m	\$12.7m	Sweden/US	Precision seals for the aerospace industry
27-Sep-16	Polymer Solutions Group (PSG)	Alkon Solutions						US/UK	Anti-tack products for the rubber industry
26-Sep-16	BASF	Automotive refinish coatings assets	Guangdong Yinfan Chemistry					Germany/China	Automotive refinish coatings
19-Sep-16	Italmatch Chemicals	Solvay's Ionquest 290 and OPA products	Solvay					Italy/Belgium	Phosphorus process additives for mining, metalworking fluids, corrosion inhibition and pigmentation
13-Sep-16	Allnex	Nuplex				\$1bn	\$1bn	Belgium/New Zealand	Resins used in paints, coatings and structural materials
12-Sep-16	RPM	Specialty Polymer Coatings (SPC)				\$26m	\$26m	US/Canada	Epoxy and urethane coatings for oil and gas pipelines
8-Sep-16	HIG	Texbond (controlling stake)						US/Italy	Specialty polypropylene nonwovens
1-Sep-16	LANXESS	Chemours' disinfectant and hygiene unit	Chemours	€210m	\$221m			US/US	Specialty chemicals for disinfectant and hygiene uses
1-Sep-16	Sika	FRC Industries						Switzerland/US	Synthetic polypropylene (PP) and steel fibres for concrete
31-Aug-16	Synthos	INEOS' EPS business	INEOS	€80m	\$84m			Poland/Switzerland	Expandable polystyrene (EPS)
31-Aug-16	Westlake Chemical	Axiall		\$3.8bn	\$3.8bn	\$3.36bn	\$3.36bn	US/US	Chlor-alkali and polyvinyl chloride (PVC)
30-Aug-16	Fairfax India	Privi Organics (51% stake)		\$55m	\$55m			Canada/India	Aroma chemicals
24-Aug-16	Keystone Aniline	Colour Synthesis Solutions (CSS)						US/UK	Colour dyes
11-Aug-16	Valentus Specialty Chemicals	Absolute Coatings	Paint Over Rust Products					US/US	Wood floor finishes
8-Aug-16	Azelis	Ametech						Belgium/Italy	Fertilizers and specialty chemicals distribution
5-Aug-16	RPC Group	British Polythene Industries (BPI)		£261m	\$321m			UK/UK	Polythene films for ag, industrial and consumer, food and related packaging, recycled products
4-Aug-16	DAK Americas (Alpek)	Selenis Canada (controlling interest)	IMG Group					US/Canada	Polyethylene terephthalate (PET)
2-Aug-16	Avery Dennison	Mactac Europe	Platinum Equity	€200m	\$211m	€147m	\$155m	US/Belgium	Pressure-sensitive adhesives for graphics, specialty labels, industrial tapes
2-Aug-16	INEOS	Calabrian	SK Capital Partners					Switzerland/US	Sulphur dioxide and sodium-based derivatives
1-Aug-16	Veolia	Chemours' sulphur business	Chemours	\$325m	\$325m	\$250m	\$250m	France/US	Sulphur
1-Aug-16	Ferro	Delta's colour blending assets	Delta Performance Products	\$4m	\$4m			US/Belgium	Customised colour blends
Jul-16	INEOS Enterprises	Befesa Valorizacion de Azufre (BVA)						Switzerland/Spain	Sulphuric acid and oleum
22-Jul-16	Pretium Packaging	Custom Blow Molding	Genstar Capital					US/US	Blow-moulded containers
20-Jul-16	Donau Chemie	Standard Purification						Germany/US	Activated carbon
20-Jul-16	Vantage Specialty Chemicals	Mallet and Co						US/US	Baking release agents

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20-Jul-16	Axalta Coating Systems	Auto interior rigid thermoplastics coatings unit	United Paint and Chemical					US/US	Automotive interior rigid thermoplastics coatings
12-Jul-16	Pilot Chemical	Liquid Minerals Group Inc (LMGI)						US/US	Oil-soluble organometallic additives for oilfield, refinery, power generation, marine
6-Jul-16	PPG Industries	MetoKote				\$200m	\$200m	US/US	On-site coatings services
5-Jul-16	Royal Adhesives & Sealants	Bacon Adhesives	Cass Polymers					US/US	Adhesives for aerospace and defense communications, avionics, satellites, electronics
5-Jul-16	RPM International	Duram Industries				\$6m	\$6m	US/Australia	Liquid-applied waterproofing products
4-Jul-16	Safic-Alcan	Sichuan HuaFaMei (remaining 50%)				€14m	\$14.8m	France/China	Distribution of APIs, intermediates, plant extracts, chemical raw materials, pharmaceuticals
1-Jul-16	Thermo Co	Sekisui Film						Japan/Japan	Polyolefin films
1-Jul-16	Synthomer	Hexion Performance Adhesives & Coatings (PAC)	Hexion	\$226m	\$226m	\$370m	\$370m	UK/US	Performance adhesives and coatings
30-Jun-16	W.R. Grace	BASF's polyolefin catalysts business	BASF					US/Germany	Polyolefin catalysts
20-Jun-16	BASF	EnerG2						Germany/US	Advanced carbon materials
15-Jun-16	Technip	BP's ethanol-to-ethylene technology	BP					France/UK	Ethanol-to-ethylene technology
13-Jun-16	Unipetrol	Spolana	Anwil	€1m	\$1.1m			Czech Republic/Poland	Polyvinyl chloride (PVC)
9-Jun-16	WL Ross Holding	Nexeo Solutions	TPG	\$1.6bn	\$1.6bn	\$3.76bn	\$3.76bn	US/US	Chemical distribution
7-Jun-16	Italmatch Chemicals	Compass Chemical International	One Rock Capital Partners					Italy/US	Phosphonates and additives for water treatment, oil and gas
6-Jun-16	H.B. Fuller	Cyberbond				\$15m	\$15m	US/US	Adhesives for electronics, medical, audio equipment, auto, structural
3-Jun-16	Solenis	Nuplex Pulp & Paper		A\$21m	\$15.2m			US/Australia	Pulp and paper chemicals, distribution
3-Jun-16	HEXPOL	Berwin Group		£25m	\$30.8m	£40m	\$49.3m	Sweden/UK	Rubber compounding
2-Jun-16	Solvay	Primester (remaining 50% stake)	Eastman Chemical					Belgium/US	Cellulose acetate
1-Jun-16	Transilwrap	Dow's specialty films unit	Dow Chemical					US/US	Blown-orientated polystyrene (PS) films, co-extruded multi-layer barrier and polyolefin films
1-Jun-16	Dow Chemical	Dow Corning (remaining 50% stake)		\$4.8bn	\$4.8bn	\$4.5bn	\$4.5bn	US/US	Silicones
1-Jun-16	Ferro	Pinturas Benicarlo		€15.0m	\$15.8m	€7.5m	\$7.9m	US/Spain	Industrial paints
20-May-16	Safic-Alcan	KemCare						France/UK	Specialty chemical distribution for personal care, home care and industrial
18-May-16	RPM International	Carboline Dalian Paint Production Co (remaining 51% stake)	UniChemical					US/China	Corrosion control coatings and linings for oil and gas, power and petrochemical projects
4-May-16	Pampa Energia	Petrobras Energia (67.19% stake)	Petrobras					Argentina/Argentina	Refining, electricity and petrochemicals, including polystyrene (PS)
4-May-16	Maroon Group	U.S. Chemicals						US/US	Specialty chemicals distribution
4-May-16	Eco Services Operations	PQ Corp						US/US	Inorganic specialty materials and catalysts, sulphuric acid regeneration
3-May-16	Frutarom Industries	Extrakt Chemie		\$6m	\$6m			Israel/Germany	Specialty extracts for pharmaceuticals, natural medications, nutritional supplements, food, cosmetics
Apr-16	Evonik	Alkion Biopharma						Germany/France	Biotechnological active ingredients for cosmetics
Apr-16	Lotte Group	Samsung's chemicals business units	Samsung Group					SouthKorea/South Korea	Petrochemicals
29-Apr-16	M Holland	Able International						US/Puerto Rico	Thermoplastic resin distribution
29-Apr-16	M Holland	Tril Export						US/Puerto Rico	Thermoplastic resin distribution
29-Apr-16	H.B. Fuller	Advanced Adhesives				\$17m	\$17m	US/Australia	Industrial adhesives for consumer packaged goods, woodworking, product assembly
29-Apr-16	Solenis	Lostris International, Wester Blend						US/Netherlands	Specialty chemicals for the pulp and tissue and towel markets
28-Apr-16	Polymer Solutions Group (PSG)	SASCO Chemical						US/US	Rubber anti-tack agents
14-Apr-16	Arsenal Capital Partners	Peterson Chemical Technology						US/US	Polyurethane (PU) foams
11-Apr-16	Eurazeo and Merieux Developpement	Novacap	Ardian					France/France	Pharma and healthcare, cosmetics and fragrances, food and feed, home care and environment chemicals
8-Apr-16	Indorama	Cepsa's PET and feedstock businesses	Cepsa Quimica					Thailand/Spain	Purified isophthalic acid (PIA), polyethylene terephthalate (PET), purified terephthalic acid (PTA)

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Completed	Buyer	Target	Seller	Price, local	Price (\$)	Sales (target)	Sales (target, \$)	Countries (Buyer/Target HQ)	Business
7-Apr-16	LyondellBasell	PP compounding assets	Zylog Plastalloys					Netherlands/India	Polypropylene (PP) compounding assets
5-Apr-16	KMG	Nagase FineChem (NFC)				\$8m	\$8m	US/Singapore	Wet process chemicals - solvents, acids, custom blends for LCDs, electronics, semiconductors
1-Apr-16	Indorama Ventures	PTA, PX complex	BP Chemicals					Thailand/US	Purified terephthalic acid (PTA), paraxylene (PX), naphthalene dicarboxylate (NDC) in Decatur, Alabama, US
1-Apr-16	Sika	L.M. Scofield				Swfr17m	\$16.7m	Switzerland/US	Concrete colour additives
31-Mar-16	Teknor Apex	Plastic-Technologie-Service (PTS)						US/Germany	Thermoplastic elastomers (TPEs) and engineering thermoplastics (ETPs) compounding
29-Mar-16	Silverfleet Capital	Coventya	Equistone Partners			€124m	\$131m	UK/France	Specialty chemicals used in surface treatment
28-Mar-16	Arsenal Capital Partners	Elite Foam, Hickory Springs Manufacturing						US/US	Flexible polyurethane (PU) foam for furniture, bedding, packaging, medical
18-Mar-16	Arsenal Capital Partners	Pacific Urethanes						US/US	Specialty polyurethane (PE) foams for bedding, furniture, packaging and recreational
9-Mar-16	Accella Performance Materials	Spray foam division	Quadrant Urethane Technologies					US/US	Polyurethane spray foams
3-Mar-16	Evonik	MedPalett						Germany/Norway	Food ingredients
3-Mar-16	RPM International	Seal-Krete						US/US	Concrete coatings and sealants
2-Mar-16	Univar	Bodine Services of the Midwest						US/US	Waste management and environmental consulting
Feb-16	Sun Chemical (owned by DIC)	Flexo inks business	Colmar Inks					US/Canada	Flexographic inks
22-Feb-16	Polymer Solutions Group (PSG)	Flow Polymers	Geneva Glen Capital					US/US	Dispersions, process aids and homogenising agents for tyre, auto, industrial, wire and cable, plastics
19-Feb-16	GFBiochemicals	Segetis						Italy/US	Levulinic acid and derivatives
3-Feb-16	PolyOne	Thermoplastic elastomer (TPE) assets	Kraton Performance Polymers	\$72m	\$72m			US/US	Thermoplastic elastomers (TPE)
1-Feb-16	Royal Adhesives & Sealants	Weld Mount Systems	Associated Technologies					US/US	Adhesively bonded fasteners
1-Feb-16	Huber Engineered Materials	Martinswerk	Albermarle					US/US	Flame retardants
End Jan 2016	Italmatch Chemicals Group	Solvay's water treatment chemicals unit	Solvay					Italy/Belgium	Water desalination, phosphonates and phosphonic acid-based water additives
27-Jan-16	Farathane	Boston Plastics						US/China	Plastic-injected moulded components for automotive, industrial, consumer
19-Jan-16	AkzoNobel	EKO Peroxide (remaining stake)	OCI					Netherlands/US	Hydrogen peroxide
14-Jan-16	Orion Engineered Carbons	Qingdao Evonik Chemical Company (majority stake)	Evonik, DEG					Luxembourg/China	Carbon black
13-Jan-16	Farathane	Tepso Plastics Mex						US/Mexico	Engineered plastic injection moulded components and assemblies for automotive
13-Jan-16	Symrise	Pinova Holdings	TorQuest Partners	\$417m	\$417m			US/Canada	Pine-based specialty chemicals
12-Jan-16	Framework Capital	APS Plastics						US/US	Thermoplastic and thermoset plastics for oil/gas, aerospace/transport, petrochemical/power, food processing, electronics
7-Jan-16	Axens	Sulphur removal products business	Scutter Enterprise					France/US	Sulphur removal adsorbents
6-Jan-16	Hexcel	Remaining 50% of Formax						US/UK	Composite reinforcements from carbon and glass fibre, and aramid fibre fabrics
6-Jan-16	Treibacher Industrie	Tribotec metal sulphides business	Albermarle					Austria/US	Metal sulphides
6-Jan-16	Kraton Performance Polymers	Arizona Chemical Holdings	American Securities	\$1.37bn	\$1.37bn			US/US	Pine-based specialty chemicals
5-Jan-16	Amcor	Deluxe Packages		\$45m	\$45m	\$42m	\$42m	Australia/US	Flexible packaging
5-Jan-16	TER Plastics	Plastics division	Proquibasa					Germany/Spain	Engineering and commodity plastics
5-Jan-16	Brenntag	TAT Group				€145m	\$153m	Germany/Singapore	Distribution of solvents
4-Jan-16	Royal Adhesives & Sealants	Adhesives Systems Inc (ASI)						US/US	Cyanoacrylate, methyl methacrylate, epoxy and anaerobic adhesives.
4-Jan-16	DuPont	Dyadic's enzyme and technology assets	Dyadic International	\$75m	\$75m			US/US	Enzymes and technologies

Currency conversion rates for all tables, 31 Dec 2016: \$1 = €0.9490; Swiss francs (Swfr) 1.0190; Australian dollars (A\$) 1.3850; £0.8120; Swedish kroner (SkR) 9.0630; Canadian dollar (C\$) 1.3460  
 NOTE: Excludes fertilizers, industries gases

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9-Jun-16	WL Ross Holding	Nexeo Solutions	TPG	\$1.6bn	\$1.6bn	US/US	Chemical distribution
6-Jan-16	Kraton Performance Polymers	Arizona Chemical Holdings	American Securities	\$1.37bn	\$1.37bn	US/US	Pine-based specialty chemicals
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1-Nov-16	Ferro	Electro-Science Laboratories (ESL)		\$75m	\$75m	US/US	Thick-film pastes and ceramic tape systems for electronics packaging
4-Jan-16	DuPont	Dyadic's enzyme and technology assets	Dyadic International	\$75m	\$75m	US/US	Enzymes and technologies
3-Feb-16	PolyOne	Thermoplastic elastomer (TPE) assets	Kraton Performance Polymers	\$72m	\$72m	US/US	Thermoplastic elastomers (TPE)
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4-Nov-16	IPL (One51)	Encore Industries		\$35m	\$35m	Ireland/US	Rigid plastic packaging products for industrial uses
3-Jun-16	HEXPOL	Berwin Group		£25m	\$30.8m	Sweden/UK	Rubber compounding
3-Oct-16	Chase	Resin Designs		\$30.4m	\$30.4m	US/US	Adhesives and sealants for electronics, including semiconductors
3-Oct-16	Manali Petrochemicals	Notedome		£13.5m	\$16.6m	India/UK	Neuthane polyurethane cast elastomers, propylene glycol (PG), propylene oxide (PO)
1-Jun-16	Ferro	Pinturas Benicarlo		€15.0m	\$15.8m	US/Spain	Industrial paints
Sep-16	Brenntag	Mayes County Petroleum Products		\$15.5m	\$15.5m	Germany/US	Lubricants, fuels and chemical distribution
3-Jun-16	Solenis	Nuplex Pulp & Paper		A\$21m	\$15.2m	US/Australia	Pulp and paper chemicals, distribution
30-Nov-16	Quaker Chemical	Lubricor		C\$16m	\$11.9m	US/Canada	Metalworking fluids
3-May-16	Frutarom Industries	Extrakt Chemie		\$6m	\$6m	Israel/Germany	Specialty extracts for pharmaceuticals, natural medications, nutritional supplements, food, cosmetics
1-Aug-16	Ferro	Delta's colour blending assets	Delta Performance Products	\$4m	\$4m	US/Belgium	Customised colour blends
13-Jun-16	Unipetrol	Spolana	Anwil	€1m	\$1.1m	Czech Republic/Poland	Polyvinyl chloride (PVC)

NOTE: Includes only deals where disclosed purchase price is available

ICIS TOP M&A - 2016 DEALS BY SALES OF TARGET							
Completed	Buyer	Target	Seller	Sales (target)	Sales (target, \$)	Countries (Buyer/Target HQ)	Business
1-Jun-16	Dow Chemical	Dow Corning (remaining 50% stake)		\$4.5bn	\$4.5bn	US/US	Silicones
9-Jun-16	WL Ross Holding	Nexeo Solutions	TPG	\$3.76bn	\$3.76bn	US/US	Chemical distribution
31-Aug-16	Westlake Chemical	Axiall		\$3.36bn	\$3.36bn	US/US	Chlor-alkali and polyvinyl chloride (PVC)
13-Sep-16	Allnex	Nuplex		\$1bn	\$1bn	Belgium/ New Zealand	Resins used in paints, coatings and structural materials
14-Dec-16	BASF	Chemetall	Albermarle	\$845m	\$845m	Germany/US	Specialty chemicals and surface treatment for corrosion protection
28-Nov-16	OpenGate Capital	Umicore Zinc Chemicals	Umicore	€400m	\$421m	US/Belgium	Zinc chemicals
1-Jul-16	Synthomer	Hexion Performance Adhesives & Coatings (PAC)	Hexion	\$370m	\$370m	UK/US	Performance adhesives and coatings
1-Dec-16	Arkema	Den Braven		€350m	\$369m	France/ Netherlands	Adhesives, sealants and foams for construction and industrial
15-Dec-16	AkzoNobel	Industrial coatings business	BASF	€300m	\$316	Netherlands/ Germany	Industrial coatings
8-Dec-16	LINTEC	MACTac Americas	Platinum Equity	\$304m	\$304m	Japan/US	Adhesive printing papers and films
9-Dec-16	Evonik	J.M. Huber's silica business	J.M Huber	\$300m	\$300m	Germany/US	Silicas
1-Aug-16	Veolia	Chemours' sulphur business	Chemours	\$250m	\$250m	France/US	Sulphur
Oct-16	Brenntag	NOCO's lubricants distribution business	NOCO	\$209m	\$209m	Germany/US	Lubricants distribution
6-Jul-16	PPG Industries	MetoKote		\$200m	\$200m	US/US	On-site coatings services
2-Aug-16	Avery Dennison	Mactac Europe	Platinum Equity	€147m	\$155m	US/Belgium	Pressure-sensitive adhesives for graphics, specialty labels, industrial tapes
5-Jan-16	Brenntag	TAT Group		€145m	\$153m	Germany/ Singapore	Distribution of solvents
29-Mar-16	Silverfleet Capital	Coventya	Equistone Partners	€124m	\$131m	UK/France	Specialty chemicals used in surface treatment
14-Dec-16	Sika	Rmax Operating		\$75m	\$75m	Switzerland/US	Polyisocyanurate insulations
9-Dec-16	Ferro	Cappelle Pigments		\$70m	\$70m	US/Belgium	Inorganic and organic pigments used in coatings, inks and plastics
21-Dec-16	RPM International	SPS Group		\$60m	\$60m	US/Netherlands	Decorative and specialty coatings
3-Jun-16	HEXPOL	Berwin Group		£40m	\$49.3m	sweden/UK	Rubber compounding
2-Nov-16	Sonoco	Plastic Packaging		\$42m	\$42m	US/US	Flexible packaging
5-Jan-16	Amcor	Deluxe Packages		\$42m	\$42m	Australia/US	Flexible packaging
Sep-16	Brenntag	Mayes County Petroleum Products		\$37m	\$37m	Germany/US	Lubricants, fuels and chemical distribution
12-Sep-16	RPM	Specialty Polymer Coatings (SPC)		\$26m	\$26m	US/Canada	Epoxy and urethane coatings for oil and gas pipelines
29-Apr-16	H.B. Fuller	Advanced Adhesives		\$17m	\$17m	US/Australia	Industrial adhesives for consumer packaged goods, woodworking, product assembly
1-Apr-16	Sika	L.M. Scofield		Swfr17m	\$16.7m	Switzerland/US	Concrete colour additives
6-Jun-16	H.B. Fuller	Cyberbond		\$15m	\$15m	US/US	Adhesives for electronics, medical, audio equipment, auto, structural
4-Jul-16	Safic-Alcan	Sichuan HuaFaMei (remaining 50%)		€14m	\$14.8m	France/China	Distribution of APIs, intermediates, plant extracts, chemical raw materials, pharmaceuticals
28-Sep-16	Trelleborg	CoorsTek's precision seals business	CoorsTek	SKr115m	\$12.7m	Sweden/US	Precision seals for the aerospace industry
3-Oct-16	Chase	Resin Designs		\$11m	\$11m	US/US	Adhesives and sealants for electronics, including semiconductors
30-Nov-16	Quaker Chemical	Lubricor		\$10m	\$10m	US/Canada	Metalworking fluids
5-Apr-16	KMG	Nagase FineChem (NFC)		\$8m	\$8m	US/Singapore	Wet process chemicals - solvents, acids, custom blends for LCDs, electronics, semiconductors
1-Jun-16	Ferro	Pinturas Benicarlo		€7.5m	\$7.9m	US/Spain	Industrial paints
5-Jul-16	RPM International	Duram Industries		\$6m	\$6m	US/Australia	Liquid-applied waterproofing products

NOTE: Includes only deals with disclosed sales of target business



# Chemical M&A to hit record levels

A historic peak should be reached globally in 2017 in terms of dollar value of deals, even as activity and valuations appear to be moderating at still robust levels

Getty Images

JOSEPH CHANG NEW YORK

**G**et ready for a record year in global chemical mergers and acquisitions (M&A) with a number of mega mergers finally closing in 2017. Deal activity remains healthy although modestly lower, after multiple years of strong performance, and transaction valuations continue to linger at lofty levels as both strategic buyers and private equity firms aggressively pursue acquisitions amid available and still cheap financing.

Chemical M&A activity “has been on fire and continues to be” as managements of companies are getting rewarded for growth in all forms, said Telly Zachariades, partner at The Valence Group.

“The market – investors, analysts – are rewarding companies that are growing, regardless whether it’s organic or inorganic (via M&A). It used to be that companies were rewarded more for organic growth,” said Zachariades. “It also »



» doesn't seem to faze the market when companies pay healthy multiples for acquisitions."

For example, when US-based specialty chemicals company Quaker Chemical announced its merger with US-based metalworking fluids company Houghton International on 5 April, its stock price jumped 7.6%.

The deal values Houghton at \$1.415bn, which includes \$172.5m in cash, around 4.3m shares of newly issued Quaker Chemical stock valued pre-deal at \$552.9m and the assumption of \$690m in net debt.

With Houghton generating \$120m in earnings before interest, tax, depreciation and amortisation (EBITDA) in 2016, the deal multiple is a healthy 11.8 times 2016 EBITDA.

The Valence Group provided a fairness opinion on the Houghton deal to Quaker Chemical's board of directors.

"Public chemical company CEOs and boards are more confident in paying a high multiple," said Zachariades. "A fairly decent specialty chemical business should have no trouble getting a transaction multiple in the 9-11 times range. A highly sought-after company with proprietary technology, high growth and margins could get 15 times or more. What used to be 6-7 times on the low end and 10 times on the high end has clearly shifted upwards."

Other recent deals in the sector involving US buyers and sellers include Ashland's planned acquisition of US-based health and wellness, and flavours and fragrances ingredients company Pharmachem for \$660m, or 10.5 times estimated 2017 EBITDA announced on 17 April, and KMG Chemicals' buyout of pipeline performance enhancing chemicals producer Flowchem from Arsenal Capital Partners for \$495m or 11.5 times trailing 12-month EBITDA announced on 24 April. Ashland's stock price

rose 2.0% on the deal announcement, while KMG's share price jumped 7.8%.

"Companies with a record of successful acquisitive growth are getting value ascribed to them. And most deals in the chemical sector have worked out well, as reflected in stock prices," said Leland Harris, managing director at investment bank Houlihan Lokey.

That shouldn't be entirely surprising, as the current US economic expansion is one of the longest in history. Plus, shale gas has provided a big benefit across the sector in the form of low-cost raw materials.

**MARIO TOUKAN**  
Managing director, KeyBanc Capital Markets

**"Buyer appetite and company boards' focus on strategic acquisitions to augment their profile are at a peak level"**



"These are healthy times and we don't see anything derailing that in the near term," said Harris.

The chemical M&A market remains relatively healthy with a shortage of supply, robust demand for assets and a strong financing market, said Harris.

"Strategics and financial sponsors are interested and motivated, and deal multiples are at historical highs as financing costs are low. Organic growth is hard to find, so companies are opening their checkbooks," said Harris.

"It is still very robust and there's nothing on the horizon that would change things in the near term with the exception of an exogenous event," he added. While M&A valuations are

at peak levels and are likely to soften from here, the decline could be gradual.

"Buyer appetite and company boards' focus on strategic acquisitions to augment or change their profile are at a peak level. But we don't see valuations falling off a cliff – rather a soft landing at some point," said Mario Toukan, managing director of investment bank KeyBanc Capital Markets.

#### US ASSET DEMAND, THE TRUMP FACTOR

"Financing for sponsors and corporates is still wide open, and there's a scarcity value out there for assets of size," said Toukan.

Strategic buyers continue to be very competitive in sale processes and more non-US companies are participating and winning deals, the banker noted.

"International companies are getting more aggressive and focused on US markets because of favourable dynamics – stable growth, less regulations and low-cost raw materials," said Toukan.

This has less to do with US President Trump's policies than the fundamental aspects of the US economy and chemical sector, he pointed out.

"The Trump hype is at or near its end. Early on, radical changes were proposed but they didn't happen. Now people are focusing on the fundamental shifts in the US economy or overall chemical market – such as whether propylene is long and will be favourable to downstream production in the US," said Toukan.

European strategic buyers have been particularly interested in US specialty chemical assets. These cross-border deals have included LANXESS/Chemtura and the Evonik/Air Products deal, noted Allan Benton, vice chairman and head of chemicals at investment bank Scott-Macon.

#### VALUATIONS JOSEPH CHANG NEW YORK

### SPECIALTY CHEMICAL M&A MULTIPLES FALL BUT REMAIN ROBUST

SPECIALTY CHEMICAL M&A multiples fell in 2016 but valuations and activity levels are still robust.

In 2016, the median TEV/EBITDA (total enterprise value/earnings before interest, tax, depreciation and amortisation) multiple for completed global specialty-chemical transaction deals was 9.7 times – down from 12.1 times in 2015 and also below the median 10.4 times for the prior five years, according to Allan Benton, vice chairman and head of the chemicals group at Scott-Macon.

And activity remained healthy with 45 deals worldwide in the specialty-chemicals space in 2016 versus 41 in 2015, he said. Including commodity-chemical transactions, 69 trans-

actions closed in 2016, compared to 70 in 2015. These are all the closed deals where Scott-Macon could obtain at least a multiple of TEV/sales or TEV/EBITDA.

"A 9.7 times multiple [for EBITDA] is still very attractive – just down from the prior five years. Activity in 2017 is continuing strong and we can see multiples coming in at pretty high levels," said Benton.

Deals announced in 2017 with high EBITDA multiples include Quaker Chemical/Houghton International (11.8 times) and HB Fuller/Wisdom Worldwide Adhesives (11.1 times) while Evonik's acquisition of Air Products' specialty and coatings

**ALLAN BENTON**  
Vice chairman, Scott-Macon

**"There are healthy multiples being paid for deals with the right buyer and seller that can generate significant synergies..."**



additives business completed in 2017 was 15.8 times, he noted.

"There are healthy multiples being paid for deals with the right buyer and seller that can generate significant synergies," said Benton. "We are still seeing strong interest in growing by acquisition. Everyone on the strategic side is looking for good transactions."

It's worth noting that while high-

profile deals have commanded high multiples, smaller deals can often see multiples of 1-times less on an EV/EBITDA (enterprise value/EBITDA) basis than larger ones, said Lincoln International's Mennella.

"The middle market (\$50m-500m) does not always enjoy the same multiples or offer the same financing options as the larger transactions," said Mennella. ■

“European companies have been strong buyers of US assets as the economics of operating in the US have been favourable. Plus, there’s the added expectation of lower corporate tax rates,” said Benton.

US President Donald Trump has proposed lowering the corporate tax rate from 35% to 15%. While this is far from a given and the timing is also uncertain, companies are banking on some sort of tax cut at some point, he noted.

“Some US companies that have been thinking of selling are hesitating now, as clarity on a lower tax rate could boost their valuation later. Six months from now, a seller could show how a tax cut would boost earnings on a pro forma basis,” said Benton.

Some international buyers are preparing for potential protectionism by the new US administration by buying plants in the US, according to Bernd Schneider, managing director and head of global chemicals at Germany-based investment bank Alandra Group.

### SHALE GAS OPPORTUNITY

And US shale gas presents another opportunity – not necessarily in buying commodity petrochemical companies, but in the oilfield chemicals sector.

“Oilfield chemicals is an attractive area because of growing shale oil and gas production. And oil prices are relatively low, so it might be the right time to buy now at an attractive price,” said Schneider.

Switzerland-based Clariant acquired two US oilfield chemicals companies in October 2016 – Kel-Tech and X-Chem – for around \$360m, adding about \$200m in annual sales and tripling its size in the sector.

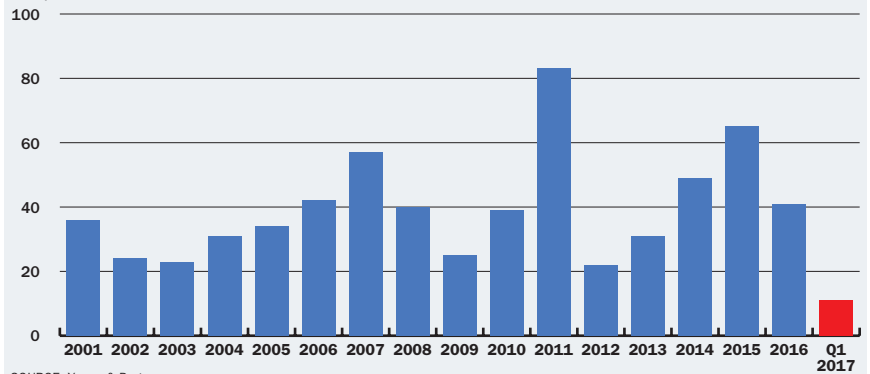
“The industry is clearly looking for a third Tier 1 player, and we are in position to be that,” said Ken Golder, president and CEO of Clariant Corp, and head of the North American region at a press event in New York in March 2017. “It is a very strategic opportunity for us and at the right time given the condition of the oil services market.”

The new combined oil services group has around 17% of US market share and would be the third largest behind Nalco/Champion (an Ecolab company) and Baker Hughes, according to Clariant.

One interesting target area for acquisitions in the US is chemical intermediates, noted KeyBanc’s Toukan. “There is high interest but few actionable targets. They have a feedstock

## ACQUISITIONS OF WORLDWIDE CHEMICAL COMPANIES - EQUITY VALUE

\$bn, disclosed deals



SOURCE: Young & Partners

advantage, good margin profile and free cash flow stability – more specialty chemical characteristics,” said Toukan.

### JAPANESE ACTIVE IN EUROPE

But it’s not just the US drawing attention from buyers. Japanese chemical companies are increasingly stepping to the plate in the European M&A market, attracted by opportunities to pick up technology, broaden global market reach and relative bargains in an economy still facing challenges.

“Japanese chemical companies – both chemicals distributors and producers – are looking more and more at European acquisition opportunities after being rather silent for many some time,” said Alandra Group’s Schneider.

“Japanese companies are looking for technology and customer access – they want to globalise their environment and be able to serve customers wherever they are. Also Europe growth is supposed to be limited, so some buyers speculate on using bargaining power,” he added.

And rather than focusing on the US, where the economic growth has already recovered to a greater extent and reflected in the stronger US dollar, Japanese buyers might often see more opportunity for upside in European assets, the banker noted.

M&A valuations in Europe are typically slightly lower than in the US on an EBITDA multiple basis, partly due to less financing availability.

“Banks in Europe are often less aggressive than in the US, so generally there can be a slight discount,” said Schneider.

In February 2017, Japan-based petrochemical producer and trader Sojitz agreed to acquire Germany-based chemical distributor Solvadis, which specialises in methanol, sulphur and sulphuric acid. Sojitz produces and distributes methanol, along with other chemicals. Alandra advised Sojitz on the Solvadis deal.

“Other Japanese chemical trading companies and producers are looking at Europe. They want the technologies, to increase global market share and also Western clients that are willing to pay a

premium for quality products,” said Schneider.

Other deals involving Japanese buyers and targets in Europe include Hitachi Chemicals’ acquisition of Germany-based thermal insulation producer ISOLITE announced in April 2017 and Kansai Paints’ €572m acquisition of Austria and Slovenia-based Helios Coatings Group announced in December 2016. All these deals above involved private equity sellers.

### ACTION IN ASIA

However, Young of Young & Partners points out that Asia continues to dominate the M&A scene with 43% of the deals closed in Q1 involving businesses located in Asia, and mostly in China.

“The rationale is simple. China’s chemical industry is going through a period of consolidation. Part of this trend is a natural occurrence when high growth emerging markets start to slow down and part is being orchestrated by the Chinese government to reduce overcapacity,” said Young.

### RECORD VALUE BUT NOT ACTIVITY

The banker sees US chemical deal volumes down slightly in 2017 versus 2016 – back to still healthy 2015 levels.

Peter Young, president of investment bank Young & Partners, sees a record year for chemical M&A in value of deals, but with less activity.

“We feel strongly that 2017 will be a record year for chemical M&A in terms of dollar volume as a number of mega deals will close. However, the number of deals that close will be moderate and well below previous records,” said Young.

The first quarter of 2017 saw a continuation of the moderate level of M&A activity in 2016 with only \$11.2bn worth of deals closed, a slightly higher annualised pace than in 2016. In terms of number of deals, Q1 was modestly weaker, with only 21 deals completed compared to 96 deals in all of 2016 (24 deals on average on a quarterly basis). While still healthy, activity fell short of the previous peak level in 2014.

“It is almost certain that one or more of the announced mega deals will close this year. The

**LELAND HARRS**  
Managing director, Houlihan Lokey

“Companies with a record of successful acquisitive growth are getting value ascribed to them”



» deals announced but not closed as of the end of Q1 was a massive \$270bn (42 deals). A number of these deals are so large that just one or two could drive a record dollar volume for the year. We believe that it is highly likely that the ChemChina/Syngenta and Dow/DuPont deals will close,” he added.

Other mega deals yet to close include Germany-based Bayer’s planned acquisition of US-based Monsanto, US-based Sherwin-Williams pending buyout of US-based Valspar and US-based Praxair’s merger with Germany’s Linde.

**PPG/AKZONOBEL, FUTURE OF COATINGS**

And the biggest M&A drama is playing out in the coatings space, where US-based PPG Industries has made a “bear hug” for AkzoNobel. PPG’s third unsolicited bid for the Netherlands-based company amounts to €24.6bn – a premium of 50% to AkzoNobel’s share price before any news of the offer. PPG’s cash and stock offer valued at €96.75 is also substantially higher than AkzoNobel’s stock price of around €76 as of mid-May.

AkzoNobel has rejected all three offers and plans to undertake its own plan for value creation involving the sale or separation of its specialty chemicals business.

Regardless of whether PPG is successful in its pursuit, M&A in the red-hot coatings sector is likely to continue at a fast pace.

“It’s remarkable how much the coatings industry has consolidated. A decade ago the top 10 companies had around a quarter of global market share. Now it is half, with the top 3 having about 30%,” said Houlihan Lokey’s Harrs. “Yet there are still thousands of other players so consolidation will continue.”

In March 2017, Japan-based Nippon Paint completed its acquisition of US-based architectural and industrial coatings company Dunn-Edwards. Nippon Paint is the world’s fourth largest paint producer, with \$4.8bn in sales. Houlihan Lokey acted as Dunn-Edwards’ financial adviser on the deal.

Coatings is a sector where strategic buyers

have a huge advantage versus private equity firms because of the high level of synergies available, the banker said.

“Strategics have a natural advantage with tremendous synergy potential – in logistics, raw materials procurement, marketing and production. It is very hard for a private-equity firm to win the deal if a strategic buyer wants it,” said Harrs.

“With the mega mergers on the downstream side and the corresponding concentration (Sherwin Williams/Valspar, potentially PPG/Akzo Nobel), the entire coatings value chain could be ripe for accelerated consolidation, involving pigment manufacturers and coatings formulators”, said Alantra Group’s Schneider.

**TELLY ZACHARIADES**  
Partner, The Valence Group

**“The market – investors, analysts – are rewarding companies that are growing, regardless whether it’s organic or inorganic (via M&A)”**



**PRIVATE EQUITY CHALLENGED**

With M&A interest levels high among both strategic buyers and private equity firms, it is difficult for the latter to compete on deals.

“It is tougher for private equity in the current valuation environment, but they nevertheless can still prevail in auction situations, particularly the bigger and more diverse the target,” said The Valence Group’s Zachariades. “If there is real interest among strategics, private equity will tend not to win. Their share of the market in terms of number of deals has fallen from the 10-15% range, to less than 5%.”

On the sell side, high valuations should be attractive to CEOs seeking to divest non-core assets, or private equity firms aiming to mone-

tise holdings, the banker said. Looking ahead, financing costs are likely to creep higher with interest rate hikes from the US Federal Reserve, but the impact will likely be minimal and “won’t materially change the acquisitive attitude”, he noted.

“Private equity firms continue to struggle to regain the market share on the buy side that they lost three years ago. Even though they have substantial amounts of equity to invest and interest rates are still low, they are reluctant to invest in Asia/China and they heavily favour the specialty chemical industry where competition from strategic buyers has been high. In Q1, private equity market share was only 5% of the number of acquisitions and 8% of the dollar volume,” said Young of Young & Partners.

“M&A on a global basis will continue to be dominated by Asia and private equity will continue to struggle to regain their normal 20% to 25% market share as long as specialty chemical valuations are high and Asia located businesses dominate the M&A market,” he added.

In 2016, strategic buyers accounted for 88.9% of the total number of specialty chemical deals, up from the median 80% in the prior five years, according to Scott-Macon’s Benton.

In the commodity-chemicals sector, strategic buyers accounted for 79.2% of deals in 2016 – about the same level as the median for the prior five years, he noted.

**SPECIALISED SPONSOR SUCCESS**

Strategic buyers have squeezed out private equity in most cases, but certain specialised sponsors continue to compete for deals.

“The interest level is very high among sponsors and they have not given up hope. Among private equity, it’s the same firms buying all the assets – the ones focused on chemicals such as American Securities, Arsenal, SK Capital, Golden Gate Capital, New Mountain and CCMP,” said Toukan.

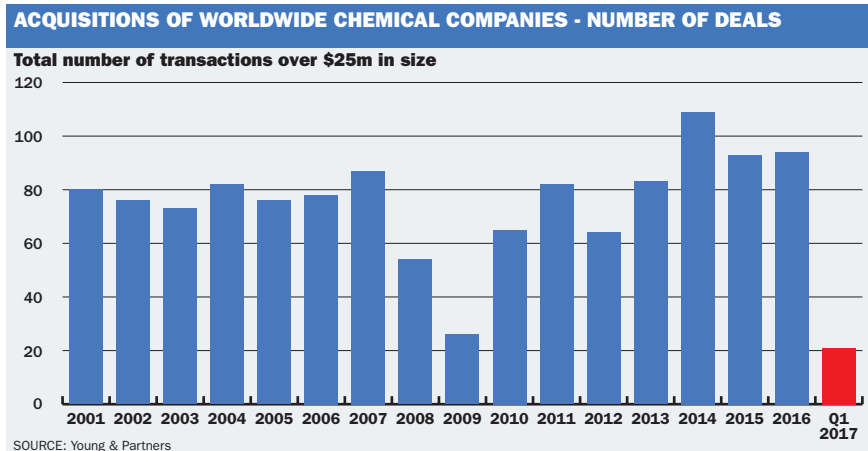
“These private equity companies have created a quasi-strategic platform and can compete better than a regular sponsor,” he added.

They can often see an angle towards value creation that is not obvious to other sponsors, whether in raw material issues or supply chain changes.

“They can look at the target as a truly strategic asset and value it differently from a

**BERND SCHNEIDER**  
Managing director, Alantra Group

**“Japanese chemical companies – both chemicals distributors and producers – are looking more and more at European acquisition”**



sponsor running a model, implementing fundamental changes beyond just rolling assets up,” said Toukan.

#### MORE LUCK ON SELL SIDE

Sponsors are having more luck on the sell side, taking advantage of heady M&A valuations. They are putting more chemical businesses up for sale and are also being approached to sell.

“You’re seeing private equity selling businesses that they’ve owned for a few years now – they are bringing good assets on the market,” said Federico Mennella, managing director and head of global chemicals at investment bank Lincoln International.

“They are taking advantage of good valuations and also may want to put points on the board before raising another fund or pass the

#### PETER YOUNG

President, Young & Partners

**“We feel strongly that 2017 will be a record year for chemical M&A in terms of dollar volume as a number of mega deals”**



business on to somebody who could do more with it than they have. Often, a sale is sparked by an approach by a strategic buyer,” he added.

Strategic buyers are firmly in acquisition mode and have been willing to pay up for assets where they can achieve synergies, he said.

In one recent example of a private equity sale to a strategic buyer, Arsenal Capital is selling pipeline performance enhancing chemicals producer Flowchem to US-based specialty chemicals producer KMG for \$495m, or a healthy 11.5 times trailing 12-month EBITDA.

On the sell side, both corporates and private equity firms are often running smaller sell processes involving a limited number of likely potential buyers, said the banker.

“In some cases, they may just approach three or four players – an asset may never make it to the broader market, should the right deal be struck in that initial phase,” said Mennella.

Lincoln International represented US-based polyurethane fabrics producer Ultrafabrics in its sale to Japan’s Daiichi Kasei (DKK) in an example of such a process.

The benefits of running a smaller process, as long as the sale price is acceptable, include less “wear and tear on management”, a faster timeline and the preservation of confidentiality, with less leakage of material information to competitors, he noted. High multiples are

#### FEDERICO MENNELLA

Managing director, Lincoln International

**“You’re seeing private equity selling businesses that they’ve owned for a few years now – they are bringing good assets on the market”**



likely to draw out more assets for sale by private-equity firms, with some coming out earlier than the typical holding period of 5 years, said Houlihan Lokey’s Harrs.

Yet corporates are typically loathe to sell assets and become smaller unless they are in restructuring mode. And there are fewer of those situations in the US, said the banker. “They’ll want to grow by acquisition and then sell some assets, but not just sell – it’s not in their DNA,” said Harrs.

However, KeyBanc’s Toukan sees corporate divestitures picking up in the next 12 months, both as a result of major M&A where companies have to sell to satisfy government anti-trust regulators, and as corporations “clean house” in a seller’s market. ■



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# Last of the mega-deals?

Chemical M&A has been boosted by a handful of mega-deals as companies look for size and top-line growth. But the drivers for acquisition are shifting subtly, with a focus on market position and innovative technology

JOHN BAKER LONDON

The mutually agreed merger of Huntsman and Clariant to create a specialty chemical company with \$20bn enterprise value is the latest in a string of major consolidation deals in the sector. Leading chemical producers have been seeking ways of achieving growth during an extended period of sluggish global economic expansion, and mergers and acquisitions has been the go-to strategy.

But the deal might just mark the high-water point of this active M&A period that has seen mega-deals agreed between Dow Chemical and DuPont, Bayer and Monsanto, ChinaChem and Syngenta, Praxair and Linde, Sherwin-Williams and Valspar, and Potash Corp and Agrium. Waiting in the wings, and getting somewhat aggressive, is the approach made by PPG Industries to purchase AkzoNobel.

The task of driving top-line growth in these companies has been made more difficult as the areas they are active in are relatively mature and concentrated in terms of market share. Many of the deals above cover agrochemicals, fertilizers, industrial gases and coatings; areas where the top five players have over 50% market share, and in some cases well over this percentage.

## SIGN OF STRENGTH

Joachim von Hoyningen-Huene, partner in A.T. Kearney's energy and process industry practice, explains that he sees an acceleration of the trend towards greater scale in chemical value chains and segments. M&A not only brings scale and enhanced opportunities for growth, but synergies and the ability to cut costs.

"These mega-deals are a sign of strength showing that the [company management] has a clear vision and really wants to own the space in the value chain. They can focus more effectively and serve the customer better." However, he adds that they are also driven "by the lack of alternative growth opportunities in the market."

There is today, he says, greater readiness and confidence to meet anti-trust requirements to divest businesses as required by merger authorities, and a higher level of confidence that synergies can be achieved once the deal has been done.

The active M&A market is throwing up plenty of potential buyers for these required divestments – largely in the form of strategic buyers looking to strengthen their existing portfolio and expand into new areas – but also buyers from emerging economies such as China, India and the Middle East.

## DAN SCHWELLER

Global M&A leader, chemicals and specialty materials sector, Deloitte & Touche

**"It is very challenging to do these really complex mega-deals... there are concerns over losing focus"**



But the climate is beginning to change for these mega-deals. There are signs that economic growth around the world is beginning to strengthen – reducing the imperative to consolidate and buy-in growth. The prospects of rising interest rates will also impact access to cheap debt finance for such huge deals.

Although, at present, debt levels in the industry are low and finance is not generally an issue, the industry is seeing slightly lower levels of cash, with return on sales declining in the first quarter of the year in some segments, such as fertilizers, consumer chemicals and inorganic chemicals, according to research by Accenture.

Paul Bjacek, research principal director in Accenture's chemicals practice, believes the M&A flavour may alter going forward. "With improved economic performance, M&A activity may change towards more strategic acquisi-



tions, with companies looking for smaller, incremental purchases."

He does, however, see two major exceptions. These are emerging market players, who may buy for market position, geographic expansion and technology, and integrated oil companies, who may buy petrochemicals and downstream capacity, driven by reduced oil revenues due to the low to moderate oil price.

Dan Schweller, global M&A leader of Deloitte & Touche's chemicals and specialty materials sector, also thinks the year of the mega-deals may be drawing to an end. "I wonder when we will have a slow down – it is very challenging to do these really complex mega-deals. It is daunting to the companies involved and there are concerns over losing focus."

But, he argues, we will continue to see solid M&A activity. "The search for growth and innovation are huge drivers and companies will continue to want to focus on core competencies. In North America and Europe there is also the pressure from shareholder activists who are keen to challenge companies seen to be stepping too far from their core areas."

And, he adds, there is still a big emphasis on top-line growth. One indicator, he notes, is that companies setting up joint ventures are today very keen to see sales consolidated into their own profit and loss statements.

"It's a change from the former asset-light approach in the sector – more these days towards a revenue-heavy model."

## MARCUS MORAWIETZ

Partner, Strategy&/PwC

**"[Companies] are turning to M&A... to do deals in adjacent business areas or in areas where they have... capabilities"**





Getting the deal done can take a lengthy period of negotiation

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Marcus Morawietz, partner at Strategy&PwC and global leader of its chemicals sector, also argues that strategic deals will continue to play a big part going forward. “Companies have identified that cutting prices and being aggressive in chasing market share are not the best or fastest ways to achieve growth.”

So how do they achieve the challenge of moving to the next growth and performance level? Says Morawietz: “They are intensifying M&A. First, by classical consolidation of their core segments, such as in crop protection, coatings, etc; and second, through capability-driven deals which address adjacent or downstream businesses or new areas where they have the necessary capabilities, for example in dealing with complexity, product and service innovation, etc.”

The result, he argues, is that “the capability-driven M&A strategy can provide growth with confidence and security, with few anti-trust issues. Companies have a good idea of the synergies they can achieve as they know how to run the type of businesses they are acquiring.”

As examples, Morawietz gives the LANXESS acquisition of Chemtura and the downstream focused deals of ChemChina.

## EMERGING M&A TRENDS

All four consultants point to two other major trends in chemical industry M&A at the present time: the huge M&A activity in China and its growing involvement in cross-border M&A, and the efforts by North American and European companies to move into the digital era, by acquiring IT, software and digital service start-ups and companies.

The China story is part of a wider move that is seeing producers in non-Western economies, such as China, India and the Middle East becoming increasingly involved in M&A activity to acquire market position and/or technology. Saudi Aramco, for instance, acquired a half share in LANXESS’s rubber business

and Novomer’s CO2 technology recently.

A recent survey by A. T. Kearney amongst industry executives shows that top drivers for future M&A activity include emerging market players seeking access to advanced technologies or application knowhow (given by 82% of respondents); the resurgence of the US chemicals industry because of low-cost feedstock (61%) and downstream integration of Middle East petrochemical producers (58%).

A. T. Kearney’s von Hoyningen-Huene notes that its analysis shows that China accounted for a quarter of all chemical sector M&A activity in 2016 by number of deals – double the proportion just 10 years ago. Much of this activity is within China, where the market is very much more fragmented than elsewhere and there is thus more room for consolidation. This is, he adds, also being driven by overcapacity in the country in many products.

But China is also becoming increasingly relevant on the global scene, he adds. ChemChina is not only in the process of buying seeds and agchem specialist Syngenta, it has recently bought Krauss Maffei in the plastics processing sector and tyre-maker Pirelli.

These “quite astonishing” deals have left the company highly leveraged and there are now rumours of a merger with Sinochem to create a major chemical presence. The Chinese will acquire good assets, he adds, and run them at high operating rates, with less regard to margins than European or US owners.

### JOACHIM VON HOYNINGEN-HUENE

Partner, energy and process industry practice, A.T. Kearney

“These mega-deals are a sign of strength showing that the [company management] has a clear vision”



A. T. Kearney expects the China trend to continue. As it says in its latest M&A report: “Government-driven consolidation in supply industries such as coal, steel and chemicals is creating more national champions that in turn pursue international growth strategies through M&A.” It adds that it expects the same trend to continue in India, though to a lesser extent.

Figures from Accenture show that China was the third largest origin of M&A buyers in cross-border deals during the period 2012-to date, while it was virtually absent from the market over the period 2007-2012. Western Europe and Japan have been leading buying areas since 2012, with these three areas accounting for close to 45% of all deals done.

Says Bjacek: “Chinese companies have been the largest acquirers over the past four years and

China has also been the location of the largest number of target companies. In cross-border terms, China is now the third largest acquirer in terms of the number of deals.”

### PAUL BJACEK

Research principal director, chemicals practice, Accenture

“In cross-border terms, China is now the third largest acquirer in terms of the number of deals”



This cross-border activity is being driven by the search for technology and market position but also growth, as China’s GDP advance slows. It is also a result of capital flight as Chinese investors look for somewhere to put their money as the Chinese economy slows.

On the digital front, there has been growing M&A activity as companies seek to build capabilities quickly so they can take advantage of big data and analytics in their offerings to customers and in support of their operations.

Deloitte notes in a recent report that “greater use of digitisation may also lead to growth and additional deal flow, as the industry turns to technology to help drive innovation and enhance operational effectiveness.”

Deloitte’s Schweller believes 2017 will see continued deal flow around digitalisation and innovation, in order to drive additional growth and differentiate acquirers in the marketplace. He points to uses in farming/agriculture and self-medication in pharma, not to mention uses in remote operations and track-and-trace functionality on customer orders as examples of where companies are looking to derive benefits from digitalisation.

Morawietz from Strategy& also comments on the rise of M&A in the area of digitalisation by chemical players. Figures from the consultancy show that one in 10 M&A deals by chemical companies in 2015 was done to acquire digital technology, up from just 4% in 2011.

But buying a digital company, he warns, is not the usual acquisition a chemical company is used to. Companies will need to ask whether it makes sense to buy the company or to try and build the capability in-house or to establish a network of digital service providers – the type of digital capabilities and speed are key levers and criteria for the best option.

“The rationale is completely different and the evaluation and due diligence are not so easy. The management, staff and capabilities are not the same as in the chemical sector, so integration and staff retention are also an issue – an acquisition of a digital target is primarily capability driven. Also, there will be very limited cost synergies with existing operations – it is typically a top-line case.” ■

# German majors' great expectations

Robust first quarter results among German chemical producers lead to positive forecasts for the full year and a renewed sense of optimism moving forward

ANDY BRICE LONDON

**D**espite the uncertainty stemming from tough trading conditions globally, fraught election campaigns and the ongoing Brexit negotiations, little appears to have dampened the mood of the leading chemical players in Germany so far this year.

In fact, the first three months of 2017 have proven pretty positive for producers within Europe's largest economy.

Production, sales and capacity utilisation have all shown signs of improvement, with the consensus suggesting a positive performance is likely for the year overall.

Martin Wansleben, director general of Germany's chamber of commerce (DIHK), says several factors contributed to the 0.6% GDP growth in the first quarter – including low interest rates and oil prices, as well as favourable exchange rates that were a boon for German exporters.

Trade group VCI adds that production showed a 2.1% improvement on the previous quarter, and was 1.1% above a similarly strong period this time last year. Capacity utilisation during these past few months had ramped up to 87.7%.

"Business sentiment is good in the industry," said VCI president Kurt Bock in early May. "But, speaking in metaphors, one swallow does not make a summer. After the encouraging start of the year, it remains to be seen whether the positive development lasts in chemistry. Many economic uncertainties and political risks can dampen the upswing."

The VCI expects chemicals production to grow by a modest 1% in 2017. Prices are expected to be 2.5% higher year on year and the indus-

STEVEN HOLLAND  
CEO, Brenntag

"We saw encouraging trends in the first quarter, with further growth in our EMEA and Asia Pacific regions"



try's sales up 3.5% to reach a value of €191.2bn.

Bock – speaking this time in his role as chairman of BASF – acknowledged the producer had indeed enjoyed a strong first quarter, and confirmed that demand had continued to follow the trends seen through 2016.

First-quarter net profit grew 23% year on year to €1.71bn on the back of higher sales volumes, particularly in its chemicals division, he said.

BASF's sales for the three months to March 2017 leapt 19% to €16.9bn – compared with €14.2bn during the same period last year. This was supported by an 8% growth in both volumes and prices. Operating income was up 31% at €2.45bn.

"We had a good start to the year and finished the first quarter 2017 with considerable growth in sales and earnings compared to the prior-year quarter. We were able to further increase our sales volumes," added Bock.

"From a regional perspective, we significantly improved sales and earnings in Asia Pacific, where we succeeded in growing volumes strongly in all segments; China was the main contributor to this development."

Sales in its chemicals segment rose 36% year on year to €4.1bn, largely because of higher prices seen in the petrochemicals and monomers divisions, and an increase in volumes.

Monomers showed a 44% improvement on Q1 2016 with sales of €1.70bn, followed by pet-

rochemicals (up 38%) at €1.65bn, and intermediates (up 16%) at €752m. Market tightness helped boost margins, particularly for isocyanates, cracker products and acrylics.

Bock went on to confirm the forecasts made by the company at the end of February, and said he was optimistic moving forward.

"We expect BASF Group sales to grow considerably in 2017, which means an increase of at least 6%. Based on the good start to the year our outlook may seem cautious, but we see some elevated risks with regard to macro-economic developments and the political environment. Therefore, we confirm our full-year outlook at this time."

Rubber and specialty chemicals producer LANXESS headlined its Q1 results briefing with the bold declaration that despite challenges facing the markets, "2017 could therefore be the most successful fiscal year in the company's history".

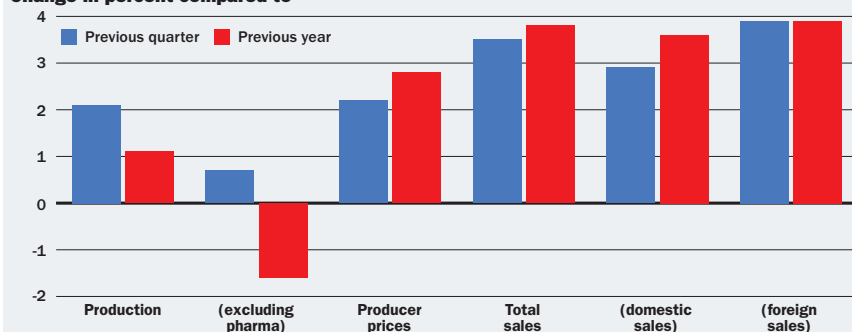
KURT BOCK  
President, VCI and chairman, BASF

"Business sentiment is good in the industry. But, speaking in metaphors, one swallow does not make a summer"



## CHEMICAL BUSINESS INDICATORS IN GERMANY – Q1 2017

Change in percent compared to



SOURCE: Destatis, VCI

34,170	( 34,290 / 34,315 )
44,090	( 44,220 / 44,265 )
6,562	( 6,558 / 6,562 )
10,650	( 10,640 / 10,655 )
115,980	( 115,290 / 115,380 )
68,310	( 68,020 / 68,090 )
33,700	( 33,765 / 33,790 )
67,720	( 67,480 / 67,550 )
101,010	( 101,060 / 101,090 )
32,180	( 32,140 / 32,155 )
43,760	( 43,750 / 43,770 )
47,025	( 47,020 / 47,075 )
77,380	( 77,430 / 77,450 )
21,950	( 21,925 / 21,940 )
128,800	( 128,800 / 128,820 )



63DU	39,650	( 39,650 / 39,650 )
ADS	51,150	( 51,150 / 51,150 )
ALV	85,050	( 85,050 / 85,050 )
BAS	53,640	( 53,610 / 53,660 )
BAYN	46,930	( 46,920 / 46,940 )
BEI	41,900	( 41,905 / 41,895 )
BMW	59,910	( 59,880 / 59,940 )
CBK	1,987	( 1,987 / 1,987 )
DAI	38,790	( 38,770 / 38,790 )
DBK	32,630	( 32,625 / 32,635 )
DPW	11,200	( 11,195 / 11,205 )
DTE	9,290	( 9,286 / 9,294 )
EOAN	17,985	( 17,990 / 17,980 )
FME	51,840	( 51,820 / 51,860 )
FRE	71,380	( 71,380 / 71,380 )



**Leading chemical players in Germany have enjoyed a strong start to the year, each suggesting that their strategies are proving effective**

As part of its strategy to have a more diversified and structured portfolio, April saw the completion, ahead of schedule, of its €2.4bn acquisition of US-based Chemtura – the largest purchase in its history.

Other highlights from the first quarter included strong growth across each of its business segments, with the significant increase in sales fuelled by higher prices and volumes.

Sales for the three months ending March 2017 were up 25% at €2.40bn from €1.92bn during the same period a year earlier. Earnings before interest, tax, depreciation and amortisation (EBITDA) rose 26% to €316m. Net profit during the period rose by 47.2% year on year to €78m. Operating profits, meanwhile, leapt 47% to €192m.

ARLANXEO, the JV with Saudi Aramco, saw a 48% year on year surge in sales to €948m – up from €640m.

Following a particularly strong first quarter, LANXESS said it was hoping to post record earnings for the full year and expected EBITDA of between €1.23bn-1.3bn.

“LANXESS got off to a very strong start to the new fiscal year. We recorded an increase in demand in all of our business segments and generated higher sales in all regions. This clearly shows that we have the right positioning,” said Matthias Zachert, chairman of the board of management.

“Good order flow and a dynamic business environment appear to continue in the second

quarter,” he added. “For the full year, we are even expecting record earnings. This is a clear indication of our operational strength, which will be further enhanced by the Chemtura acquisition. Our job now is to ensure the swift and smooth integration of the new businesses.”

Covestro’s chairman of the board of management, Patrick Thomas, was in an equally bullish mood at the company’s annual general meeting in early May, noting that “2016 was an excellent year for Covestro” and that all key financial targets had been reached or exceeded.

The record year, he said, had seen a strong performance driven by robust demand across its portfolio. He specifically highlighted higher capacity utilisation, higher volumes and a positive pricing delta.

“In 2016, we once again pushed the boundaries of what is possible. We brought several innovations to the market, often revolutionising established processes and procedures,” he said. “Our key financials are proof that our strategy is paying off.”

It displayed a strong performance in the first quarter results thanks to improved consumption in the global construction sector, as well as from the furniture and mattress industries in North America and Asia Pacific.

Covestro’s first-quarter net profit soared to €468m, up from €182m during the same period last year, as earnings from its polyurethanes segment more than tripled.

Sales for the three months to March 2017 rose

**PATRICK THOMAS**  
Chairman, Covestro

**“In 2016, we once again pushed the boundaries of what is possible. Our key financials are proof that our strategy is paying off”**



24.7% year on year to €3.59bn, with EBITDA climbing by 66.5% to €846m.

Operating profit for the quarter stood at €688m, more than double the €340m profit recorded in the same period last year.

The polyurethanes segment saw sales climb 35% in the first three months to €1.89bn, up from €1.40bn the year before. Operating profit for the period soared to €396m – compared with €117m in Q1 2016.

Strong demand from the automotive and electronics sectors helped boost polycarbonates results too, with a 44.9% increase in operating profit reported at €184m. Sales totalled €954m – marking a 21.4% rise year on year.

The coatings, adhesives and specialties business, meanwhile, saw a 10.2% improvement in sales (€564m) and a 3.4% rise in operating profit to €123m.

Echoing the successes of other major German producers these past few months, Evonik

INGEBROCKE REVISIONSBERATUNG



» reported a 19% sales increase to €3.68bn. EBITDA was also up by 8% at €612m, driven by improved results in the resource efficiency and performance materials segments.

The former segment posted a 24% year-on-year increase in sales to €1.39bn, with the performance materials business seeing the biggest increase in sales of 26% to €972m.

Demand for specialty chemicals such as silica, coating additives and pharmaceutical ingredients helped boost quarterly earnings.

Net income, however, fell 33% (€80m) for the period to €160m because of one-off costs related to the purchase of Air Products' specialty additive business at the start of the year.

Evonik said integration of the new acquisition has been smooth, with the company on course to achieve synergies of around €70m by the end of the decade. It is also looking to finalise the purchase of the silica business of US-based J. M. Huber in the second half of the year.

It remained confident of achieving its forecast to grow sales and operating earnings in 2017 and expects adjusted EBITDA to increase to between €2.2bn-2.4bn.

"The successful start to the year shows that we are on the right track with our growth strategy," said Klaus Engel, then-chairman at Evonik.

Despite the "somewhat challenging environment", Wacker CEO Rudolf Staudigl said the company had also started the year well. First-quarter net profit still jumped to €665.9m from €16.1m from the same period the year before.

The chemical divisions fuelled the gains, amid strong sales and decent customer demand.

**KLAUS ENGEL**  
Former chairman, Evonik

**"The successful start to the year shows that we are on the right track with our growth strategy"**



**MARKETS NIGEL DAVIS LONDON**

## GERMAN PLAYERS GET BOOST IN FIRST QUARTER

GERMANY'S CHEMICAL producers benefited in the first quarter from stronger year-on-year volume growth and higher prices.

Higher prices offset raw material costs to a greater extent and margins improved.

Leading companies in the sector reported considerably higher year-on-year profits. The uptick was sentiment and price driven. The rising oil price late last year began to lift chemical prices globally while demand pull remained steady. In some petrochemical markets, prices rose markedly as supply tightened due to outages. Buyers were keen to secure volumes in times of price and volume uncertainty.

That sentiment persisted in

2017, particularly ahead of the Lunar New Year. Buyers built stock at most points in the value chain. There was underlying uncertainty but, as long as the oil output agreement between OPEC and non-OPEC nations held, then slow but steady demand growth was expected to continue to drive markets. Stocks built earlier in the quarter but towards the quarter's end, stock drawdown in the important northeast Asia and China markets was beginning to signal a slowing volume and price momentum.

Looked at across the board, this was a strong quarter for the sector. BASF reported stronger group sales and profits. This was driven to a great extent by a

strong performance for from the company's chemicals businesses where prices were up 24% and volumes up 10%. Margins improved for steam cracker products in all regions. Earnings increased significantly from the BASF-YPC Company Ltd joint venture in Nanjing, China.

The quarterly financial results show that growth was not confined to the upstream. Evonik's specialty chemicals businesses delivered strong sales and profits performance. Sales and profits growth in the quarter were the strongest from polycarbonate and polyurethanes producer Covestro and from LANXESS. Demand for intermediates and materials was rising in the quarter in Europe and globally. ■

First quarter sales rose by 7.6% year on year to €1.22bn due to higher volumes of silicones and polymer products. EBITDA, meanwhile, saw an increase of 11.7% to €229.3m, with operating profit up 14.2% at €73.2m.

Since the start of the year, Wacker has sold shares in its semiconductor subsidiary Siltronic, reducing its stake in the silicon wafers producer.

"By reducing our stake in Siltronic to just under 31%, we have now achieved the strategic goals we pursued with a non-controlling position in the company: we have put Wacker on a less capital-intensive footing and are focusing investments on strengthening our chemical divisions' supply chains," Staudigl said.

Wacker has revised its full-year forecast following the deconsolidation of Siltronic. It now

expects 2017 sales to increase by mid-single-digit percentage from last year, while EBITDA excluding special income would fall by a mid-single-digit percentage.

Linde CEO Aldo Belloni, meanwhile, said the company had made "a proper start to the new financial year, in line with our forecast".

Both revenue and earnings saw increases for the industrial gases company in the first quarter. Group operating profit from continuing operations increased by 5.7% to €1.04bn. Sales for the three months to March 2017 rose 6.6% to €4.39bn – thanks to the positive trends in the EMEA and Asia Pacific segments and higher revenue in its engineering division.

"Our positive business performance is testament to our solid business model," he said.

The company says it will remain focused on implementing efficiency improvement measures as part of its Focus programme and LIFT programme.

Speculation continues over the potential merger with US firm Praxair, the companies having agreed terms in December 2016.

Solid growth in the Europe, Middle East and Africa (EMEA) and Asia Pacific meant a strong start to the year for distributor Brenntag, according to CEO Steven Holland. Demand in North America had also stabilised as expected, he said – all helping to offset falling earnings in Latin America.

Sales of €2.97bn in the first quarter represented a 15.2% increase on the previous year, with gross profit up 7.7% year on year at €631.8m. Post tax profit leapt to €94.7m from €66m during the same period in 2016. ■

**Covestro says all key financial targets have been reached or exceeded**

