

A photograph of laboratory glassware, including Erlenmeyer flasks and a graduated cylinder, filled with a clear liquid. The image has a blue tint and is used as a background for the top section of the document.

# Market Update Chemicals

Q4 2016

## Year-in-review

- Record year for Lincoln's M&A Group with 136 transactions completed in 2016
- Strengthening of global capabilities with the addition of the Joint Ventures & Partnering Group
- Continued global expansion through the opening of offices in Dallas and Munich
- The Chemicals Group remains engaged on 25+ buy-side and sell-side assignments

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**Market Intelligence**



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#### Notes:

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## Chemicals Industry Momentum Improved in Q4 2016

### Guest Columnist

Based on economic and industry reports through early January, we believe business conditions for the U.S. chemical industry improved during the recently completed fourth quarter. Domestic economic activity continued to grow but likely less than the 3.5% real GDP rate for the third quarter, which was the fastest growth in more than two years and up from the sluggish average 1.1% rate in the first half. [Subsequently to this report, economic growth was estimated at 1.9% annual rate for the fourth quarter]

The expansion of the domestic manufacturing sector appears to have continued to strengthen during the second half. U.S. construction and automobile markets remained healthy, including record retail auto sales, helping companies with exposure to those markets.

Ahead of the start of the earnings season for fourth quarter, we expect the industry to report solid but mixed results. Makers of basic chemicals and plastics should have experienced good demand but were limited by lower margins versus the 2015 period amid rising feedstock costs as 2016 progressed. We believe margins in the fourth quarter for downstream and specialty chemical producers, such as paint makers, were generally helped by both good demand and still favorable costs comparisons for their input materials versus the year earlier period. Fertilizers producers' results continue to be contained from reduce nutrients prices resulting from challenging agricultural markets, although better conditions are forecasted for 2017.

The American Chemistry Council (ACC) in late December reported its Chemicals Activity Barometer (CAB), a leading macroeconomic indicator based on chemical industry data, on a three- month moving average basis, ended 2016 on a strong note and at a pace not seen since 2010. The CAB in December was up 4.4% over same month in 2015, a significant increase over the first half of 2016. The ACC noted that the CAB continued to signal further gains in U.S. business activity well into second quarter 2017.

The global manufacturing sector, the largest customer base for the chemical industry, exhibited improved growth rates during the just completed fourth quarter, the best period

since the start of 2014, according to the monthly worldwide PMI business surveys. Boosted by better growth in basic materials and industrials, the sector enters 2017 with good momentum.

The U.S. manufacturing sector also appears to have continued to strengthen over the final months of 2016, following sluggish growth early in the year. According to the Institute for Supply Management's monthly reports for manufacturing activity, U.S. manufacturing activity in December expanded for the fourth consecutive month, with growth at the fastest pace in two years. Manufacturing activity early in 2016 was constrained due to the high value of the dollar and weak demand abroad.

The details in the ISM manufacturing monthly reports indicated that the U.S. chemical industry expanded each month in the just completed fourth quarter, following a contraction reported in September.

Railcar loadings suggest that the pace of growth of chemicals shipments slowed in the second half of 2016. According to the Association of American Railroads, U.S. chemicals railroad carloads for the fourth quarter increased 1.0% from a year earlier, a slower pace of growth than for each of the first two quarters of 2016, although December alone rose 3.9%. Railcar loadings for all of 2016 grew 1.5%, a pickup from the 0.4% pace in 2015. Railroads carry about 30% of industry shipments.

Selling prices for some key basic chemicals products eased during the fourth quarter following a rebound from their lows early in 2016, but ended the year higher than at the start. These higher prices should soon become cost headwinds to buyers such as specialty producers.

The domestic monthly contract prices for ethylene, the largest volume petrochemical monomer, in the fourth quarter averaged slightly below that of the third quarter but almost 20% higher versus the final quarter of 2015. The monthly price bottomed at the start of 2016 at the lowest since 2003 before rising 44% through September due to a greater amount of industry supply outages and higher feedstock costs following a rise in natural gas prices. For all of 2016, the price averaged slightly below that of 2015. We believe U.S. contract ethylene margins



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narrowed in the fourth quarter on the lower prices and higher average feedstocks costs.

Domestic prices for most of the major derivative plastics also declined during the fourth quarter. Polyethylene makers in November and December gave up most of an increase achieved in September, although prices for the quarter overall averaged higher than in the 2015 final quarter on the higher monomer costs. We expect resin prices to rise during the upcoming seasonal stronger spring period. Polyethylene makers include Dow Chemical, LyondellBasell, and Westlake Chemical. Polyvinyl chloride prices were higher in the fourth quarter after increases in the spring months on improved seasonal demand and the higher ethylene costs. After partial success in October for another hike, vinyl makers gave back that increase in November; producers have proposed hikes for February, ahead of the typical seasonal pickup of construction activity. Vinyl producers include Westlake Chemical, now the second largest U.S. vinyl resins producer following its purchase of Axiall Corp. in August 2016.

Contract prices for propylene, the second largest volume monomer, declined each month of the fourth quarter, more than reversing the total increases of the third quarter. Prices for the fourth quarter averaged 4% lower versus the third quarter but were up by about 16% against the year earlier quarter. The current first quarter could be higher on average both sequentially and versus the comparable period in 2016. These higher propylene prices are now resulting in

increased prices for derivatives to buyers such as paint makers (including Sherwin-Williams, PPG Industries, Axalta, and Valspar).

Inorganic prices also increased in the second half. We believe that caustic soda contract prices increased since the first quarter of 2016 on better overall demand, breaking a trend of price weakness during 2015. Producers will continue to push their recent proposed price hikes, including for the first quarter of 2017.

Chlorine prices also rose modestly during 2016 as producers had some success for their price hikes announced early in the year. Contract prices were unchanged during the recent seasonal slow fourth quarter, although they were modestly higher than for the year earlier period. We believe that prices may be unchanged through the first quarter of 2017. Olin Corp. and Westlake Chemical are major chlor-alkali makers.

Titanium dioxide pigment prices and margins, while down from their peaks in 2012, increased globally during 2016 for the first times in several years as producers were able to implement various regional price increases on more favorable market fundamentals. Additional price hikes have been announced for 2017 by the major producers. The leading producers are Chemours (the former pigment business of DuPont), Huntsman Corp., and Tronox. The rise in selling prices will in 2017 negatively impact important users such as paint and plastics makers.





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## Nexant Case Study – Market and Technical Due Diligence

### Introduction to Nexant

Nexant is a leading independent consultancy providing over fifty years of experience-based technical and management consulting services to the full range of energy and chemical industry participants.

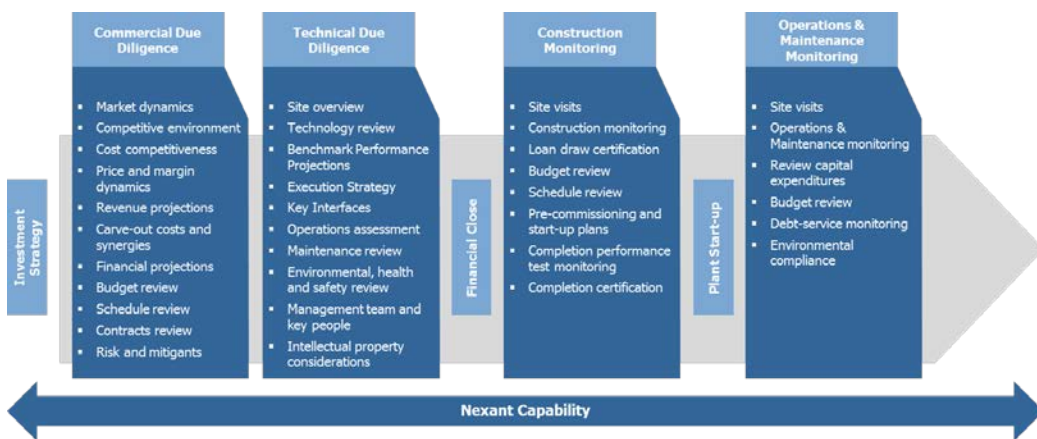
As an independent consultant, the Nexant team is technology-neutral, and does not hold any business or financial interest with any technology providers or equipment manufacturers. Therefore, Nexant offers unbiased insight to companies of all sizes, governments, investors, financial institutions, regulators, development agencies as well as law firms. Nexant understands their businesses, the challenges they face, and the competitive pressures that shape their actions.

Pairing the strategic, operational, and technical expertise of Nexant consultants with highly sophisticated analytic tools delivers the

most powerful and reliable solutions that add value to businesses by helping them make well-informed, better decisions. Nexant offers consulting services in technical and market reviews, master planning and feasibility appraisal, strategy, mergers & acquisitions, initial public offerings, project evaluation & financing, monitoring, and expert witness.

Transaction Support is a particular area of specialization for Nexant for which it has completed hundreds of engagements. Typical advisory activities for M&A or Project Finance transactions range from the initial investment strategy; commercial and technical due diligence; through to construction, operations, and maintenance monitoring.

A case study follows to illustrate the role Nexant often plays to inform client investment decision-making.



### Background

Nexant was engaged by a financial services/securities company (the "Client") to provide market and technical intelligence to Client concerning an investment opportunity in a growing specialty chemicals manufacturer (the "Target"). Target had plans to construct a new specialty chemicals manufacturing plant in the United States, leveraging a novel patented technology and based in part on a similar Target plant outside the U.S. Client was considering the extension of a loan in the hundreds of millions of dollars to Target to build the U.S. plant. The loan would be repaid by cash flow generated by the sale of a portfolio of specialty chemicals from the new plant. The

Nexant engagement focused on market and technical risks as they related to Target's ability to cover projected debt payments (i.e., downside risks).

Nexant's approach to due diligence is interactive and comprehensive. Nexant views due diligence as the independent technoeconomic assessment of a technology or project, with emphasis on viability of the technology, plans for commercialization, costs to build and operate a commercial plant, value proposition, and ability to generate cash.



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Due diligence usually includes regular communication with the Client to keep them abreast of latest developments and thinking. Nexant first collects information on the target company(s), their technology(s), and their operations and plans for further development. This information is analyzed to build a base of knowledge and to generate questions. These questions are sent to the developer(s) in advance of a site visit to conduct meetings, a facility inspection, and discussions with relevant developer personnel.

Nexant will typically take a hypothesis-driven approach, in which our team will formulate an initial hypothesis to drive the fact-finding and analysis. This hypothesis will be revised, refined, and updated during the course of the analysis.

The Nexant team's initial hypothesis was that Target's value proposition was compelling and would enable successful placement of its envisioned portfolio of specialty chemicals into targeted markets. However, its current stage of market development did not support the proposed timing of the construction of the U.S. plant, although the technology was sound and the design/plans for the proposed U.S. plant were valid.

### Key Issues and Nexant Approach

The portfolio of specialty chemicals planned to be produced by Target are small, specialty products without clearly defined markets. Thus, detailed, reliable information about them proved to be challenging to ascertain. Each of the products was explored using Nexant databases, previously completed non-confidential Nexant work, secondary research and an interview campaign that sought up-to-date market intelligence from key decision makers in the relevant market segments. Nexant focused on the ability and readiness of the market to absorb additional product such as that planned from the proposed plant.

The market segments addressed in this engagement were a mix of specialty chemicals/intermediates and end use products using these specialties and their derivatives and compounds. Specific market diligence activities included:

- Estimate the current size of the market segments
- Estimate projected growth of the market segments relative to GDP and to each other
- Identify and discuss the drivers of the market segments and the key product aspects buyers use to differentiate one

product versus another (e.g., quality, price, etc.)

- Based on the above, and Nexant's experience and knowledge of these and similar market segments, provide Nexant's opinions on the likelihood of adoption by the market segments of new, alternative products like those expected from the Project, including identification of apparent issues/barriers to adoption

Technical diligence focused on assessment of the technology to be deployed and the plans for the proposed new U.S. plant. Key activities included:

- Review the technical plans that were used to construct the existing plant, including process flow diagrams, flowsheets, capital cost estimates, and other pertinent information, and compare actual results to these plans
- Make one visit to the existing plant to observe the current operation of the plant
- Review the technical plans proposed for the Project (the new plant in the United States), including process flow diagrams, flowsheets, capital cost estimates, and other pertinent information, with a visit to the U.S. Gulf Coast site or the office of a relevant party (e.g., to review Project plans, etc.) as desired by the Client
- Based on the above reviews and visit, and Nexant's experience and knowledge of similar projects, provide Nexant's opinions of the ability of the Project to produce the planned products at the costs projected in the technical plans provided

Other Nexant scope items included:

- Review and assess intellectual property
- Review and critique commercial and technical key assumptions in Target's financial model
- Derive individual product-specific revenue models for Target's proposed products
- Derive liquidation value for the proposed U.S. plant



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### Nexant Team

Nexant staffed this engagement with a joint team located in its White Plains, NY and one of its international offices. White Plains staff members brought expertise in specialty chemicals, technology assessment, process design and scale up, and primary market research skills to perform field work in the value chains for the proposed specialty chemicals and their end uses. Nexant international personnel leveraged their expertise in process design and technical plans to assess the existing plant and its use as a basis for the proposed U.S. plant.

### Nexant Results

The Nexant market assessment of the Target's specialty chemical portfolio focused on six primary markets. Nexant examined the chemicals Target would produce, the compounding, derivatization, and downstream processing of these chemicals, and the ultimate end use applications. Nexant research indicated end use market sizes ranging from less than one billion dollars to \$40 billion in annual sales, with segment growth ranging from GDP-level to significantly stronger growth. Target's sales of its specialty chemicals comprised a very small, but chemically vital portion of these end use market revenues.

In assessing Target's potential value proposition in these markets, Nexant noted that success for these specialty products comes from a combination of the product's functionality and the customer's ability to realize that value. These require a high degree of end use expertise and the ability to sell technical value to the customer, ensuring appreciation for the functionality.

Target was seeking to penetrate markets that were served by existing competitors. However, Target's products provided unique properties and opened up new product application opportunities for its customers. The fact that these products were not simply drop-in substitutes contributed to the complication in projecting market penetration for Target.

Nexant found market penetration would be enabled by the compelling nature of the products and the value-add they can provide and specific target market applications would be more than large enough to accommodate

Target's volumes. Nexant concluded that Target showed strong potential to establish substantive specialty chemical sales. However,

Target's market development efforts had not been allowed requisite time to prepare for immediate placement of its specialty products. Especially when dealing with these small, specialty chemicals, market development is an intense, time-consuming process that involves a number of steps. The critical path items are often out of the direct control of the specialty chemical producer and include environmental and regulatory approvals, product testing, and field trials in addition to requisite customer qualification. Barriers to switching are formidable with a strong reluctance to change.

It was jointly concluded that Target's chances of leveraging its value proposition to successfully penetrate the targeted segments was high, but that more time was needed before the volumes of the proposed new U.S. plant could be placed in the markets.

Technical due diligence was more straightforward. The technology was found to be viable and scalable, the plant design and layout followed good engineering practice, and the existing similar plant was deemed workable.

### Nexant Impact

Nexant findings supported the Client investment, but at a modified schedule of deployment. It was decided to advance the investment in two tranches, first at a tens of millions of dollars magnitude to fund targeted market development efforts and later, if warranted by the targeted market development efforts, to fund the full construction of the U.S. commercial plant. Target used the initial investment to realign, refocus, and intensify its market development efforts.

Thus, Nexant recommendations resulted in actions to change the nature and size of the Client investment to support needed market development as it strengthened Target's market development efforts. Client avoided making a well-intentioned, but ill-timed investment. Client has engaged Nexant to help it evaluate other, non-related investment opportunities.

## Chemicals Index

					LTM		YoY		Enterprise Value/LTM	
	Share Price	% of 52 Week High	Market Cap	Enterprise Value	Revenue	EBITDA	Revenue Growth	EBITDA Margin	Revenue	EBITDA
Specialty Chemicals										
A. Schulman, Inc.	\$33.45	88.7%	\$981	\$2,031	\$2,447	\$221	0.8%	9.0%	0.8x	9.2x
Air Liquide SA	111.53	99.1%	43,229	64,575	18,587	4,690	3.3%	25.2%	3.7x	14.4x
Air Products and Chemicals, Inc.	143.82	91.1%	31,263	36,113	9,524	3,114	(1.7%)	32.7%	3.8x	11.1x
Albemarle Corporation	86.08	93.3%	9,682	13,050	3,528	973	(3.4%)	27.6%	3.7x	12.7x
Ashland Global Holdings Inc.	109.29	91.8%	6,799	8,673	4,948	740	(4.1%)	15.0%	1.8x	11.5x
Cabot Corporation	50.54	93.2%	3,150	4,000	2,411	458	(9.4%)	19.0%	1.7x	8.7x
Cambrex Corporation	53.95	90.8%	1,735	1,644	470	143	8.3%	30.4%	3.5x	11.5x
Celanese Corporation	78.74	92.7%	11,276	13,468	5,412	1,150	(4.6%)	21.2%	2.5x	10.3x
Chugoku Marine Paints, Ltd.	7.37	97.5%	483	406	963	95	(1.1%)	9.8%	0.5x	4.9x
Clariant AG	17.30	93.1%	5,583	7,166	5,983	794	3.2%	13.3%	1.2x	8.6x
Ecolab Inc.	117.22	94.1%	34,176	40,730	13,213	2,873	(2.5%)	21.7%	3.1x	14.2x
Elementis plc	3.43	99.2%	1,587	1,553	652	127	(3.9%)	19.5%	2.6x	13.1x
Evonik Industries AG	29.93	91.5%	13,946	13,034	14,303	2,368	(2.5%)	16.6%	1.0x	5.9x
Ferro Corporation	14.33	88.6%	1,195	1,649	1,129	180	5.0%	16.0%	1.5x	9.1x
Givaudan SA	1,837.01	88.2%	16,935	17,905	4,661	1,000	6.2%	21.4%	4.0x	18.7x
H.B. Fuller Company	48.31	94.9%	2,430	3,013	2,095	282	0.5%	13.5%	1.5x	11.0x
Hitachi Chemical Company, Ltd.	25.04	98.4%	5,213	4,641	5,214	857	14.6%	16.4%	1.0x	6.0x
International Flavors & Fragrances	117.83	82.0%	9,359	10,230	3,069	702	1.5%	22.9%	3.3x	14.6x
Kansai Paint Co., Ltd.	18.44	92.4%	4,762	4,813	3,155	458	10.1%	14.5%	1.8x	11.2x
Linde Aktiengesellschaft	165.25	94.9%	30,676	39,263	19,512	4,351	0.1%	22.3%	2.1x	9.6x
NewMarket Corporation	423.84	94.6%	5,022	5,365	2,027	409	(5.3%)	20.2%	2.6x	13.1x
Nippon Paint Holdings Co., Ltd.	27.28	85.5%	8,749	8,468	5,203	1,015	31.8%	19.5%	1.9x	9.5x
Novozymes A/S	34.57	72.7%	10,285	10,449	2,008	700	(1.5%)	34.9%	5.3x	15.1x
PolyOne Corporation	32.04	83.4%	2,684	3,733	3,328	384	(1.5%)	11.5%	1.1x	9.7x
PPG Industries, Inc.	94.76	81.0%	25,016	28,531	14,751	2,527	(3.8%)	17.1%	1.9x	10.6x
RPM International Inc.	53.83	96.3%	7,180	8,902	4,858	659	3.0%	13.6%	1.8x	13.2x
Sanyo Chemical Industries Ltd.	42.83	98.0%	944	959	1,497	223	11.2%	14.9%	0.7x	4.8x
Sensient Technologies Corporation	78.58	94.2%	3,500	4,095	1,392	255	1.2%	18.3%	2.9x	16.0x
Shenzhen Capchem Technology Co.,	7.10	68.7%	1,307	1,266	229	50	59.1%	21.7%	6.3x	25.1x
Diversified Chemicals										
3M Company	\$178.57	98.0%	\$107,404	\$117,145	\$30,078	\$8,659	(0.6%)	28.8%	3.9x	13.5x
Akzo Nobel N.V.	62.69	91.3%	15,810	17,520	16,074	2,407	(0.4%)	15.0%	1.2x	7.6x
Arkema S.A.	98.11	97.5%	7,427	8,745	8,366	1,315	0.3%	15.7%	1.1x	7.0x
BASF SE	92.86	99.8%	85,287	99,002	63,603	10,657	(16.9%)	16.8%	1.7x	9.7x
The Dow Chemical Company	57.22	96.4%	64,165	83,882	46,600	8,936	(4.5%)	19.2%	1.8x	9.1x
E. I. du Pont de Nemours and	73.40	96.8%	63,810	70,074	24,682	4,556	(1.8%)	18.5%	2.8x	15.1x
Eastman Chemical Company	75.21	95.5%	11,037	17,589	9,045	2,114	(6.3%)	23.4%	1.9x	8.3x
FMC Corporation	56.56	94.3%	7,570	9,452	3,316	672	1.2%	20.3%	2.9x	14.1x
Hubei Yihua Chemical Industry Co.,	1.14	94.0%	1,028	2,831	2,603	317	(7.8%)	12.2%	1.1x	9.3x
Huntsman Corporation	19.08	92.9%	4,544	8,845	9,594	1,025	(6.8%)	10.7%	0.9x	8.6x
Kemira Oyj	12.80	96.7%	1,951	2,666	2,663	318	3.2%	11.9%	1.1x	8.9x
LANXESS Aktiengesellschaft	65.82	98.1%	6,024	8,067	8,531	1,057	(0.6%)	12.4%	1.0x	8.1x
Mitsubishi Chemical Holdings	6.49	95.0%	9,511	25,449	34,804	4,389	9.2%	12.6%	0.8x	6.5x
Monsanto Company	105.21	92.1%	46,133	53,611	13,933	4,013	(2.9%)	28.8%	4.0x	14.4x
Olin Corporation	25.61	95.1%	4,233	7,786	5,432	818	90.3%	15.1%	1.4x	9.5x
Pidilite Industries Limited	8.69	76.7%	4,455	4,299	836	187	7.1%	22.4%	5.2x	23.3x
SK Chemicals Co., Ltd.	55.65	77.6%	1,172	3,981	5,534	311	23.6%	5.6%	0.8x	12.1x
Solvay SA	117.54	99.2%	12,198	17,153	13,293	2,554	10.8%	19.2%	1.4x	6.9x
Tangshan Sanyou Chemical Industries	1.35	95.8%	2,502	3,708	2,225	369	5.5%	16.6%	1.7x	10.5x
UPL Limited	9.52	88.6%	4,827	5,498	2,113	404	11.7%	19.1%	2.7x	14.1x
Mean		88.7%					4.6%	18.1%	2.4x	11.2x
Median		90.8%					0.3%	17.6%	1.9x	10.5x

Source: Bloomberg, Capital IQ and company filings, as of 12/31/2016

Note: \$ in millions, except share price



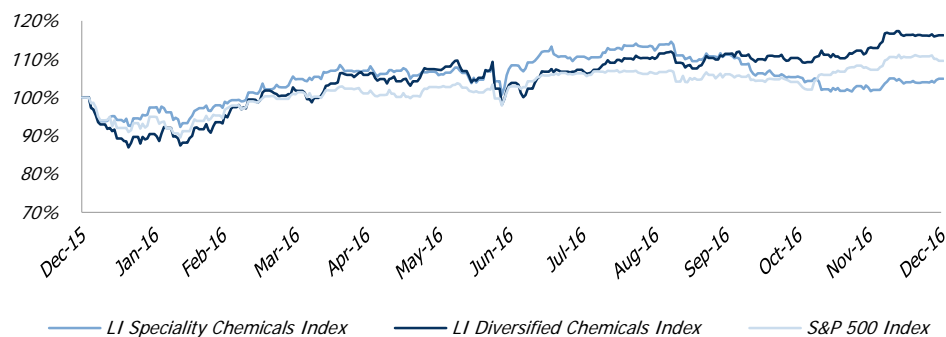
## Lincoln News



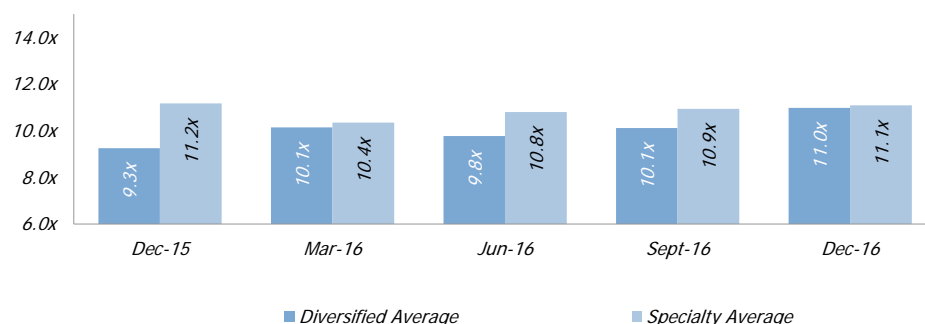
12/27/2016: METabolic EXplorer ("METEX"), the French biological chemistry company, has sold a technology package to Evonik Industries. The package includes METEX's entire technology portfolio for the fermentative production of methionine, as well as patents, essential bacteria strains and the inoLa™ brand. L-methionine is the world's second most widely sold amino acid and is notably used in feed for chickens and piglets. Benjamin Gonzalez, METEX CEO declared: "...Proceeds from the sale will accelerate our ability to further develop and market our other technologies such as PDO, MPG, or new high-value-added molecules".

Lincoln International acted as the exclusive sell-side advisor.

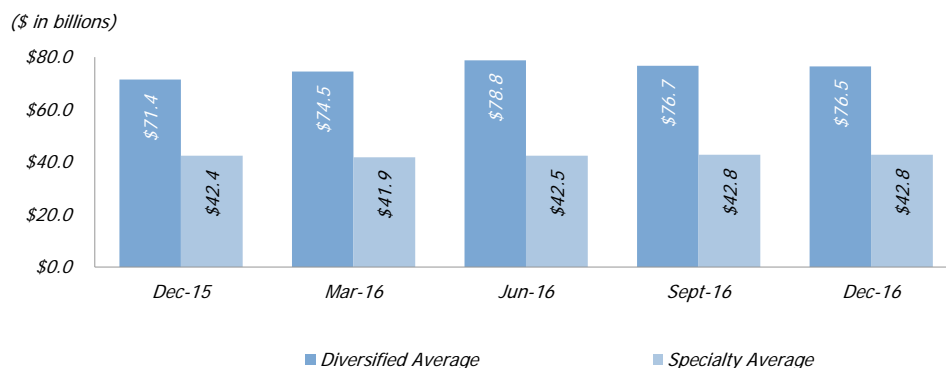
## Chemicals Index – LTM Relative Stock Price Performance



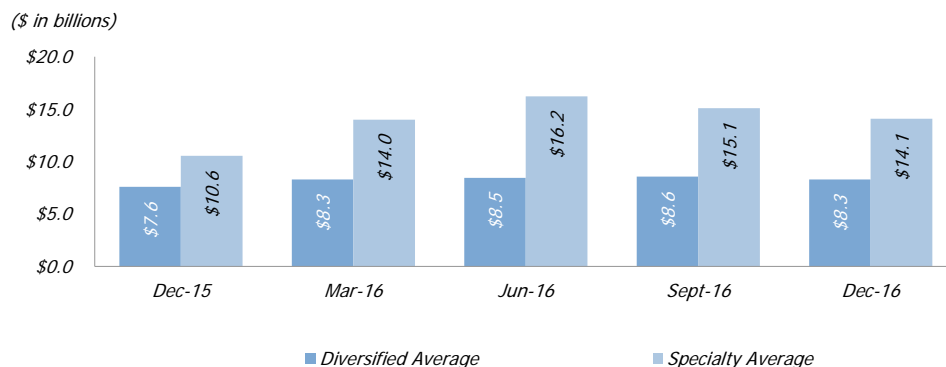
## Chemicals Index – LTM TEV / EBITDA Multiples



## Chemicals Index – LTM Revenue



## Chemicals Index – LTM EBITDA



Source: Bloomberg, Capital IQ and company filings



## M&A Transaction Recap (Selected Announced Transactions)

Date	Target Company	Target Description	Acquiring Company
Dec-16	Companhia Petroquímica de Pernambuco and Companhia Integrada Têxtil de Pernambuco	Manufactures and distributes PET resin and other polymers	Grupo Petrotremex; Dak Americas Exterior
Dec-16	Dunn-Edwards Corporation	Manufactures paints, painting supplies and equipment	Nippon Paint (USA) Inc.
Dec-16	Cadence Chemical	Distributes specialty chemicals	Maroon Group, LLC
Dec-16	Vale Fertilizantes S.A.	Manufactures fertilizers and other animal feed chemicals	The Mosaic Company
Dec-16	Aditivos Mexicanos, S.A. De C.V.	Manufactures lubricants, diesel additives and other chemicals	Afton Chemical de Mexico S.A. de C.V.
Dec-16	Innovia Group (Holding 1) Limited	Manufactures polypropylene and cellulose films	CCL Industries Inc.
Dec-16	Wako Pure Chemical Industries, Ltd.	Manufactures and develops laboratory and specialty chemicals	Fujifilm Corporation
Dec-16	Solvay SA, Neolor Business	Manufactures coloration pigment	Baotao Hongbo TE Technology Co Ltd.
Dec-16	Vinythai Public Company Limited	Manufactures polyvinyl chloride and other biochemicals	Asahi Glass Co., Ltd.
Dec-16	OMG Borchers GmbH	Manufactures additives for colorants, coatings, paints and inks	The Jordan Company, L.P.
Dec-16	Hanita Coatings RCA Ltd.	Manufactures engineered polyester films and laminates	Avery Dennison Corporation
Dec-16	Wuhan Huasen Plastic Ltd.	Manufactures plastic and foam products	Beijing Comens New Materials Co., Ltd.
Dec-16	Tiger-Sul Products Co.	Manufactures sulphur-based fertilizers	Platte River Equity
Dec-16	Kerneos SA	Manufactures calcium aluminate-based specialty products	Imerys SA
Dec-16	Huber Engineered Materials, Silica Business	Manufactures silica for industrial applications	Evonik Industries AG
Dec-16	Fiber Materials, Inc.	Manufactures high temperature composites and carbon products	Edgewater Capital Partners
Dec-16	Solvay Acetow GmbH	Manufactures cellulose acetate and other acetate products	The Blackstone Group
Dec-16	Helios Group Holding S.A.	Manufactures paints and coatings	Kansai Paint Co., Ltd.
Dec-16	OCI Partners LP	Manufactures methanol and ammonia	OCI N.V.
Dec-16	DTI, Inc.	Manufactures fine and specialty chemical products	Edgewater Capital Partners
Dec-16	BASF SE, PET Structural Foam Business	Manufactures structural foam products	Gurit Holding AG
Dec-16	Impact! Chemical Technologies, Inc.	Manufactures specialty chemicals for the oil and gas industry	Hastings Equity Partners, LLC
Nov-16	Lubricor Inc.	Manufactures metalworking coolants, oils and lubricants	Quaker Chemical Corporation
Nov-16	Linde Aktiengesellschaft	Manufactures gases, engineered chemicals and other products	Praxair, Inc.
Nov-16	Guardian Industries Corp.	Manufactures fabricated glass products and other coatings	Koch Industries, Inc.
Nov-16	Eagle Performance Products Inc.	Manufactures flame retardant additives, coatings and polymers	Stahl Holdings BV
Nov-16	BASF SE, Inorganic Specialties Business	Manufactures specialty alcoholates, boranes and alkali metals	Edgewater Capital Partners
Nov-16	Metabolic Explorer S.A., Technology Package	Comprises methionine fermentation process technology	Evonik Industries AG
Nov-16	SAPEC-Agro and Trade Corporation Int'l	Manufactures agrochemical products and specialty fertilizers	Bridgepoint Advisers Limited
Nov-16	Novomer, Inc., Converge Polyols Businesses	Manufactures polyol polymer	Saudi Aramco Technologies
Nov-16	Pinova, Inc.	Manufactures specialty resins and sensory ingredients	Les Derives Resiniques Et Terpeniques SA
Nov-16	SNF FloMin, Inc, Specialty Reagents Business	Manufactures specialty reagents for chemicals mining processes	Clariant AG
Nov-16	ESL ElectroScience, Inc.	Manufactures screen-printable thick-film materials and tapes	Ferro Corporation
Nov-16	DEUTEK S.A.	Manufactures decorative paints, primers and other products	PPG Industries, Inc.
Oct-16	Petro-Canada Lubricants Inc.	Manufactures lubricants, specialty fluids and greases	HollyFrontier Corp.
Oct-16	Evans Enterprises, LLC	Manufactures ammonium chloride fertilizer products	United Suppliers, Inc.
Oct-16	SO.F.TER. SPA	Manufactures thermoplastic elastomers and engineered plastics	Celanese Corporation
Oct-16	Cappelle Pigments NV	Manufactures high grade organic pigments and oxides	Ferro Corporation
Oct-16	Shenyang Sinochem Agrochemicals Co., Ltd.	Manufactures agrochemicals	Sinochem International Corporation
Oct-16	AP Formulators, Inc.	Manufactures car wash detergents and other cleaning chemicals	Niteo Products, LLC
Oct-16	Warren Oil Company, LLC	Manufactures automotive lubricants and specialty chemicals	Trail Creek Investments, LLC
Oct-16	Chromaflo Technologies Corp.	Manufactures chemical and pigment dispersions for coatings	American Securities

## Market Intelligence

**12/07/2016: Solvay**, “The divestment of Acetow is another significant step in Solvay’s transformation towards a multi-specialty chemical group with a higher growth profile”.  
– Jean-Pierre Clamadieu, CEO of Solvay

**11/14/2016: Chemical Week Magazine**, Consolidation remains an on ongoing trend in the chemical distribution industry. The sector remains highly fragmented despite steady deal activity driven by private equity and the emergence of large, publicly traded global players, with more than 10,000 distributors globally, according to industry experts.

**11/04/2016: FlowChem**, the Waller-Texas-based oilfield chemical company backed by Arsenal Capital, has mandated KeyBanc to advise on a potential sale.

**10/27/2016: PolyOne Corp.**, the Avon Lake, Ohio-based provider of specialty polymer formulations, color and additive systems, stated that it has a good pipeline of potential bolt-on acquisitions, according to senior executives. In February 2017, PolyOne acquired Silcotec Inc., a producer of silicone-based color concentrates, and Comptek Kunststoffverarbeitung GmbH, a producer of color concentrates and other specialty resins.

*Source: Mergermarket, Capital IQ, company filings, investor presentations and earnings transcripts*

## Global Industry Groups

Aerospace & Defense  
Automotive & Truck  
Building &  
Infrastructure  
Business Services  
Chemicals  
Consumer  
Distribution  
Electronics  
Energy & Power  
Financial Institutions  
Food & Beverage  
Healthcare  
Industrials  
Packaging  
Technology & Media

## Global Locations

Amsterdam  
Beijing  
Chicago  
Dallas  
Frankfurt  
London  
Los Angeles  
Madrid  
Milan  
Moscow  
Mumbai  
Munich  
New York  
Paris  
São Paulo  
Tokyo  
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Lincoln International specializes in merger & acquisition advisory services, debt advisory services, private capital raising and restructuring advice on mid-market transactions. Lincoln International also provides fairness opinions, valuations and joint venture and partnering advisory services on a wide range of transaction sizes. With seventeen offices in the Americas, Asia and Europe, Lincoln International has strong local knowledge and contacts in key global economies. The firm provides clients with senior-level attention, in-depth industry expertise and integrated resources. By being focused and independent, Lincoln International serves its clients without conflicts of interest. More information about Lincoln can be obtained at [www.lincolninternational.com](http://www.lincolninternational.com).

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