



MAZZONE & ASSOCIATES  
INTEGRITY | EXECUTION

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Transactions

MAZZONE & ASSOCIATES, INC.

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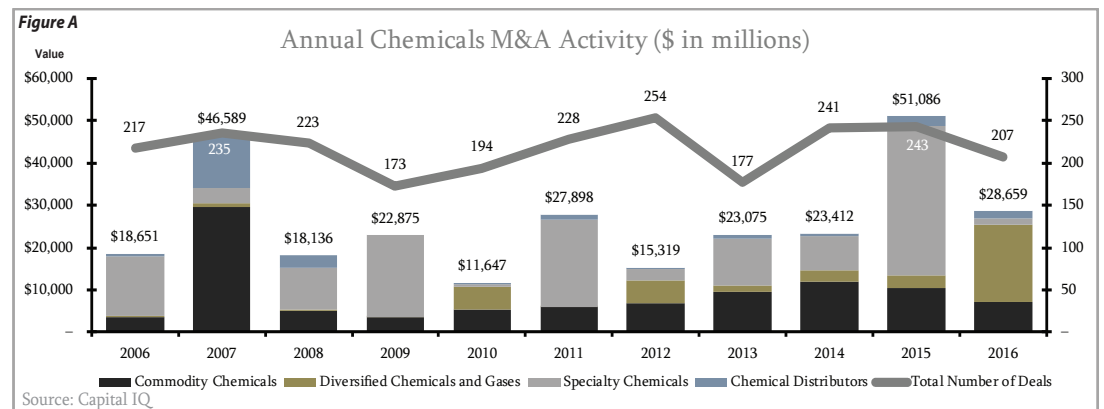
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## Chemicals M&A

Chemical product and service industries in the U.S. completed fewer transactions in 2016 than the prior year. 2015 was a strong year for M&A activity and 2016 was likely slowed due to a strengthening dollar affecting multi-national corporations and the drop-off in oil prices. Assuming the broader economy continues on a path of recovery and oil prices, which have rebounded nicely, remain above the \$45 per barrel range, we expect chemical deal activity and valuations to tick up in 2017.

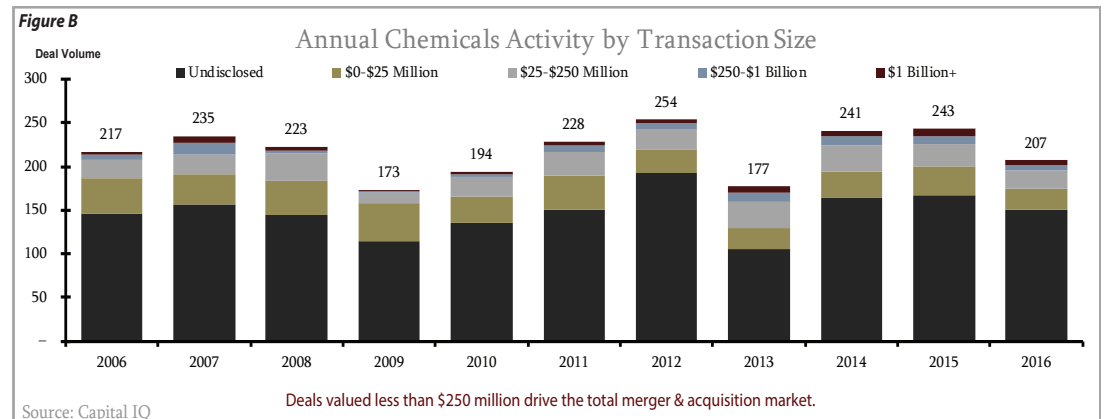
### Transaction Volume (# of deals completed)

Transaction activity for the 4th quarter of 2016 was down by 14.8% compared to the same period in 2015. It is no surprise then that the Chemical Distributors industry, which is a low margin business has seen the largest drop off of the four sub-industry groups that compose this report. Chemicals activity was likely lower due to poor financial performance from companies who were affected by oil prices and the strengthened dollar. Deals in the middle market (less than \$1 billion) dropped off slightly, but remained in the average range of the last five years. M&A activity should remain healthy in the middle market as it is one solution to extreme competition and relatively low margins in the chemicals industry.



### Transaction Value (\$-value of deals completed)

The chemicals market completed \$29 billion of transactions in 2016, higher than every calendar year since 2007, except for 2015, which was a record year. The acquisition of Sigma-Aldrich Corporation for \$17.3 billion in the fourth quarter of 2015 drove up total value significantly. There were eight additional \$1 billion deals in 2015 compared to only five total in 2016. 2017 values will rise substantially as blockbuster deals announced in 2016 should come to a close.



### Valuations

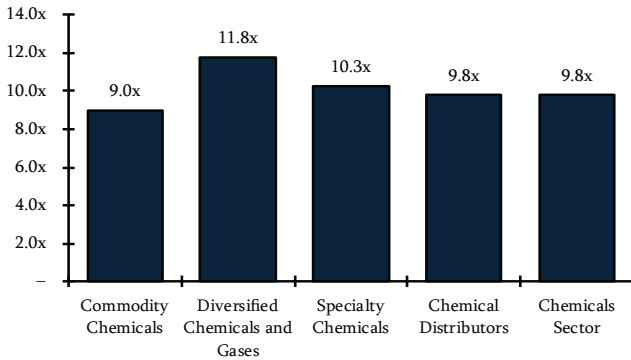
Median EV/EBITDA and EV/Revenue multiples were consistent with historical figures. Chemical companies sold for an average of approximately 9.8 times EBITDA and 1.1 times Revenue in 2016. It will be interesting to see how valuations react to new monetary and fiscal policy efforts in 2017, which will directly affect industrial manufacturers and in turn chemicals companies.



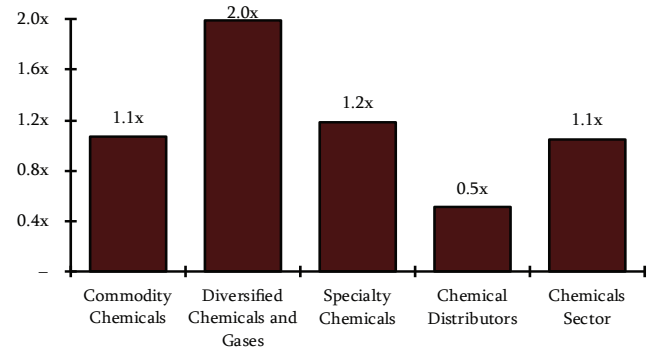
## Chemicals M&A (continued)

Transaction Multiples and Deal Activity by Sub-Industry

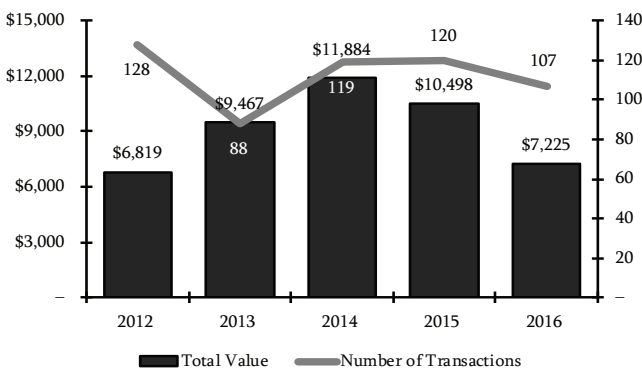
2016 Median EV / LTM EBITDA Multiples



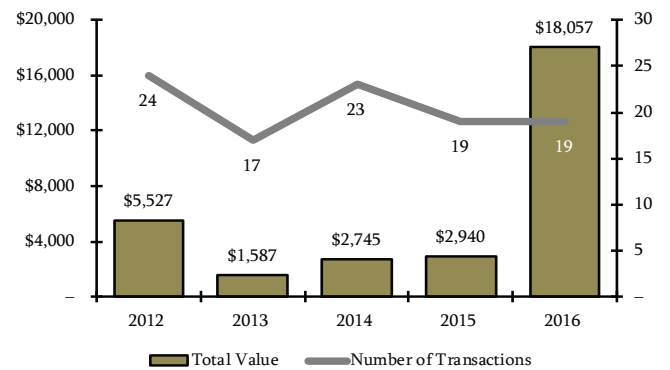
2016 Median EV / LTM Revenue Multiples



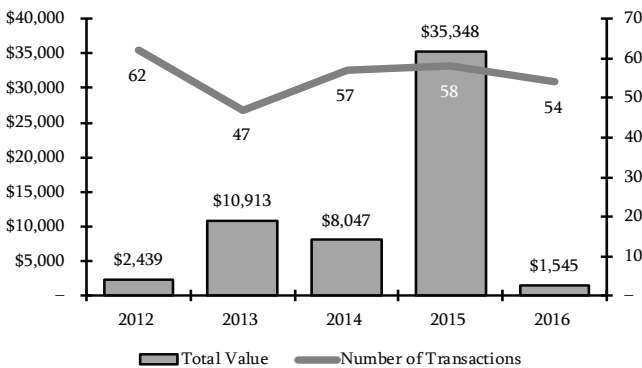
Commodity Chemicals Activity



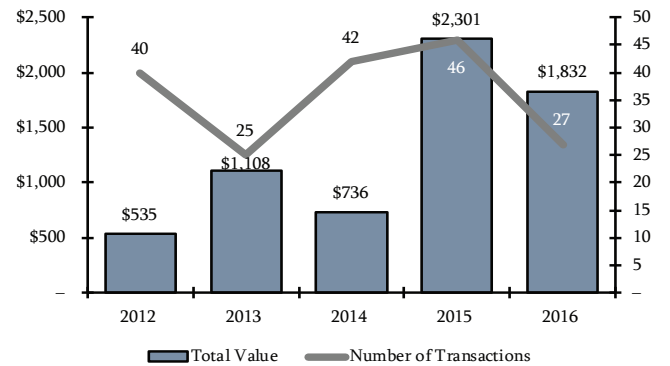
Diversified Chemicals and Gases Activity



Specialty Chemicals Activity



Chemical Distributors Activity



### Summary

2017 looks to be a solid year for chemicals companies as macroeconomic indicators have turned more favorable for the space. Mazzone & Associates looks forward to assisting clients who are in the space and seeking strategic alternatives. In Fall 2016, Maury Bell joined the Mazzone & Associates' team to lead our industrials practice. Maury brings a wealth of experience having run a Middle Market private equity firm and prior to that advising on middle market transactions at regional and bulge bracket investment banks, while all based in Chicago.



## Q4 2016 Chemicals Noteworthy Closed Transactions

Date	Target	Buyers/Investors	Size (\$ in millions)
<b>Commodity Chemicals</b>			
28-Dec	Union Carbide Corporation, Certain Glycol Distillation Assets	Recovery Solutions & Technologies Inc.	\$1.7
27-Dec	WEBA Technology Corp. and 96% of Recovery Solutions & Technologies Inc.	GlyEco, Inc. (OTCPK:GLYE)	5.3
09-Dec	Paragon Films, Inc.	Wind Point Partners	N/D
06-Dec	Viking Plastics, Inc.	Spell Capital Partners LLC	N/D
05-Dec	DTI, Inc.	Edgewater Capital Partners	N/D
01-Dec	Impact! Chemical Technologies, Inc.	Hastings Equity Partners, LLC	N/D
01-Dec	Trostel Ltd.	Preferred Compounding Corporation	N/D
23-Nov	DeWAL Industries, Inc.	Rogers Corporation (NYSE:ROG)	N/D
22-Nov	CoorsTek, Inc.	Trelleborg Sealing Solutions US Inc.	N/D
18-Nov	Eagle Performance Products Inc.	Stahl Holdings BV	N/D
18-Nov	Water & Energy Systems Technology, Inc.	U.S. Water Services, Inc.	N/D
07-Nov	o2si smart solutions, LLC	LGC Limited	N/D
04-Nov	Encore Industries, Inc.	IPL Inc.	35.0
03-Nov	Novomer, Inc., Converge Polyols Businesses	Aramco Services Company, Inc.; Saudi Aramco Technologies	100.0
01-Nov	WL Plastics, Inc.	INEOS Olefins & Polymers USA, LLC	N/D
31-Oct	ESL ElectroScience, Inc.	Ferro Corporation (NYSE:FOE)	75.0
31-Oct	Emerald Performance Materials, LLC, Five specialty chemical units	DyStar LP	245.0
28-Oct	B&B Molders LLC	Theftord Corporation	N/D
28-Oct	Assured Quality Technologies, Ltd. and Automation Liberation Group LLC	Atlas Fibre Company	N/D
10-Oct	Puricore, Inc., Supermarket Retail Business	Chemstar Corporation	13.5
07-Oct	Warren Oil Company, LLC	Trail Creek Investments, LLC	N/D
03-Oct	Travis Oil LLC	American Synthol, Inc.	N/D
03-Oct	3M Company, Temporary protective films business	Pregis Corporation	N/D

Date	Target	Buyers/Investors	Size (\$ in millions)
<b>Diversified Chemicals and Gases</b>			
12-Dec	Tiger-Sul Products Co.	Platte River Equity	N/D
18-Oct	Evans Enterprises, LLC	United Suppliers, Inc.	N/D
03-Oct	American Agritech, LLC	Hawthorne Hydroponics LLC	N/D
09-Dec	Dow AgroSciences LLC, Global Dinitroaniline Herbicide Portfolio	Gowan Company LLC	N/D

Date	Target	Buyers/Investors	Size (\$ in millions)
<b>Specialty Chemicals</b>			
28-Dec	Dritherm International Inc.	Gilsulate International, Inc.	N/D
27-Dec	American Traffic Products, Inc.	Ennis-Flint Inc.	N/D
19-Dec	Amyris, Inc., Neossance Business	Nikko Chemicals Co., Ltd.	20.0
20-Nov	GMM Development Limited	Show a Denko K.K. (TSE:4004)	N/D
02-Nov	Palm Beach Motoring Group, Inc.	Vision Investments, LLC	N/D
03-Oct	SNF FloMin, Inc, Specialty Reagents Business	Clariant AG (SWX:CLN)	N/D
28-Oct	Tip Top Products, Inc.	Sudbury Boat Care Products, Inc.	N/D
07-Nov	Energy & Environmental Services, Inc.	Energy & Environmental Services Inc. (OTCPK:EESE)	N/D
01-Dec	Vacuum Depositing, Inc.	Lintec USA Holding, Inc.	26.0
03-Oct	KEL-TECH, INC.	Clariant AG (SWX:CLN)	N/D
31-Oct	Vertellus Specialties Inc.	Black Diamond Capital Management, L.L.C.; Brightwood Capital Advisors, LLC; Black Rock Capital, Inc., Investment Arm; BlueBay Asset Management LLP; Tpg Special Situations Partners, Llc	453.8

Date	Target	Buyers/Investors	Size (\$ in millions)
<b>Specialty Chemicals</b>			
19-Dec	Midway Industrial Supply Co., Inc.	Ohio Transmission Corporation	N/D
13-Dec	Plastics & Metals Enterprises Inc.	Curbell Plastics, Inc.	N/D
01-Dec	Johansen Farms, LLC	Wilbur-Ellis Company Inc.	N/D
05-Dec	Hart Chemicals, Inc.	Ravago Holdings America, Inc.	N/D
02-Nov	Thornton and Company Inc.	Axxom LLC	3.7
10-Oct	Reliable Distributors, Inc.	PRO Group, Inc.	N/D