



Chemical compounds

**Fourth-quarter 2013 chemicals industry
mergers and acquisitions analysis**

Highlights

To our chemical compounds readers



**Anthony J.
Scamuffa**

A handwritten signature in blue ink that reads "Anthony J. Scamuffa".



**Antoine
Westerman**

A handwritten signature in blue ink that reads "Antoine Westerman".

To help provide further insight on recent mergers and acquisitions (M&A) activity, PwC is pleased to share with you our quarterly analysis of M&A activity in the global chemicals industry.

In *Chemical compounds*, you'll find an overview of deals in the sector during the fourth quarter of 2013.

While activity for 2013 declined overall, the fourth quarter showed marked improvement, with strong sequential growth in both volume and value and several major deal announcements. Year-over-year growth, however, was less robust, with only a moderate increase in deal value.

On a positive note, the sector has largely been a seller's market, with more carve-out activity and average deal value increasing significantly during the fourth quarter, thanks to a substantial uptick in mega deals.

PwC analysts are monitoring several additional trends expected to affect the values and locations of deals in the chemicals sector:

- The United States was a driver of the increased fourth-quarter growth: US-based acquirers were involved in one-third of all deals valued at \$50 million or more in the fourth quarter. The increased activity may be linked to a relatively strong recovery in the United States.
- Specialty chemical targets, particularly attractive given their higher margins and lower cyclicalities, were significant drivers of the improved mega-deal environment in the fourth quarter. These targets were involved in five deals out of six with a combined value of almost \$9.4 billion.
- European deals activity continued to decline as the economic recovery in the region remained muted. In addition to declines in GDP in many nations, unemployment remained near historic highs for much of the year.
- Despite a deceleration in economic activity in China, the deal environment remained relatively robust when compared with that of other nations.

Prospects are bright for M&A activity in the sector in 2014, with expectations of a continued US recovery and an end to the recession in much of Europe. While volumes are likely to remain close to the 10-year average this year, deal values are likely to remain lower than usual. Why? Acquirers seem to be more risk-averse and will probably be less likely to engage in larger, more transformative deals.

So while the number of deals appears to be stable, deal values will likely continue to be smaller than in previous periods.

We're pleased to present our fourth-quarter 2013 analysis as part of our ongoing commitment to providing you with a deeper understanding of M&A trends and prospects in the industry.

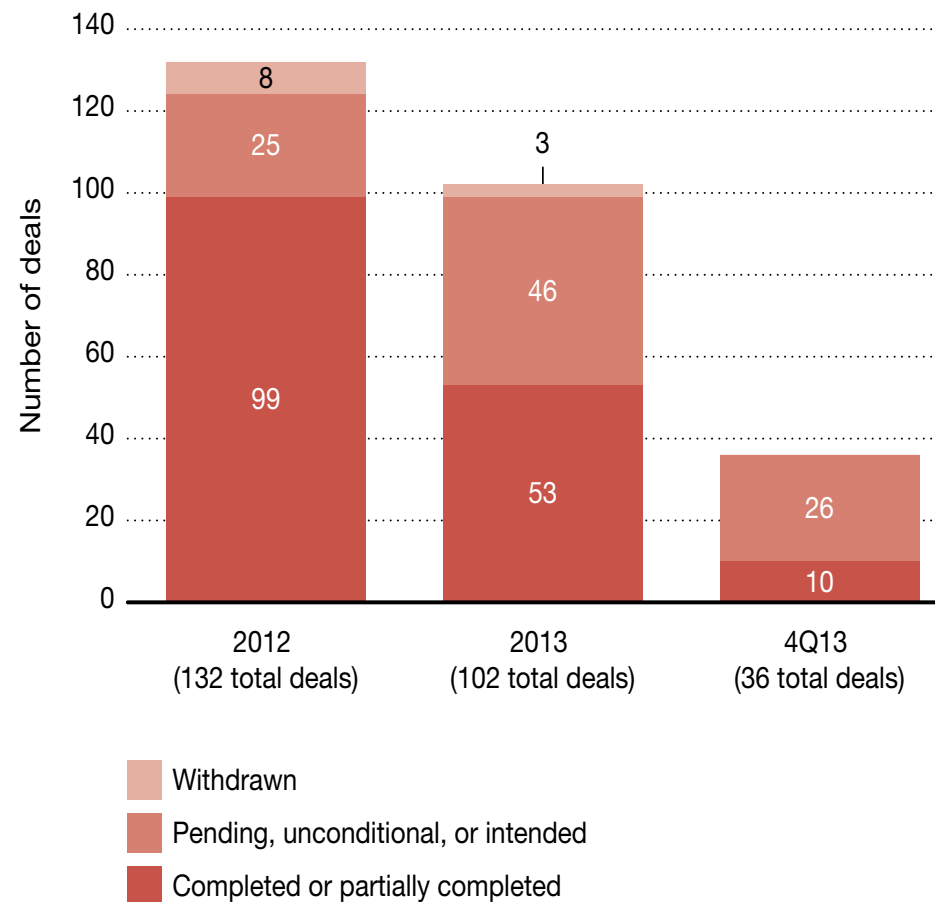
For a deeper dive into the data, we encourage you to launch the data explorer at www.pwc.com/us/chemicalcompounds or contact us to further discuss our insights.

Deal activity

Deal values shows significant gains on increase in mega-deals.

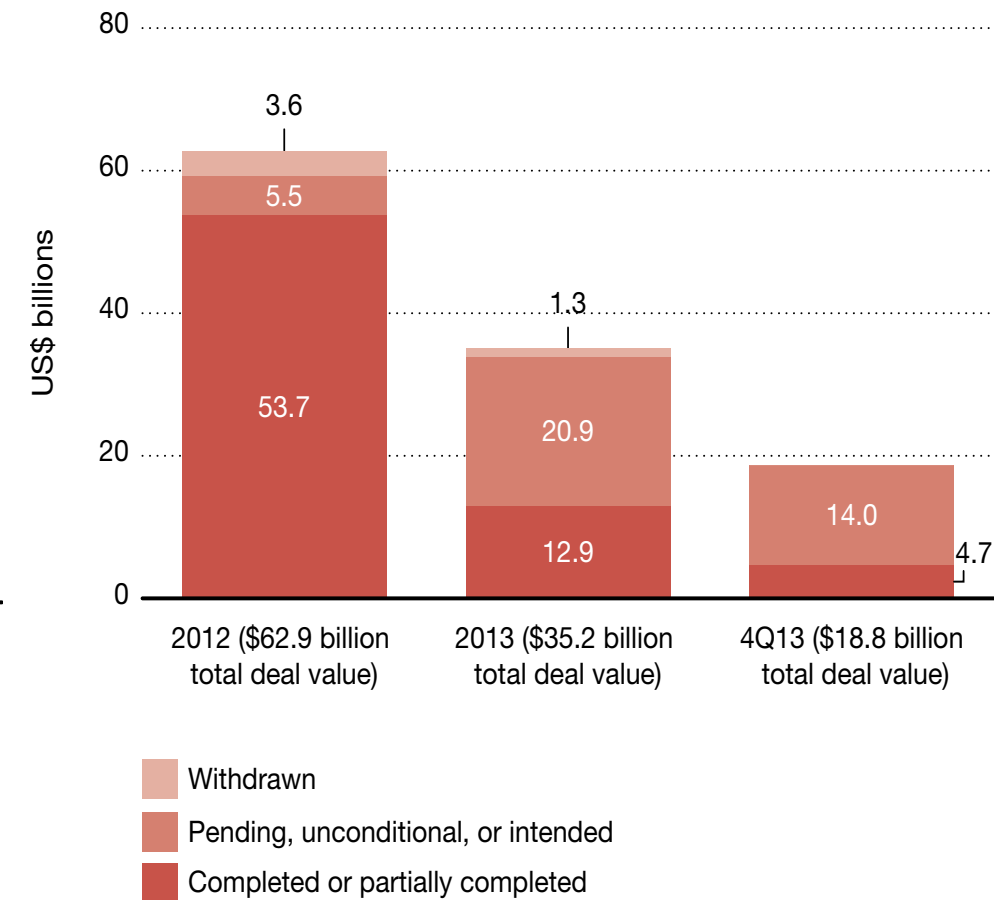
Deal activity by number of deals

Measured by number of deals worth \$50 million or more (2012, 2013, 4Q13)



Deal activity by total deal value

Measured by value of deals worth \$50 million or more (2012, 2013, 4Q13)



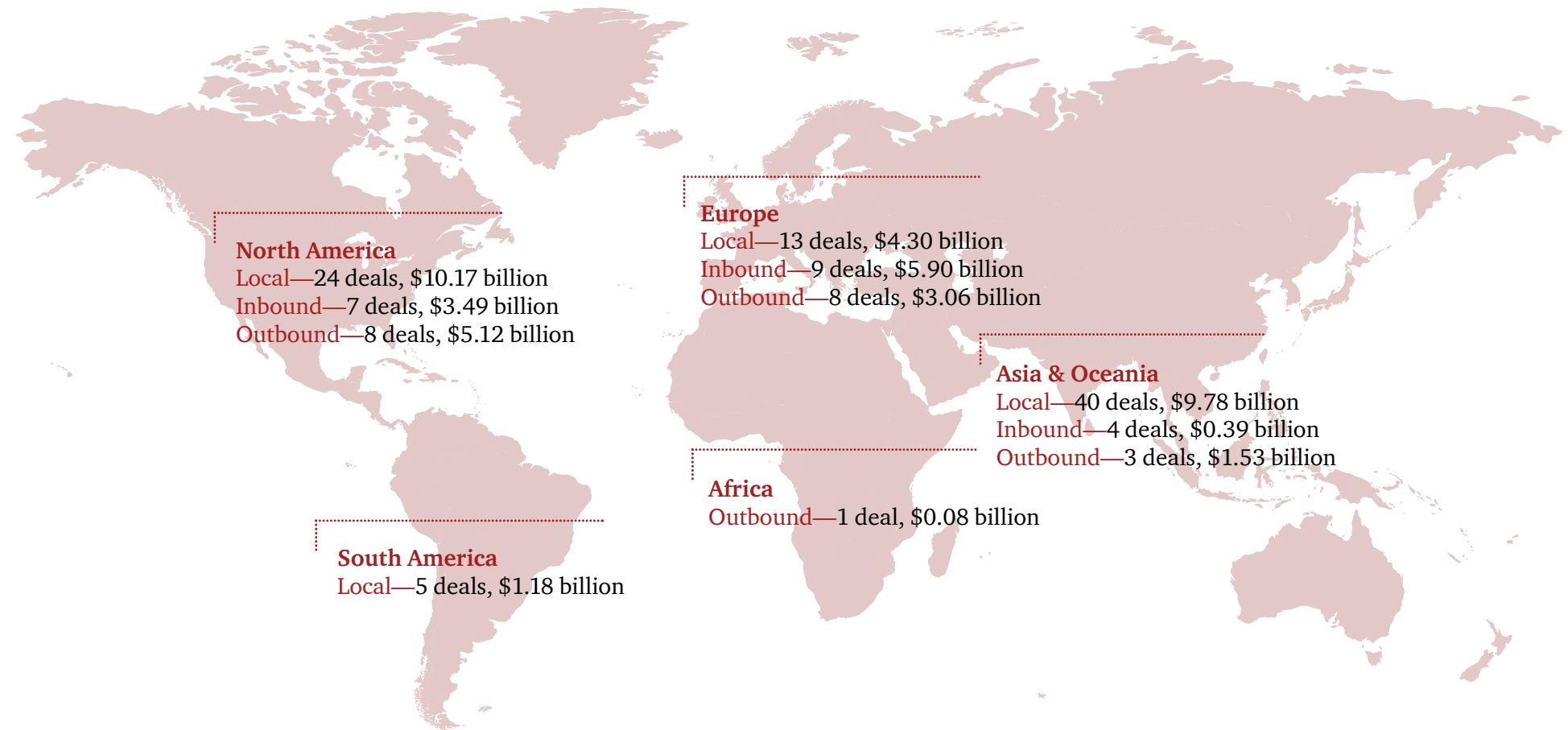
In the fourth quarter, deal volume and value rebounded and advanced to their highest levels of the year. Gains in value were driven in large part by an increase in mega-deals (deals valued at more than \$1 billion). Average deal value increased as well, to \$522 million, the strongest showing since the third quarter of 2012.

On an annual basis, both volume and value continued to decline, a trend seen since 2010. Deal volume decreased almost 23 percent, to 102 deals, while value fell more than 44 percent, to \$35.2 billion. Average value fell as well (to \$345 million), indicative of the decline in larger deals in 2013.

Deal market characteristics

North America leads 2013 deal value while Asia & Oceania leads volume.

Global chemicals M&A activity 2013
Measured by number and value of deals worth \$50 million or more (2013)



North America—involved deals led 2013 deal value with 39 deals valued at almost \$18.8 billion. This activity included a mix of local, inbound, and outbound deals. A large proportion of this value was the result of five mega-deals with a combined value of more than \$7 billion. This is not surprising, given the improvement in economic activity seen in the second half of the year.

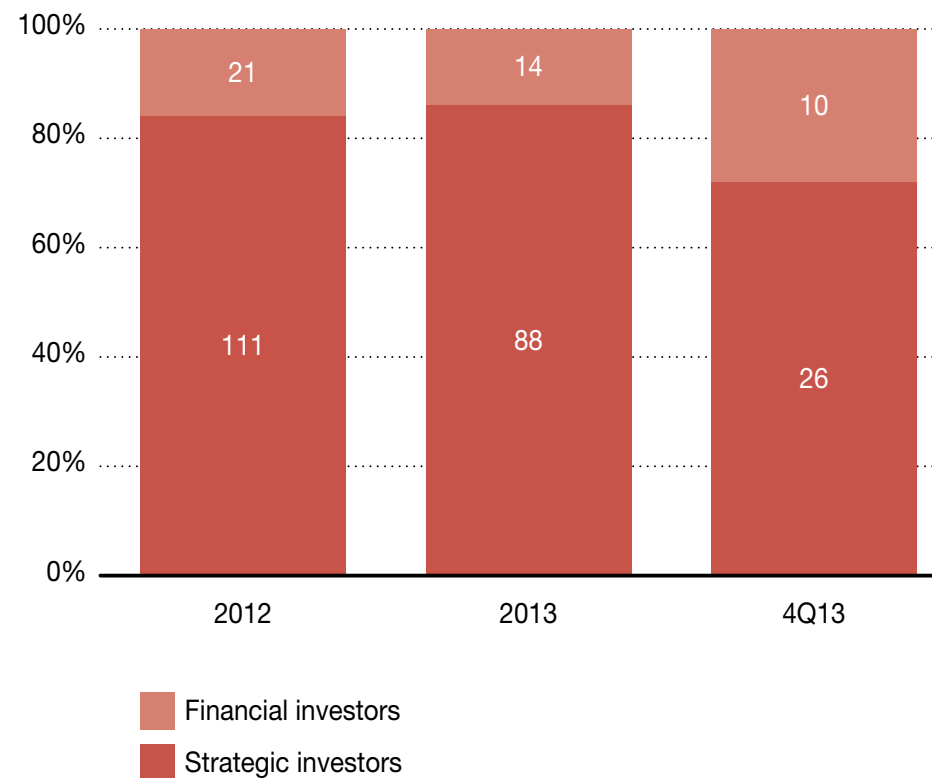
Asia and Oceania led in volume with a total of 47 deals valued at \$11.7 billion. The majority of these deals were local deals, with China continuing to be a significant driver of activity. As China's economy continues to diversify, consolidation allows the industry to improve operational efficiencies among key players. Another driver of increased activity in China is a growing middle class, which drives increased demand in key end-user markets.

While all regions saw significant declines compared to 2012, Europe was hit hardest, with a decline of more than 61 percent in deal value. This decrease in activity is the result of a weakened economy, with much of the region in recession during the past year. This tends to lead to increased investor caution about larger deals; these larger deals tend to drive deal value.

Financial investor activity expands as competition for high-quality assets heats up.

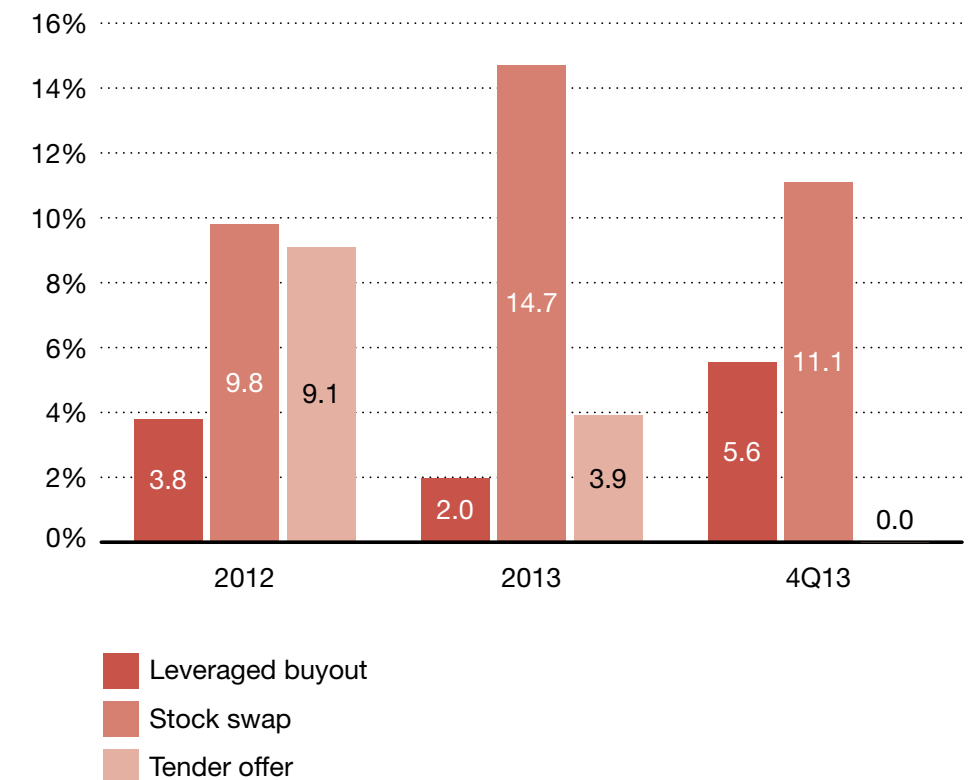
Deals by investor group

Measured by volume of deals worth \$50 million or more (2012, 2013, 4Q13)



Acquisition characteristics

Measured by percentage of deals worth \$50 million or more (2012, 2013, 4Q13)



The proportion of deals involving financial investors decreased slightly in 2013 as a whole; however, the fourth quarter saw significant growth. At the same time, valuations for announced deals increased, indicating that while fewer deals are being announced, increased competition may be driving higher value.

Stock swaps as a means for acquisition financing increased substantially in 2013. This increase was likely driven in part by the general improvement in the equity market over the course of the year. Increasing stock prices make stock swaps attractive to publically traded companies as they allow companies to leverage the appreciation in value as a mechanism for acquisitions. Despite the overall increase in stock swaps in 2013, they declined somewhat in the fourth quarter, likely driven by the increase in activity by financial investors, as these firms rely more on cash and debt for financing.

Large deals

Increase in fourth quarter mega-deals drives gain in deal value.

Mega-deals in 2012 (value of \$1 billion or more)							
Month announced	Target name	Target nation	Acquirer name	Acquirer nation	Status	Value of transaction in US\$ billion	Category
Aug	El du Pont de Nemours & Co-Performance Coatings Unit	United States	The Carlyle Group LP	United States	Completed	4.90	Specialty Chemicals
Jul	Lincare Holdings Inc	United States	Linde AG	Germany	Completed	3.69	Other
Jan	Solutia Inc	United States	Eastman Chemical Co	United States	Completed	3.40	Specialty Chemicals
Nov	Consortio Comex SA de CV	Mexico	Sherwin-Williams Co	United States	Pending	2.25	Specialty Chemicals
Oct	Champion Technologies Inc	United States	Ecolab Inc	United States	Completed	2.21	Commodity Chemicals
Mar	ZOLL Medical Corp	United States	Asahi Kasei Corp	Japan	Completed	2.20	Other
Jul	PPG Industries Inc-Commodity Chemicals Business	United States	Georgia Gulf Corp	United States	Completed	2.08	Specialty Chemicals
Jun	Yunnan Yuntianhua International Chemical Co Ltd	China	Yunnan Yuntianhua Co Ltd {YYTH}	China	Completed	1.88	Specialty Chemicals
Mar	Neo Material Technologies Inc	Canada	Molycorp Inc	United States	Completed	1.29	Commodity Chemicals
Jan	Georgia Gulf Corp	United States	Westlake Chemical Corp	United States	Withdrawn	1.14	Commodity Chemicals
Oct	Cytec Industries Inc-Coating Resins Business	Belgium	Advent International Corp	United States	Completed	1.13	Specialty Chemicals
Feb	New Energy Mining Co Ltd	China	Hebei Veyong Bio-chemical Co Ltd	China	Completed	1.12	Other
Jun	Norit NV	Netherlands	Cabot Corp	United States	Completed	1.10	Other
Dec	Akzo Nobel NV-North American Architectural Coatings Business	United States	PPG Industries Inc	United States	Completed	1.05	Specialty Chemicals
Nov	Houghton International Inc	United States	Gulf Oil Corp Ltd	India	Completed	1.05	Specialty Chemicals
Sep	Becker Underwood Inc	United States	BASF SE	Germany	Completed	1.02	Commodity Chemicals
Sep	Becker Underwood Inc	United States	BASF SE	Germany	Completed	1.02	Commodity Chemicals

Mega-deals in 2013 (value of \$1 billion or more)							
Month announced	Target name	Target nation	Acquirer name	Acquirer nation	Status	Value of transaction in US\$ billion	Category
Dec	AZ Electronic Materials SA	Luxembourg	Merck 15 Allgemeine Beteiligungs-GmbH	Germany	Pending	2.51	Specialty Chemicals
Jun	Sahara Petrochemicals Co	Saudi Arabia	Saudi International Petrochemical Co {Sipchem}	Saudi Arabia	Pending	2.30	Other
Oct	VION Ingredients Nederland BV	Netherlands	Darling International Inc	United States	Pending	2.17	Specialty Chemicals
Oct	MacDermid Inc	United States	Platform Acquisition Holdings Ltd	British Virgin	Completed	1.90	Specialty Chemicals
Dec	Phillips Specialty Products Inc	United States	Berkshire Hathaway Inc	United States	Pending	1.42	Specialty Chemicals
Oct	CF Industries Holdings Inc- Phosphate Mining & Manufacturing Business	United States	The Mosaic Co	United States	Pending	1.40	Fertilizers & Agricultural Chemicals
Oct	Chemlogics Group LLC	United States	Solvay SA	Belgium	Completed	1.35	Specialty Chemicals
Sep	Rockwood Holdings Inc-Titanium Dioxide Pigments & Other Businesses	Germany	Huntsman Corp	United States	Pending	1.33	Commodity Chemicals
Feb	NuCO2 Inc	United States	Praxair Inc	United States	Completed	1.10	Commodity Chemicals

Mega-deals in 4Q13 (value of \$1 billion or more)

Month announced	Target name	Target nation	Acquirer name	Acquirer nation	Status	Value of transaction in US\$ billion	Category
Dec	AZ Electronic Materials SA	Luxembourg	Merck 15 Allgemeine Beteiligungs-GmbH	Germany	Pending	2.51	Specialty Chemicals
Oct	VION Ingredients Nederland BV	Netherlands	Darling International Inc	United States	Pending	2.17	Specialty Chemicals
Oct	MacDermid Inc	United States	Platform Acquisition Holdings Ltd	British Virgin	Completed	1.90	Specialty Chemicals
Dec	Phillips Specialty Products Inc	United States	Berkshire Hathaway Inc	United States	Pending	1.42	Specialty Chemicals
Oct	CF Industries Holdings Inc—Phosphate Mining & Manufacturing Business	United States	The Mosaic Co	United States	Pending	1.40	Fertilizers & Agricultural Chemicals
Oct	Chemlogics Group LLC	United States	Solvay SA	Belgium	Completed	1.35	Specialty Chemicals

In line with the general decline in deal activity, mega-deal volume and value fell as well, compared to 2012. Mega-deal volume declined from 16 deals to nine, while deal value fell more than 50 percent to just under \$15.5 billion.

Six of the year's deals were announced in the fourth quarter, and five of these involved specialty chemical players. Specialty players traditionally have better margins than commodity players, so this may be indicative of acquirers' efforts to improve bottom lines in the face of an improving economic environment. On a regional basis, the United States was well represented, with four targets and three acquirers.

Methodology

Chemical Compounds is an analysis of deals in the global chemicals industry. Deal information was sourced from Thomson Financial using the Thomson-defined industry sector of Chemicals and Allied Products for targets or acquirers. This analysis includes all mergers and acquisitions for disclosed or undisclosed values, leveraged buyouts, privatizations, minority stake purchases and acquisitions of remaining interest announced between January 1, 2012, and December 31, 2013, with a deal status of completed, intended, partially completed, pending, pending regulatory approval, seeking buyer, seeking buyer withdrawn, unconditional (i.e., initial conditions set forth by the acquirer have been met but deal has not been completed) or withdrawn. Geographic categories generally correspond to continents with exceptions for Australia (included in the Asia Pacific category), Europe (divided into Western and Eastern categories based upon UN definitions) and the Middle East (included in Africa/Undisclosed). Where China is referenced in this analysis, it includes both the Peoples Republic of China and Hong Kong, unless otherwise indicated. Where the number of deals is referenced in this analysis it means the number of all deals with disclosed or undisclosed values, unless otherwise noted.

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