

Market Update

Global Chemicals Group

Q4 2015



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Sources:

Bloomberg; Capital IQ; Mergermarket; FactSet MergerStat; Federal Reserve; analyst reports; press releases; public filings

Global Chemicals M&A Outlook for 2016

The global chemicals industry saw slowing momentum in Q4 2015 due to uncertain economic conditions, flat manufacturing activity, adverse foreign currency effects and declining prices in oil and commodities, in spite of robust automotive sales. Weak Eurozone markets, tepid growth in the U.S. and a slowing Chinese economy proved to be major headwinds for the industry. However, major price declines in oil reduced feedstock costs for certain makers of petrochemicals and plastics, leading to higher than expected margins for those producers.

Chemicals companies should expect tepid growth this year, which may continue to drive interest by management teams in compelling inorganic growth opportunities. Chemicals companies will continue to confront challenging operating environments in 2016, with global commodity prices declining across the agriculture, metal and energy sectors. Bio-based chemicals, in particular, will have a harder time competing against petro-based substitutes given the significant declines in oil-derivative feedstock. The manufacturing sector, a key driver of chemicals demand, has also been constrained in many economies around the world. The OECD, IMF and World Bank all recently lowered their global growth forecasts for 2016.

The chemicals industry saw record levels of M&A activity in 2014. In the following year, although the number of deals was relatively flat versus 2014, deals in the space exceeded the prior six-year average by more than 6%. Deal value globally in 2015 also broke records, driven by 16 announced deals valued at over \$1 billion, including the proposed \$62.4 billion mega-deal between Dow Chemical and DuPont.

In 2015, given the difficult operating environment, chemicals companies pursued M&A and divestitures to (i) build out their core strengths, (ii) drive revenue growth, and (iii) realign their portfolios. The latter was done to rationalize business operations and achieve higher margins, while reducing complexity and making their businesses

easier for investors to analyze. With cheap debt financing, companies saw acquisitions as a clear strategy to deliver growth.

With debt markets now becoming more illiquid, particularly for companies with low credit ratings, the question is whether the M&A bonanza experienced in 2014-2015 will persist. Although much of the same logic for strategic M&A still applies, chemicals executives may be reluctant to pursue M&A now given the ongoing upheaval in the debt and equity capital markets due to global economic uncertainty. We have already seen that the pricing on debt instruments has markedly increased for larger deals. The price fluctuations and pricier debt may create enticing buying opportunities for cash-flush strategic entities and financial sponsors keen to snap up choice assets, but it is unlikely that 2016 will see the momentum from 2014-2015 continue.

In addition to fluctuating prices and dislocations in capital markets, other themes for 2016 may include the potential for further consolidation in the agricultural chemicals segment following the mega-merger between Dow Chemical and DuPont, as well as new opportunities for acquisitions of cutting-edge additive manufacturing technologies.

Additive manufacturing has been in the works for decades, but it is just now reaching a state of sophistication that may have a transformative impact on the manufacturing sector in the coming years. This process creates products through the successive layering of materials, rather than by the method of subtraction through machining or other types of processing. The advantage of additive manufacturing is that it has the potential to greatly reduce the average cost per unit produced. As the layers for many of these products will consist of metallic powders, polymers, plasticizers, resins and other chemicals, this new manufacturing technique will likely be quite disruptive to the industrial space and will be of increasing importance to the chemicals sector.



Richard O'Reilly, CFA, is a chemicals analyst who writes for Revere Associates. He previously served as Associate Director at S&P in its U.S. Equity Research – Chemicals Division.

Notes:

This section reflects the views of Richard O'Reilly, CFA, who writes for Revere Associates. Mr. O'Reilly is not employed or compensated by Lincoln International, and the views set forth in this section are those of Mr. O'Reilly and should not be assumed to reflect the views of Lincoln International.

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Chemicals Industry Momentum Slowed During Q4 2015

Guest Columnist

Based on macroeconomic and industry reports released in early 2016, we believe business conditions for the U.S. chemicals industry became more challenging during Q4 2015. The growth in domestic manufacturing appears to have come to a temporary halt during the final two months of 2015, and headwinds such as the stronger U.S. dollar further hurt company results. Although the overall domestic economy continued to advance during the quarter, real GDP growth was probably lower than the 2.0% annualized rate realized in Q3. U.S. construction and automotive markets remained healthy, helping chemicals companies with exposure to those markets. The automotive industry in 2015 had record U.S. retail vehicle sales, and automakers expect even better sales in 2016.

But, we expect the industry to report mixed results for 2015 and companies to continue to provide cautious guidance for 2016. For major chemicals companies, Q4 analyst consensus EPS estimates were below those for the comparable 2014 period. Although plastics and petrochemicals saw price declines in 2015, Q4 margins for makers of plastics and oil derivatives were generally helped by lower prices for the input materials versus the year earlier period. Fertilizer and pesticide makers faced challenging markets due to low crop prices. Earnings per share comparisons will be boosted at companies that undertook major share buyback programs.

Headwinds, such as slower growth in major foreign economies (e.g., China), weakness within energy-related markets resulting from the oil price decline and the strengthening of the U.S. dollar, had greater negative impacts than had been anticipated earlier in 2015. A number of companies lowered EPS expectations following Q3, in part due to slower than expected business trends and worsening currency impacts. Several companies warned investors of reduced earnings for the quarter, including both Huntsman and Chemours Co. due in large part to declines in prices for titanium pigment in the quarter. We believe the stronger U.S. dollar will remain an unfavorable headwind for earnings through 1H 2016 at the least.

The American Chemistry Council (ACC) in late December reported that its Chemicals Activity Barometer (CAB), a leading macroeconomic indicator based on chemicals industry data, on a three-month moving average basis, rose

slightly in December for the second consecutive month. While the index remained above the year earlier 2014 level, the ACC noted it had a marked deceleration in gains since Q2 2015. The ACC said that the index in December was signaling slow U.S. business activity into 1H 2016.

We believe that the global manufacturing sector, the most important market for the chemicals industry, remained in a low-growth phase during Q4, according to the monthly worldwide PMI business surveys. The U.S. manufacturing sector appeared to have lost its forward momentum during Q4 and may have been at its weakest pace since the Great Recession. According to the Institute for Supply Management's monthly reports for manufacturing activity, U.S. manufacturing activity slowed during Q4, with the PMI index in December at the lowest reading since June 2009, and at a level that indicated contraction for the sector for the second consecutive month. The Federal Reserve Board reported that the sector eased slightly in each of the final two months of 2015.

The Q4 ISM reports indicated that while the U.S. chemical products industry contracted in November, it reported growth for each of the other two months of the quarter. Railcar loadings suggest shipment comparisons grew at best only modestly in Q4 for the chemicals industry. According to the Association of American Railroads, U.S. chemicals railroad carloads for Q4 edged up about 0.3% from the year earlier period, including a 0.7% rise for December. For all of 2015, rail shipments increased only 0.4%, a slower rate than the 1.2% increase for 2014. Railroads carry about 30% of industry shipments.

Selling prices during Q4 varied by product lines, but overall were relatively stable compared with declining trends earlier in 2015. Chemicals prices had declined following the initial drops in oil and related feedstock prices in 2H 2014. The monthly averages of a global index published by Platts of seven widely used petrochemicals showed a degree of stabilization in late 2015 despite further significant declines in energy prices. The index in December was up about 1.4% from October. September 2015 levels were the lowest for the index since 2009. The price index in December was down 28% from its high for 2015 in June and down 45% from its prior peak in July 2014.

It was a busy quarter of deal-making for the chemicals sector in Q4 2015. Globally, there were 161 chemicals M&A transactions announced or closed in Q4 2015.

In terms of deals with disclosed values, there were 8 large-cap transactions, defined as those over \$500 million in TEV. Selected notable large-cap transactions announced or closed this past quarter are shown on the right.

There were 42 chemicals deals with disclosed values in the middle market, defined as transactions under \$500 million in TEV. Selected middle-market chemicals transactions that were announced or closed this past quarter are shown on the right.

Sources:

Bloomberg; Capital IQ; Mergermarket; FactSet MergerStat; Federal Reserve; analyst reports; press releases; public filings

Q4 2015 Market Commentary and Selected Transactions

Large-Cap Transactions

- In October 2015, **Newell Rubbermaid (NYSE: NWL)** entered into a definitive agreement to acquire **Elmer's Products, Inc.** from **Berwind Corporation** for \$600 million. Elmer's Products, Inc. manufactures consumer adhesives. The deal closed on October 22, 2015.
- In October 2015, **EQUATE Petrochemical Company (K.S.C.C)** signed a non-binding agreement to acquire **MEGlobal B.V.** from **The Dow Chemical Company (NYSE: DOW)** and **Petrochemical Industries Company** for \$3.2 billion. MEGlobal B.V. develops, manufactures, supplies and markets ethylene glycol for customers worldwide. The deal closed on December 23, 2015.
- On November 7, 2015, **L'Air Liquide SA (ENXTPA: AI)** entered into an agreement to acquire **Airgas, Inc. (NYSE: ARG)** from a group of investors for approximately \$10.6 billion in cash, representing a 13.7x LTM EBITDA and 2.5x revenue multiple. Airgas, Inc., together with its subsidiaries, supplies industrial, medical, specialty gases and welding equipment.
- On December 11, 2015, **The Dow Chemical Company (NYSE: DOW)** entered into a definitive agreement to acquire **E.I. du Pont de Nemours and Company (NYSE: DD)** in a mega-merger of equals for \$62.4 billion in stock, representing a 12.5x LTM EBITDA and 2.1x revenue multiple. E.I. du Pont de Nemours and Company operates as a diversified science and technology-based company.

Middle-Market Transactions

- On November 30, 2015, **China Dalian International Cooperation (SZSE: 000881)** agreed to acquire **CGN Advanced Materials Group** for CNY 1.9 billion in stock. CGN Advanced Materials Group develops, manufactures and sells polymer materials in China.
- On December 1, 2015, **Croda International (LSE: CRDA)** agreed to acquire **INCOTEC Group B.V.** for 160 million euros, representing a 2.2x revenue multiple. INCOTEC Group B.V. provides seed coating technologies to advance seed performances and yields.
- On December 4, 2015, **Zhejiang Jiangshan Chemical Co. Ltd. (SZSE: 002061)** agreed to acquire **Ningbo Zhetie Dafeng Chemical Co., Ltd.** from **Zhejiang Railway Investment Group Co., Ltd.** for CNY 980 million in cash and stock. Ningbo Zhetie Dafeng Chemical Co., Ltd. produces and distributes engineering plastic polycarbonate products.
- On December 14, 2015, **Frutarom Industries Ltd. (TASE: FRUT)** signed an agreement to acquire **SaGeMa Kompostierungs GmbH** and **WIBERG GmbH** for approximately \$130 million. SaGeMa Kompostierungs GmbH produces substrates, topsoil and compost products. WIBERG GmbH produces spices, herbs, and food additives.
- On December 24, 2015, **Shenzhen CR Yuanta Asset Management Co., Ltd.** won a bid to acquire a 50% stake in **Shanxi Huaxing Alumina Co., Ltd.** from **Aluminum Corporation of China Limited (SEHK: 2600)** for CNY 2.4 billion in cash. Shanxi Huaxing Alumina Co., Ltd. manufactures alumina products.

From the beginning of Q4 2014 to the end of Q4 2015, the LI Specialty Chemicals index *outperformed* the S&P 500 by ~3%, whereas the LI Diversified Chemicals index *underperformed* the S&P 500 by ~10%. The average TEV / EBITDA multiple for large-cap specialty chemicals firms increased from the prior quarter to 12.7x in Q4 2015. The average TEV / EBITDA multiple for small-cap specialty chemicals firms increased from the previous quarter to 11.3x. The average TEV / EBITDA multiple for diversified chemicals companies went up to 9.2x from the prior quarter.

Notes:

(1) LI Specialty Chemicals Index includes ALB, APD, ARG, ASH, CBM, CBT, CE, ECL, FOE, FUL, GRA, IFF, NEU, POL, PPG, RPM, SHLM, SXT and VAL

(2) LI Diversified Chemicals Index includes AKZA, BAS, DD, DOW, EMN, FMC, HUN, MMM, MON and OLN

(3) Large-cap group includes companies in the LI Specialty Chemicals Index with \$5.0 billion or greater in market capitalization

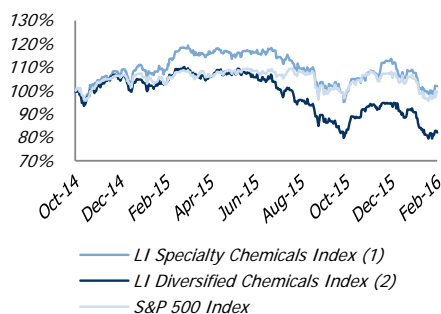
(4) Small-cap group includes companies in the LI Specialty Chemicals Index with less than \$5.0 billion in market capitalization

(5) LI Chemicals Index includes both the LI Specialty Chemicals and LI Diversified Chemicals indices; Lincoln estimates provided for chemicals companies in the index that have not yet published FY 2015 results

Q4 2015 Key Chemicals Market Statistics

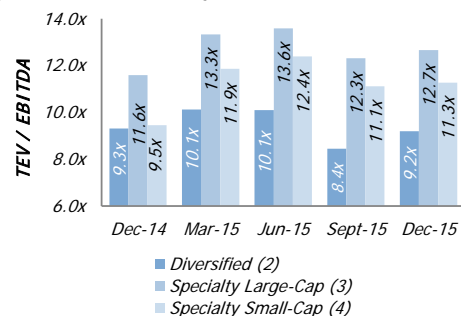
Chemicals Public Market Performance

(October 2014 – February 2016)



TEV / EBITDA Multiples

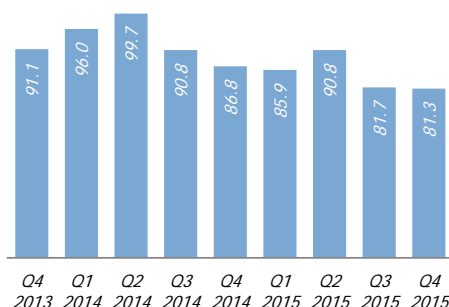
(Q4 2014 - Q4 2015)



LI Chemicals Index - Revenue ⁽⁵⁾

(Q4 2013 – Q4 2015)

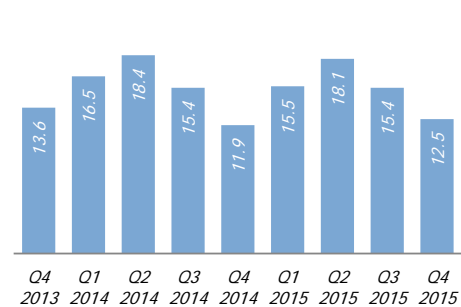
(\$ in billions)



LI Chemicals Index - EBITDA ⁽⁵⁾

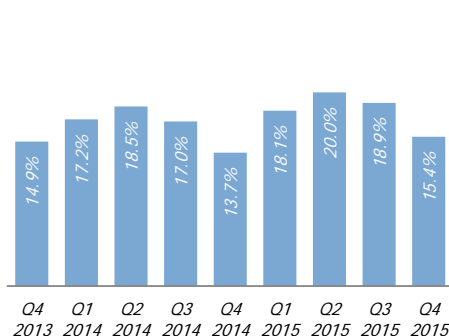
(Q4 2013 – Q4 2015)

(\$ in billions)



LI Chemicals Index - EBITDA Margins ⁽⁵⁾

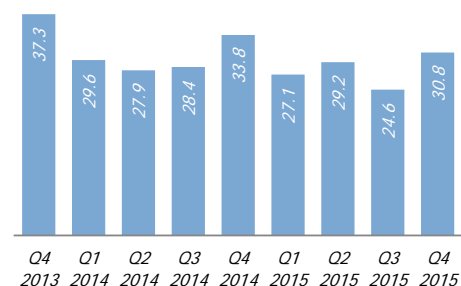
(Q4 2013 – Q4 2015)



LI Chemicals Index - Cash on Balance Sheet ⁽⁵⁾

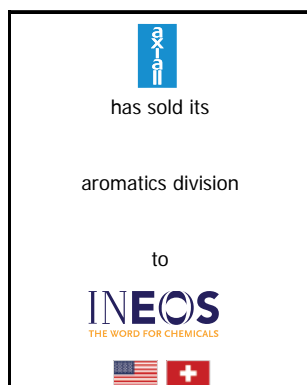
(Q4 2013 – Q4 2015)

(\$ in billions)



Sources:

Bloomberg; Capital IQ; public filings; Lincoln intelligence



Highlighted Lincoln International Chemicals Transaction

Lincoln International Represents Axiall Corporation (NYSE: AXLL) in the Divestiture of its Aromatics Business to Ineos Group Limited

Lincoln International LLC ("Lincoln International"), a leading global middle-market investment bank, represented Axiall Corporation ("Axiall" or the "Company") in the divestiture of its Aromatics division and Pasadena, Texas manufacturing facility to INEOS Americas LLC for approximately \$62.9 million. Axiall kept its phenol facility located in Plaquemine, Louisiana, which is integrated with other Axiall facilities at Plaquemine, along with the associated net working capital. The Company will complete a safe wind-down of that facility at a later point.

The Pasadena manufacturing facility, which began operations in 1979, manufactures cumene, which is used in the production of phenol, acetone and alpha-methylstyrene, all of which are building blocks for a range of everyday products, including plywood and oriented strand board, engineered plastics, pharmaceuticals, paints, acrylics and varnishes.

Lincoln International acted as the exclusive financial advisor to Axiall Corporation in this transaction, working closely with Axiall's senior management team throughout the

sale process, including providing comprehensive advisory expertise and managing the preparatory, marketing, due diligence and negotiation phases of the transaction.

"Lincoln International executed a well-structured and professional sale process involving a global group of potential strategic and financial acquirers and provided disciplined execution throughout a complex transaction," said Gary Denning, Managing Director of Corporate Development and M&A at Axiall Corporation. He added, "Lincoln International's guidance and thoughtful advice were invaluable in securing a successful transaction."

About Axiall Corporation

Axiall Corporation (NYSE: AXLL) produces and markets chemicals and building products in the U.S. and internationally. Axiall was founded in 1984 and is headquartered in Atlanta, Georgia. More information about Axiall can be obtained at www.axiall.com.

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About Lincoln International

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 pension advisory services on a wide range of transaction sizes. With sixteen 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 International can be obtained at www.lincolninternational.com.

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