Deal Capsule

Transactions in Chemicals & Pharmaceuticals

November 2014

KPMG
cutting through complexity

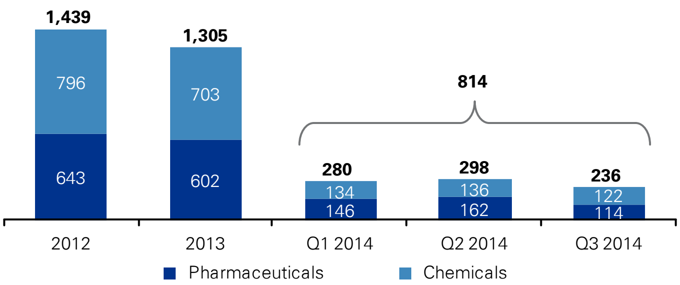
"The announcement of large deals continues unabated, although there is increasing uncertainty on the likelihood of deals completing."

Vir Lakshman
Head of Chemicals & Pharmaceuticals, KPMG Germany

HIGHLIGHTS

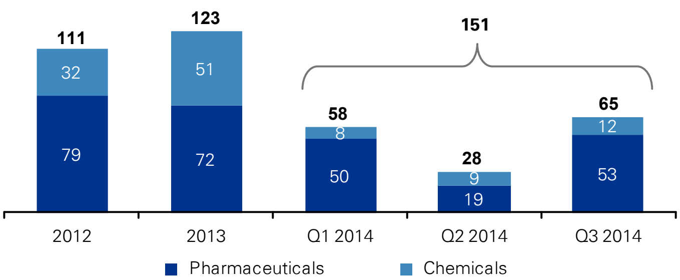
- M&A in the pharmaceutical sector continued to rally in Q3 2014 with the value of completed deals at $53 billion, almost triple Q2's value.
- Deal completions for the pharmaceutical sector continued to lag behind with only one significant deal closing in Q3 2014 (Actavis/Forest). In terms of announced deals, yet another mega deal fell by the wayside in Q3, as AbbVie Inc. withdrew its offer for Shire PLC.
- In the chemical sector, the combined top 10 completed deals were valued at $11.2 billion. The aggregated deal value of the top 10 announced deals, $37 billion, more than doubled compared to the previous quarter.
- US continued to be the most active country in both sectors. In the pharmaceutical sector, the US was involved in each of the top 10 closed pharmaceutical transactions.
- Financial investors engaged in 16% of the pharmaceutical and 25% of the chemical deals in Q3 2014.
- KPMG's Deal Thermometer indicates that the environment for M&A activity will remain 'Hot' in pharmaceuticals, while a slight shifting in chemical valuations suggests a more 'Moderate' M&A environment in chemicals.

FIGURE 01 Number of deals by sector 2012 – Q3 2014



Sources: Thomson One, KPMG Analysis

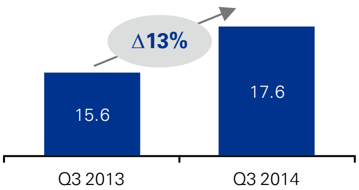
FIGURE 02 Deal value by sector 2012 – Q3 2014 – $ billion



Sources: Thomson One, KPMG Analysis

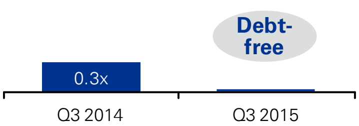
DEAL THERMOMETER – Q3 2014

Deal Appetite – Pharmaceuticals
(Forward P/E Ratio)

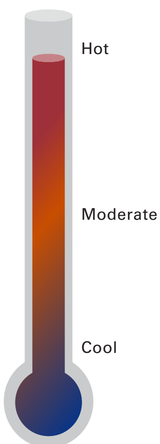


Sources: Capital IQ, KPMG Analysis

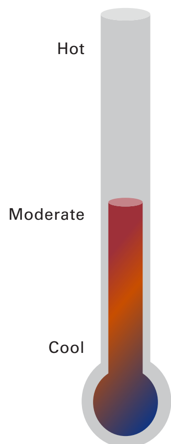
Deal Capacity – Pharmaceuticals
(Net Debt/EBITDA)



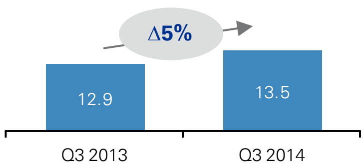
Sources: Capital IQ, KPMG Analysis



- KPMG's Deal Thermometer signals the environment for M&A deals in chemicals & pharmaceuticals.
- It combines the appetite for deals (changes in forward P/E ratios) with the capacity to fund deals (changes in Net Debt/ EBITDA multiples).
- 'Hot' signifies an environment conducive to deal-making.



Deal Appetite – Chemicals
(Forward P/E Ratio)



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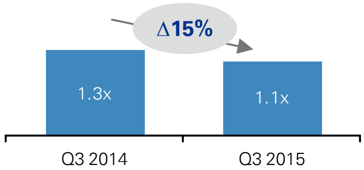
Deal Capacity – Chemicals
(Net Debt/EBITDA)

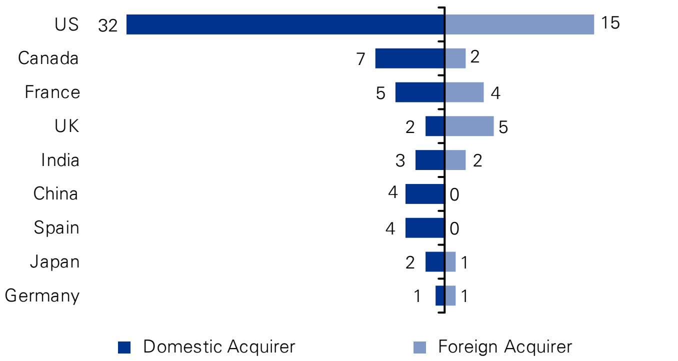


Sources: Capital IQ, KPMG Analysis

Pharmaceuticals

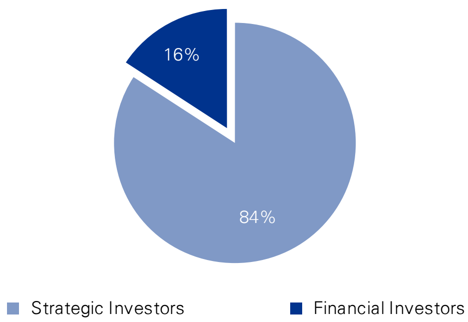
In Q3 2014, the M&A market remained robust with higher completed deal values as compared with Q2 2014. The Actavis/Forest Laboratories deal was the primary contributor to the large deal value, accounting for 60% of top 10 deals value.

FIGURE 03 Selected countries in pharmaceutical M&A in Q3 2014



Sources: Thomson One, KPMG Analysis

FIGURE 04 Number of pharmaceutical deals by investor in Q3 2014



Sources: Thomson One, KPMG Analysis

DEAL FOCUS AREAS

The US continues to be the most active country for pharmaceutical M&A, with US companies involved in each of the top 10 completed deals during Q3 2014. Deal drivers include portfolio optimization, geographic expansion and generics consolidation.

Mallinckrodt PLC completed the acquisition of Questcor Pharmaceuticals Inc. to strengthen its specialty pharmaceuticals business, while reducing the focus on medical imaging. Questcor's H.P. Acthar Gel, which generated sales of $761 million in 2013, broadens Mallinckrodt's range of branded and generic specialty medicines. H.P. Acthar Gel is an FDA approved injectable drug for the treatment of 19 indications in four key, hard-to-treat areas, namely multiple sclerosis, ideopathic types of nephrotic syndrome, infantile spasms and rheumatology related conditions.

At $8.3 billion, Roche Holding AG's acquisition of InterMune Inc. is the largest deal announced by the company since 2009. The transaction supports Roche's respiratory portfolio due to the addition of Pirfenidone. This drug for treatment of idiopathic pulmonary fibrosis (IPF), a rare lung disease with no approved medicines in the US, is under regulatory review in the US. It is approved in Canada and Europe. More than 50% of the deal price is contingent based on the sales of the drug.

The $2.9 billion acquisition of CFR Pharmaceutical S.A. by Abbott Laboratories strengthened its geographic presence in Latin America.

The announcement of Mylan Inc.'s $5.3 billion acquisition of Abbott Labboratories' generics business is further indicative of the consolidation underway in this segment.

Actavis boosts specialty drugs portfolio

In July 2014, Actavis PLC completed the acquisition of US-based Forest Laboratories Inc. in a combined equity and cash transaction for $28 billion. The transaction supports expansion of Actavis' North American specialty brand portfolio, the US specialty sales and marketing network and expansion of the specialty pharmaceutical R&D pipeline with over 25 additional products in various stages of development. Financial benefits include $1 billion operating and tax synergies within a three-year period, free cash flow of over $4 billion for 2015 and higher revenues from the specialty brand segment. The company expects to generate combined revenues of $15 billion by 2015.

Through Forest Laboratories, Actavis further acquired Furiex Pharmaceuticals Inc.. The deal extends its gastroenterology operations adding Furiex' Linzess, Asacol and Delzicol franchises and Eluxadoline to the portfolio. Eluxadoline is a potential drug for the treatment of diarrhea-predominant irritable bowel syndrome, with approximately 28 million affected patients in the US and Europe.

Allergan escapes Valeant

During October, Valeant Pharmaceuticals International Inc. increased its offer to acquire Allergan Inc.. several times, from $176 to over $200 per share by the end of the month. This offer was valid until 18 December 2014 when Allergan's extraordinary shareholder meeting is scheduled to take place.

In the meantime, Allergan evaluated various strategic options to avert a takeover by Valeant. For example, it considered acquiring Salix to increase its size stirring shareholder discontent. Actavis PLC also approached Allergan and Salix. Finally in November, Allergan accepted Actavis' offer of $219 per share, creating one of the global top 10 pharmaceutical companies. At this price, Valeant will not be making any counter offers.

TABLE 01 GLOBAL TOP DEALS COMPLETED – Q3 2014

The deal value of the global top 10 completed deals in Q3 2014 was **$ 47.3 billion**

Bidder	Target	Therapy area	Value	Contingent payments	Total value*
Actavis PLC	Forest Laboratories LLC	CNS, gastroenterology, women's health, urology, etc.			28.0
Mallinckrodt PLC	Questcor Pharmaceuticals Inc.	Autoimmune and inflammatory disorders			5.6
Merck & Co. Inc.	Idenix Pharmaceuticals Inc.	Human viral diseases			**3.8**
Abbott Laboratories	CFR Pharmaceutical S.A.	Neurology, psychiatry and cardiology, women's health etc.			2.9
Roche Holding AG	Seragon Pharmaceuticals Inc.	Breast cancer	0.7	1.0	1.7
Actavis PLC	Furiex Pharmaceuticals Inc.	Gastroenterology	1.1	0.4	1.5
Nestlé S.A.	Valeant Pharmaceuticals Intl. – Injectable aesthetic dermatology products	Aesthetic dermatology			1.4
Teva Pharmaceutical Industries Ltd.	Labrys Biologics Inc.	Chronic and episodic migraine	0.2	0.6	0.8
*GTCR LLC***	Nordion Inc.	Medical isotopes and sterilization technologies			**0.8**
Prestige Brands Holdings Inc.	INSIGHT Pharmaceuticals, LLC	OTC women's health and personal care products			0.8

* All numbers are in USD billion. Blue numbers are estimated values. ** Financial investors are italicized.
Sources: Thomson One, KPMG Analysis

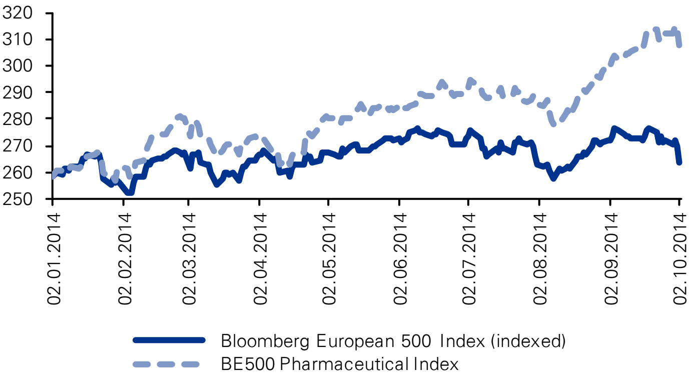
TABLE 02 GLOBAL TOP DEALS ANNOUNCED, YET TO CLOSE - Q1–Q3 2014

The deal value of the global top 10 announced deals Q1–Q3 2014 was **$ 290.2 billion**

Bidder	Target	Therapy area	Deal Status	Total value*
Pfizer Inc.	AstraZeneca PLC	Biopharmaceuticals	Withdrawn	**117.1**
AbbVie Inc.	Shire PLC	Neuroscience, gastrointestinal, internal medicine	Withdrawn	**54.8**
Valeant Pharmaceuticals International Inc.	Allergan Inc.	Eye care, neurosciences, dermatology, urologies	Withdrawn	**53.0**
Novartis AG	GlaxoSmithKline PLC -Oncology Business	Oncology	Pending shareholder and antitrust approval	16.0
Bayer AG	Merck & Co. Inc. - Consumer Care Business	Consumer Care	Completed on 01 October 2014	14.2
Mylan Inc.	Meda AB	Respiratory, dermatology, OTC	Withdrawn	**9.0**
Roche Holding AG	InterMune Inc.	Pulmonology and orphan fibrotic diseases	Tender completed, merger pending	8.3
GlaxoSmithKline PLC	Novartis AG - Vaccine Business	Vaccines	Pending shareholder and antitrust approval	7.1
Eli Lilly & Co.	Novartis AG - Animal Health Division	Animal health	Antitrust approval, merger pending	5.4
Mylan Inc.	Abbott Laboratories - Non-US generics business	Cardio/metabolic, gastrointestinal medicine etc.	Pending shareholder and antitrust approval	5.3

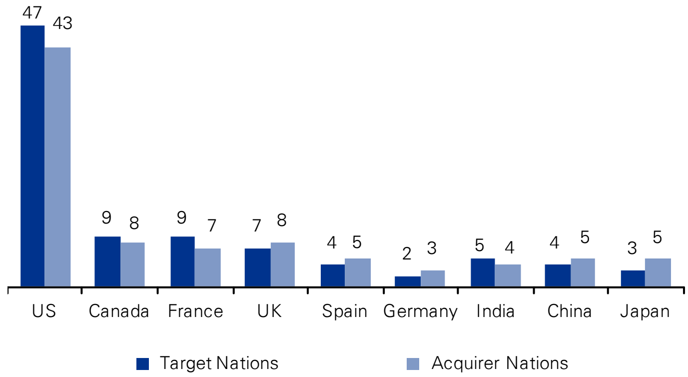
* All numbers are in USD billion. Blue numbers are estimated values.
Sources: Thomson One, KPMG Analysis

FIGURE 05 Development of European share prices Q1-Q3 2014



Sources: Bloomberg, KPMG Analysis

FIGURE 06 Pharmaceutical deals in selected countries in Q3 2014



Sources: Thomson One, KPMG Analysis

CAPITAL INDEX

The Bloomberg European (BE) 500 Pharmaceutical Index continues to outperform the BE 500 Index, granting pharmaceutical companies the fire power to execute more transactions.

TAX INVERSION CLAMPDOWN IN THE US

Inversion transactions have been on the rise, in particular in the pharmaceutical sector. Generally, a US company engages in an inversion when (i) a US company domiciles itself to a non-US jurisdiction (a stand-alone inversion) or (ii) a smaller non-US company in form acquires with its stock the US company (an acquisition based inversion). These transactions facilitate US companies relocating their headquarters to lower tax jurisdictions and permits a freer movement of cash between its operations.

On 22 September 2014, the U.S. Treasury Department issued a notice of intent to issue regulations to limit tax inversion focused deals. This notice seeks to limit the ability to avoid the application of the US anti-inversion rules. It also seeks to limit the benefits of inversions by reducing the available transactions to move cash from the US company's non-US subsidiaries in an efficient manner and transfer such non-US subsidiaries from the US company's ownership to the non-US company.

Following the issuance of the notice, US-based Salix Pharmaceuticals Inc. terminated the $2.7 billion merger with Italy's Cosmo Technologies Ltd., citing the changed political environment as the reason.

ASIA FOCUS

China and India were the most active markets in the Asian region during Q3 2014. Deals in Asia were largely domestic in nature, with the trend expected to continue in the near future.

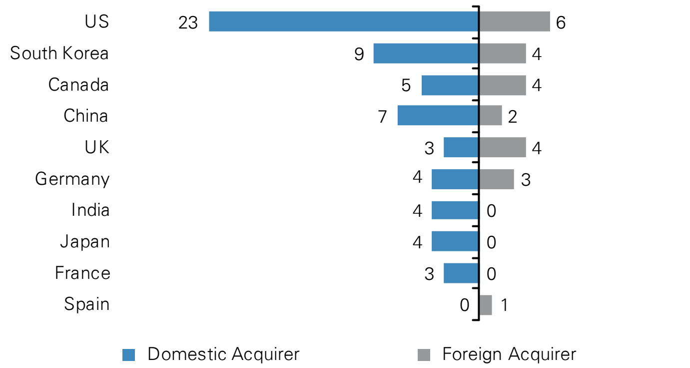
In Q3 2014, several transactions in the Indian pharmaceutical market are indicative of consolidation in the generics area. For example, Sun Pharmaceutical Industries Ltd. announced it would acquire for $4 billion the generic player, Ranbaxy Laboratories Ltd.. Strides Arcolab Ltd. also announced the acquisition of Shasun Pharmaceuticals Ltd. for $197 million to boost its generic drugs portfolio.

The largest Asia outbound transaction during Q3 2014 was US-based Ambit Biosciences Corp. acquired by Daiichi Sankyo Ltd., strengthening the cancer treatment drug pipeline.

Chemicals

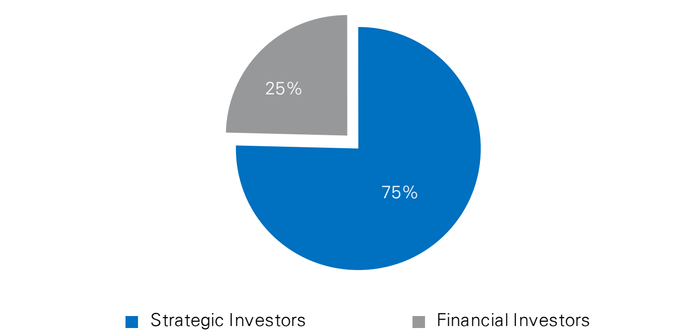
In Q3 2014, chemical deals continue to be bolt on transactions. In comparison to Q1 and Q2, the aggregated value of the top 10 completed deals rose again in Q3 up to $11.2 billion. China, followed by the US, dominates with four of the global top 10 completed deals involving Chinese targets.

FIGURE 07 Selected countries in chemical M&A in Q3 2014



Sources: Thomson One, KPMG Analysis

FIGURE 08 Number of chemical deals by investors in Q3 2014



Sources: Thomson One, KPMG Analysis

DEAL FOCUS AREAS

Deal value of the global top 10 announced deals more than doubled compared to the previous quarter. The US and China dominate the top deals. Financial investors are also showing keen interest.

The largest completed deal with US involvement on both sides is the $2.1 billion acquisition of the PetroLogistics Group by Koch Industries Inc. through its subsidiary Flint Hills Resources LLC. The deal represents the largest acquisition in the subsidiary's history and the first chemical asset since 2007, strengthening the ability to compete globally. It includes the merger of Flint Hills Resources' subsidiary, FHR Propylene LLC, with PetroLogistics.

Albermarle Corp.'s announced purchase of Rockwood Holdings Inc. for $6.2 billion represents the largest US domestic deal in Q3 2014. The acquisition aims to create a premier specialty chemicals company with market-leading positions across four high-margin businesses: lithium, catalysts, bromine and surface treatment.

In Q3 2014, financial investors were involved in 25% of the completed deals with four of the top 10 completed deals undertaken by PE houses, investment companies/groups or individual investors.

For example, the largest financial deal involves Clayton Dubilier & Rice LLC buying Ashland Inc.'s water treatment unit, which has a strong global footprint with 31 manufacturing facilities across 17 countries and 5 continents. The target's name changed to Solenis, which also includes former brands such as Betz Laboratories, Drew, Stockhausen and Hercules, serving pulp, paper, oil and gas, chemical processing, mining, biorefining, power and municipal markets.

GERMAN M&A ACTIVITY

German involvement in M&A activity increased in Q3 over Q2 2014 as German targets provide access to technology and geographic expansion.

For example, US-based Westlake Chemical Corp.'s purchase of Vinnolit Holdings GmbH aims to bring Westlake a European market presence along with new specialty PVC products by leveraging Vinnolit's world class technical centers.

Buoyancy in German specialty chemicals, was further reinforced this quarter, as Ineos Industries Holdings Ltd. exercised its option to buy the remaining Styrolution Group GmbH shares from BASF SE. German based Styrolution is a leading global provider of styrenic applications for everyday products across a broad range of industries.

Bayer AG also announced during Q3 2014 its plan to spin-off and float its Bayer MaterialScience business on the stock exchange. This will provide the capital markets with another opportunity to invest in a German based chemicals company while freeing Bayer to focus on its LifeScience business.

On the acquirer side, German firms are attracted to the US market for its low energy costs and expanding economy in comparison to lack luster growth in Europe along with high energy prices. Record-low interest rates are also helping to fuel US deal activity.

For example, Merck KGaA announced the acquisition of US-based Sigma-Aldrich Co. LLC for $17 billion. Merck expects synergies of approximately $340 million within the first three years due to broader but complementary products and services and a more efficient supply chain. It will further strengthen Merck's global geographic presence, especially in North America and Asia.

TABLE 03 GLOBAL TOP DEALS COMPLETED – Q3 2014

The deal value of the global top 10 completed deals in Q3 2014 was **$ 11.2 billion**

Bidder	Target	Business area	Total value*
Samsung SDI Co., Ltd.	Cheil Industries Inc.	Scratch resistant resins, semiconductor materials	**3.5**
Koch Industries Inc.	PetroLogistics LP and PetroLogistics GP LLC	Propane dehydrogeneration	2.1
*Clayton Dubilier & Rice LLC***	Ashland Inc. - Water Treatment Business	Specialty chemicals for water treatment	1.8
Huafang Textile Co., Ltd.	Zhejiang Jiahua Energy Chemical Industry Co., Ltd.	Sulfuric and fatty acids, chlor-alkalies	**1.6**
Westlake Chemical Corp.	Vinnolit Holdings GmbH	PVC	0.7
Baosteel Group Corp. and *Warburg Pincus LLC*	Henan Jinkai Chemical Investment Holding Group Co., Ltd.- Industrial gases assets	Industrial gases	0.5
Goldman Sachs-led consortium	Daesung Industrial Gases Co., Ltd. (68%)	Industrial gases	**0.4**
Wu Zishen, Morgan Stanley Private Equity Asia, Prosper Sino Development Ltd. and Full Alliance International Ltd.	Yongye International Inc. (67%)	Fertilizer	**0.3**
Hubei Xingfa Chemicals Group Co., Ltd.	Hubei Taisheng Chemical Co Ltd. (51%)	Glyphosate	**0.2**
Suncor Energy Inc.	Chemtrade Logistics Income Fund Montreal East business	Sulphur removal and compliance services	0.1

* All numbers are in USD billion. Blue numbers are estimated values. ** Financial investors are italicized.
Sources: Thomson One, KPMG Analysis

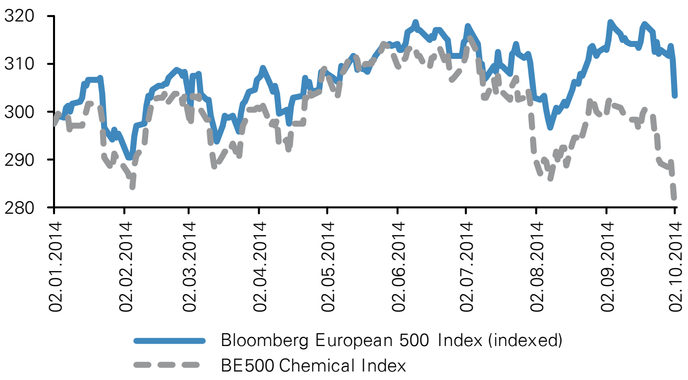
TABLE 04 GLOBAL TOP DEALS ANNOUNCED, YET TO CLOSE – Q1–Q3 2014

The deal value of the global top 10 announced deals Q1–Q3 2014 was **$ 37 billion**

Bidder	Target	Business area	Deal Status	Total value*
Merck KGaA	Sigma-Aldrich Co. LLC	Biochemicals, organic chemicals and lab equipment	Pending antitrust approval	17.0
Albemarle Corp.	Rockwood Holdings, Inc.	Lithium production, products and services for metal processing	Pending shareholder and antitrust approval	6.2
Eastman Chemical Company	Taminco Corp.	Alkylamines, acids and derivatives	Pending shareholder and antitrust approval	2.8
PPG Industries Inc.	Consorcio Comex, S.A. de C.V.	Coatings and related products	Completed on 05 November 2014	2.3
Arkema SA	Bostik SA (part of Total S.A.)	Adhesives	Pending antitrust approval	**2.2**
FMC Corporation	Cheminova A/S (part of Auriga Industries A/S)	Crop protein products	Pending antitrust approval	1.8
Ineos Group AG	Styrolution Group GmbH (50%)	Styrenics	Completed on 17 November 2014	1.5
Consolidated Energy Co., Ltd.	Methanol Holdings (Trinidad) Ltd.	Methanol	Antitrust approval, merger pending	**1.2**
Mitsubishi Chemical Holdings Corp.	Taiyo Nippon Sanso Corp. (24%)	Industrial gases and related equipment	Pending	**1.0**
NIPSEA Holdings International Ltd.	Nippon Paint Co., Ltd. (19%)	Paint, coatings, surface treatment	Pending	**1.0**

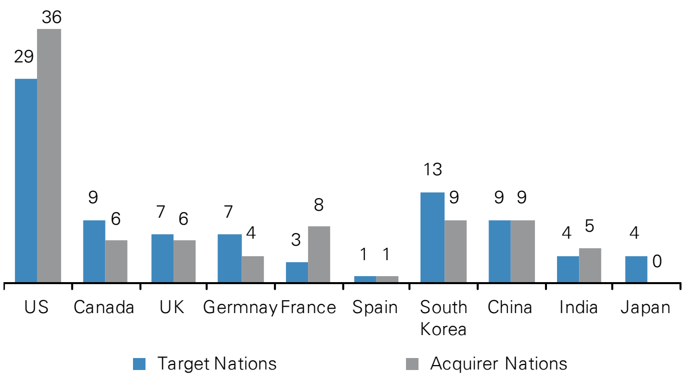
* All numbers are in USD billion. Blue numbers are estimated values.
Sources: Thomson One, KPMG Analysis

FIGURE 09 Development of European share prices Q1-Q3 2014



Sources: Bloomberg, KPMG Analysis

FIGURE 10 Chemical deals in selected countries in Q3 2014



Sources: Thomson One, KPMG Analysis

CAPITAL INDEX

The European chemical industry significantly under-performed the Bloomberg European 500 Index in Q3 2014.

LEVERAGING SYNERGIES USING CLEAN ROOMS

An increasing number of M&A deals is driven by the need to rationalize surplus capacity in the market. This places significant restrictions on the ability to carry out full-scope due diligence. As a result, several companies are using clean rooms in the pre-closing phase to compare and scrutinize relevant data.

This approach allows concrete action plans to be defined, so that once control passes, deal synergies can be leveraged and managed without delay.

Typical activities include:

- Analysis of customer databases for overlaps in order to assess overall sales impact and market positioning. Review terms of business (payment, delivery) to accelerate post-closing negotiations with customers.
- Evaluation of target's distributor network using historical sales data and qualitative information (via interviews with sales representatives). Upon deal completion, management is able to decide, without delay, which distributors to go with.
- Profitability analysis of target's sales in order to identify underperforming products and low volume customers to take corrective action from day 1.

CHINA

In Q3, four of the top 10 completed deals were domestic Chinese deals. Two of these deals aim to strengthen the buyer's product portfolio. For example, Baosteel Group Corp. was motivated to expand beyond steel into higher growth industrial gases. US-based PE house Warburg Pincus LLC and Baosteel have a strategic partnership exploring and developing projects in the industrial gases segment. Xingfa Chemicals Group Co., Ltd. looked to strengthen its glyphosate business by acquiring Taisheng Chemical Co Ltd.

Huafang Textile Co., Ltd. and Zhejiang Jiahua Energy Chemical Industry Co., Ltd. came together for a different reason – Huafang leveraged its IPO listing to acquire a stronger business to augment its loss-making textile business.

In July 2014, Yongye International Inc. completed its privatization delisting its stock from the NASDAQ stock exchange. Wu Zishen, as Chairman and CEO of Yongye, through the acquisition, hopes to get more control over the company while his co-investors hope to benefit from Yongye's high growth.

Basis of data preparation

Values and volumes used throughout the report are based on completion date as provided by Thomson Reuters' database Thomson One as of 1 October 2014, and supplemented by additional independent research. This report includes disclosed and undisclosed values for M&A transactions including minority stake purchases, acquisitions of remaining interest, and recapitalizations and it explicitly excludes self-tenders and spinoffs. The published numbers of deals and deal values are based on the analysis of target companies which operate in the following subsectors:

Pharmaceuticals:
- Medicinal chemicals & botanical products
- Pharmaceutical preparations
- In vivo and in vivo diagnostic substances
- Biotechnology – biological products, except diagnostic substances
- Pharmaceutical wholesale (added starting in Q2 2014)

Chemicals:
- Clay, kaolin, ceramic & refractory minerals
- Chemical and non-metallic mineral mining, except fuels
- Fertilizers and agricultural chemicals
- Industrial gases
- Specialty chemicals
- Chemical wholesale
- Plastics and rubber components

KPMG's Deal Thermometer is based on financial data as provided by S&P Capital IQ of public companies in the same sector as noted above with a market capitalization at quarter end of at least a $1 billion. For the pharmaceutical sector, this comprises 159 public companies. For the chemical sector, this comprises 179 public companies.

All figures in this report are shown in US Dollars ($).

Sources

Online databases:
- Thomson One (Thomson Reuters)
- Mergermarket
- S&P Capital IQ
- Bloomberg

Publications:
- Various companies' press releases

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