Chemical compounds*

Navigating through a challenging economic climate: A special issue on market volatility and M&A in the global chemicals industry

Fourth-quarter 2008 mergers and acquisitions analysis

*connectedthinking

PRICEWATERHOUSECOOPERS

Welcome to *Chemical compounds*, PricewaterhouseCoopers' quarterly analysis of mergers and acquisitions in the global chemicals industry.

In addition to our analysis on mergers and acquisitions activity, we supplemented this issue with commentary on the current economic environment. We discuss the changing business dynamics involving the weak credit conditions and the potential level of economic output. We also analyzed the US stimulus package and its anticipated effect on the chemicals sector.

As with previous issues of this report, we include a detailed summary of M&A activity in the fourth quarter.

Facing high-stakes choices during volatile times

It's hard to find a current statistic related to any aspect of the US or wider global economy that doesn't speak of turbulence and uncertainty. What started with dubious home loans and unsound lending practices has morphed into an unusually severe global recession, affecting consumer spending, business investment, housing, and exports. Those important economic engines rarely go into recession at the same time, making this downturn more severe and farther reaching globally than any other in the post-WWII period.

The US economy has been in recession for more than a year, and all indications suggest the slump is deepening. The US economy shed 2.8 million jobs in 2008, the worst single-year performance since World War II. And that performance culminated with the staggering 1.6 million jobs lost in the fourth quarter. Job losses continued at a brisk pace in the first weeks of 2009.

The National Association of Manufacturers projects that the recession will likely last through most of 2009 and that a solid recovery will not start until mid-2010.

Cash infusions into the US financial system—encompassing nearly $2 trillion in spending by the FDIC, the Federal Reserve, and the US Congress—have helped improve some credit indicators, as reflected in the significant drop in the London Interbank Offered Rate (LIBOR), an important measure of the cost of interbank lending, and the reference rate for financial instruments such as syndicated loans and variable rate mortgages. But credit markets remain clogged, although the likelihood of financial collapse appears diminished.

Although complaints are growing that banks and lending institutions are holding the money the government has provided, closer scrutiny, backed by Federal Reserve statistics, reveals that household and business credit demand is contracting as investment and consumption appetite recedes. That leaves banks struggling to find creditworthy borrowers.

In a piece of potential good news, the sudden, deep drop in fuel costs has begun to increase real wages for workers who remain employed. Coupled with low inflation, this wage growth could cushion the decline in spending. However, continuing job losses have acted as a conflicting force, driving consumer confidence to a 40-year low.

The bottom line: More than a year into the US recession, few financial institutions or businesses in the wider economy have shown a willingness to bet that the global economic conditions have bottomed and are poised for recovery.

Most sectors of the economy face painful economic adjustments in response to a precipitous drop in demand for their products. History teaches that when credit, housing, and equity bubbles burst, consumer spending can take years to return to its previous levels as consumers and investors strive to recover from up to $13 trillion in lost wealth associated with the US economic crisis.

As they struggle to survive the current conditions and set the stage for prosperous recovery, executives and other corporate managers have rarely faced such challenging and high stakes business choices: How much should we cut capacity? Which plants should we idle? Should we reduce headcount and by how much? Do we need to cut salaries and benefits? How will we know when the recession has reached its bottom? How do we maintain the flexibility and resources to grow when demand returns?

History shows strategic decisions concerning acquisitions, capital spending, investments in research and development, and other organizational choices made during economic downturns often define a company, or even an industry, for the next decade or more.

For the chemicals industry, recent weeks brought news of financial losses, idled plants, and job cuts as companies struggle to rationalize the size of their operations in a troubled business climate.

The chemical industry's overall health is closely tied to the US and global economies, with demand tracking declining GDP growth. Several major chemical companies have recently announced plans to reduce their workforce, shut down plants and temporarily idle capacity in response to the decline in demand. These actions represent a significant portion of worldwide capacity.

Although chemical companies are likely to benefit from the expected decline in feedstock prices during 2009, down from record highs seen during 2008, those prices are still expected to exceed levels of previous years. However, the price decline likely will prove insufficient to overcome the decline in volume. Moreover, the downward trend in raw material costs will put pressure on end product prices as customers will expect that the cost reductions be quickly passed along to them. This will put pressure on margins, as companies will still have higher-priced inventory, produced when raw material costs were higher.

Chemicals CEOs are particularly worried about the impact of the recent problems in the global banking system. According to PricewaterhouseCoopers' 12th annual Global CEO Survey, more than two-thirds of chemicals CEOs anticipate that financing costs will increase and that they will have to delay some of their investments.

However, executives in the chemicals industry take a longer-term perspective than those in many other sectors—partly because the chemicals industry is capital-intensive with long product lifecycles. Chemicals CEOs typically respond to periods of economic difficulty by reassessing the timing and allocation of capital investments, rather than changing their business models.

Thus, many CEOs are maintaining their focus on R&D despite the challenging environment—evidence that they see new products or services as absolutely critical to the long-term viability of their companies.

At the same time, difficulties in the credit market and declining fortunes of the industry have adversely impacted the activity of large-scale deals and may cause renegotiation of pending transactions. The anticipated outlook for the chemicals industry is continued consolidation (albeit at a slower pace), whereby we continue to see a high level of deal activity, but at lower deal values.

What opportunities does the stimulus package present?

The roughly $790 billion US stimulus plan provides a buffet of spending and tax cuts designed for widespread economic impact.

The package includes direct health and education aid to cash-strapped state governments, household and business tax benefits, and a push to convert medical records to electronic format. It provides about $80 billion in direct spending on public infrastructure. Some of these dollars will help pay for traditional transportation projects, such as road construction and rail and aviation enhancement. Other spending is aimed at upgrades of the nation's energy transmission and distribution systems, and energy-efficient upgrades to public buildings and housing. The stimulus provides roughly $40 billion more in incentives and programs designed to spur private investment in targeted industries, such as renewable energy production and broadband expansion.

The National Association of Manufacturers, among others, projects that even with the stimulus, the economy will likely contract through the first three quarters of 2009. However, the stimulus will start to have positive effects on the economy in the second half of the year and into 2010. Without the stimulus, the recession was expected to extend into mid 2010.

The roughly $120 billion dedicated to infrastructure spending and incentives represents a relatively small percentage of the total $790 billion package. While the infrastructure spending is probably too modest and too indirect to directly stimulate the chemicals industry, increased construction and the infrastructure plan could prove lucrative to key suppliers of paint, sealants, adhesives, and other chemicals closely related to construction. Many chemical companies are struggling to manage excess inventory and could benefit if government spending helps boost demand. This spending also could be a boon for individual chemical companies tied closely to large regional builders in a position to handle the work the government is funding in a specific state or region.

Whatever the benefits of construction-related stimulus spending, the chemicals industry, like many others, would benefit more from the plan if it improves the general economic climate in the United States and abroad.

We should bear in mind the United States isn't the only country pursuing a stimulus package. Most European nations are planning multibillion dollar stimulus spending. China's huge infrastructure spending plan, totaling hundreds of billions of dollars, also figures to pump money into the highly globalized chemicals industry.

Some believe protectionism will influence the stimulus packages both abroad and in the United States, where lawmakers are under pressure to strengthen the "Buy America" provisions of government procurement laws. The current law, which dates to 1933, allows for waivers based on price differential and availability of product. Cracking down on those waivers could have the unintended consequence of cutting off US companies from access to other markets as other countries retaliate against US protectionism. President Obama and congressional leaders have indicated that the "Buy America" provisions in the stimulus plan will not violate international trade agreements.

M&A outlook

Because of the credit crisis and the current difficulty in assessing the value of a potential acquisition, M&A activity has slowed considerably. We anticipate that credit will remain tight and expensive and that the economic environment will continue to deteriorate in 2009.

However, we expect a number of divestitures as companies sell assets in an effort to raise cash and reposition themselves for future opportunities.

According to PricewaterhouseCoopers' fourth quarter 2008 Manufacturing Barometer survey, planned M&A activity declined significantly over the past year, but it may have begun to stabilize. Thirty-two percent of respondents anticipate some form of M&A activity in the next 12 months, the same percentage as reported in the third quarter. This is supported by the findings of PricewaterhouseCoopers' 12th annual Global CEO Survey, which reported that 33 percent of chemicals CEOs are planning to complete a cross-border merger or acquisition over the next 12 months, compared with just 25 percent of the total survey population. The reduced valuation level in the market may create concern in the chemicals industry, particularly in emerging markets.

In light of the difficulties many companies are experiencing, it is not surprising that the Manufacturing Barometer also reported that an increasing number of companies (up to 8 percent from 2 percent a year ago) are anticipating the sale of all or part of their business in the next 12 months.

Difficult economic times cast cold scrutiny on all parts of a business, highlighting those that aren't functioning well or hold little promise for the future. Many companies will look to divest operations that don't complement their core business functions. In the short-term, there may be few buyers for those assets. But companies that identify them now and prepare to act will take the initiative when economic conditions change.

Forward-thinking companies should prepare themselves to seize the opportunities that eventually will emerge. A major part of that process is identifying the appropriate operating levels in the current environment while protecting cash and prioritizing only those critical strategic investments.

In the shorter term, we also could see "mergers of necessity," as companies look to align with stronger players in order to survive, as well as alternatives to traditional M&A, such as "loan to own" by private equity.

As the economy recovers and the credit markets loosen, we expect that the deal market will improve for a number of reasons, including:

- Increase in distressed/restructuring driven divestitures
- Lower valuations (although not necessarily lower EBITDA multiples, given the lower level of earnings in the industry)
- Reemergence of financial investor wealth that has been on the sidelines during the downturn
- Continual need for strategic repositioning driven by globalization and supply/demand shift due to the economic downturn

We expect to continue to see a low level of smaller bolt-on deals and joint ventures from strategic buyers and private equity portfolio companies. We also expect to see an increasing level of deals driven by distressed companies that are either raising capital by selling a division or looking for capital outside of the traditional banking system, including financing during the bankruptcy process.

We have received many questions concerning deals that have not or are rumored to not be closing. We do not believe that the driver for this event is anything new to the deal world as deal terms are based on projected profitability. When economic conditions change significantly as in 2008, companies need to reassess projections. It is management's fiduciary responsibility to reassess all options available prior to closing. These options include: 1) Closing the deal without any change to the original terms, 2) Closing the deal after renegotiating the terms of the deal, and 3) Not closing the deal. Each of these options has associated costs that need to be evaluated as part of management's decision-making process.

We should remember that the rule in M&A is that "Nothing is done until it is done." This is a good reminder to companies selling businesses that they should be as prepared as possible prior to entering the divestiture process to minimize the time line between "signing" and "closing," as there is always the risk of unforeseen events.

What are we seeing in the industry?

The chemicals industry, which may see this downturn as an acceleration of already declining operations in developed/high-cost countries (e.g., the US and Europe), could see continued consolidation, albeit at lower deal values. Additionally, chemicals companies may shift investment toward lower-cost, developing countries where levels of demand are increasing. This likely will come both through building overseas production facilities and via acquisitions.

The chemicals industry is near the front-end of most products' value chains and directly linked to the dynamics of the economy as a whole. In addition to the significant drop in demand, the industry has experienced the compounding effect of working capital management, whereby customers are running inventory as low as possible to maximize cash flow. Typically, the expectation in the industry is that the demand drop is merely temporary and that sales will return quickly, allowing for a higher level of inventory in their working capital.

Beyond the immediate shock of dropping demand, companies are working to maximize the margin impact of falling commodity prices by capturing the cost savings as long as possible before passing them along to customers through price reductions. This can prove to be difficult in a capital intensive industry that often relies on maintaining high operating rates to cover its significant fixed cost structure. This dynamic can incite aggressive price competition, forcing companies to operate at a loss in order to maintain their market position and operate their plants.

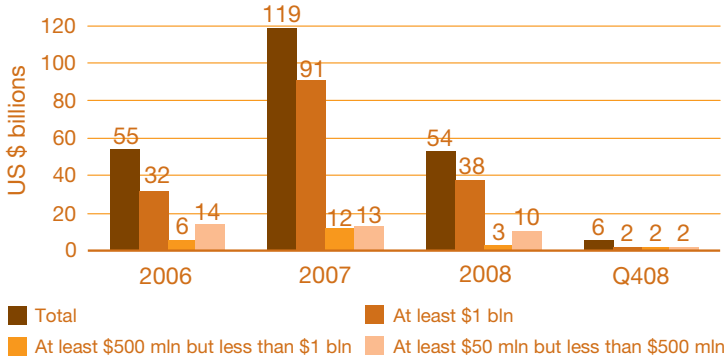
Companies that can withstand this pressure may find relief on the other side. Many segments of the chemicals industry have plants around the world that are more or less cost competitive because of either technical differences or geographical cost structure differences (labor, environmental, raw material access, etc.). Companies with plants at the high end of the competitive cost curve may quickly find it is cheaper to shut them down than to continue to run them at a loss, resulting in a fundamental change to the supply/demand balance within the segment.

This lasting change may be compounded by the delay of many capacity increases that were at an early enough stage to justify altering the project's time line. Companies should utilize this period to rethink the competitive landscape within their subsegment. They should look forward to the post-recovery supply/demand balance in their segment of the value chain as well as that of their suppliers and customers to ensure that they have a long-term plan that incorporates the fundamental changes taking place.

Commentary

Deal activity by number of deals

Deal activity by total deal value



2008 deal activity up

Deal volume up slightly over 2007

Deal volume by total announced deals in 2008 was up slightly over that of 2007 putting the year-to-date volume at 869 announced deals, compared with 853 announced deals in 2007.

Although total deal volume is up, those with disclosed value and those with disclosed value greater than $50 million are down in 2008 versus 2007. As we have noted in earlier editions of this report, chemicals industry mergers and acquisitions typically include many small to midsized deals. This allows the deal volume to remain relatively high, even during periods of economic uncertainty.

The remainder of the analysis is focused on announced deals with transaction values greater than $50 million.

Deal value falters in the fourth quarter

Despite a high volume of deals in the fourth quarter, only 13 deals had a disclosed value, which amounted to $6 billion. Our Q3 2008 report suggested that based on results through Q3 YTD, annualized total deal value would be $64 billion. However, 2008 ended around levels seen in 2006, with $54 billion total deal value.

2008 large deal activity buoyed by Q3 2008

Large deal activity in 2008 returns to near 2006 levels and is significantly down from 2007. Deal activity announced in 2008 predominantly took place in the third quarter and included: the Dow/Rohm and Haas deal ($15.5 billion), Berkshire-Kuwait Investment Authority/Dow deal to acquire preferred convertible shares ($4 billion), Ashland/Hercules deal ($3.3 billion) and the BASF/Ciba tender offer of $2.7 billion.

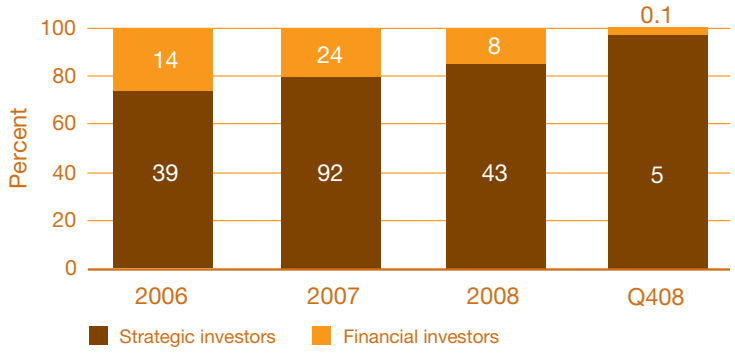
Deal activity by investor type—Financial investor activity declines

Despite the high level of financial investor deal activity in recent years, the majority of deals in all periods analyzed (as measured by both number of deals and deal value) have been by strategic investors. As we would expect with the current economic conditions, the level of activity among financial investors is down from the 2006 and 2007 levels.

In our review of the financial investor deal activity, we noted that some of the deals were for minority stakes in companies rather than full acquisitions, such as the acquisition of preferred shares convertible to a 10.4 percent stake in Dow for $4 billion. This trend is not unexpected and may continue as financial investors determine how to proceed in a tight credit market.

Although this data reveals the strength that strategic investors have relative to financial investors, it does not fully reflect the true level of financial investor activity and its impact on the bidding process. In some bidding processes, financial investors influenced the prices, forcing strategic investors to pay more to win bids. Additionally, some of the winning investors were portfolio companies of private equity firms. Although the acquiring legal entity was a strategic investor, the deal process was influenced by the ultimate shareholders (i.e., financial investors).

Deal activity by investor group
Measured by percentage of deal value (actual deal value in billions shown in chart)

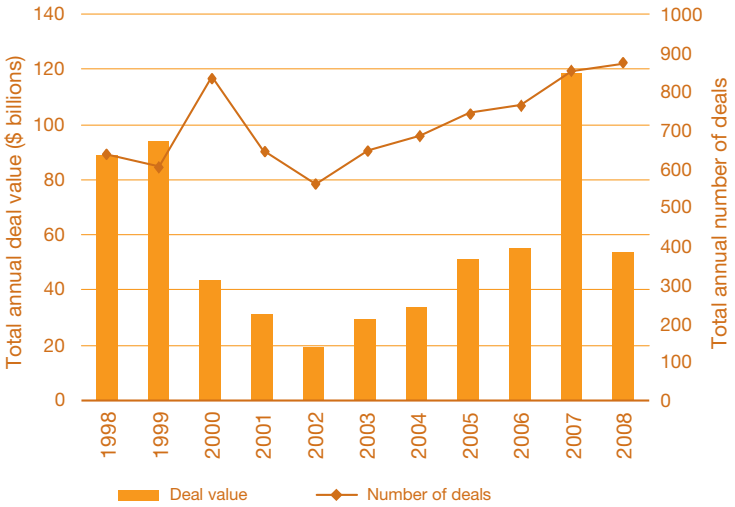


Regional distribution of 2008 large deal targets

See the Large deal section on pages 9–11 for additional information

Historical analysis of chemicals deals

10 year comparison of annualized 2008 deal activity

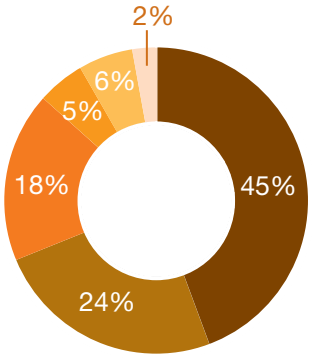


Regional distribution of deals—Asia dominates by number of deals with North America dominating by deal value

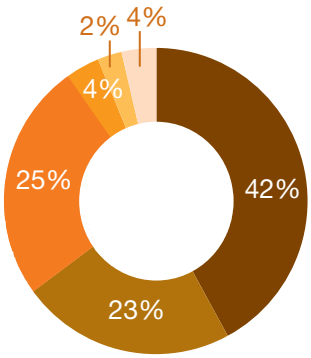
The regional distribution of deals, split by deal value, indicates that Asia dominated the 2008 M&A activity by number of deals. However, when analyzed by the value of deals, North America dominated due to the top three deals being both North American targets and acquirers (see Large Deals on Page 9). Another interesting observation that we derived from our analysis of the underlying data was that of the $51 billion of deals with disclosed values greater than $50 million, cross-border deals made up 22 percent or $11.3 billion of the deal values. This is a change from 2006 and 2007, when 58 percent and 75 percent of the deals (by value) were cross-border deals.

Regional distribution of 2008 deals

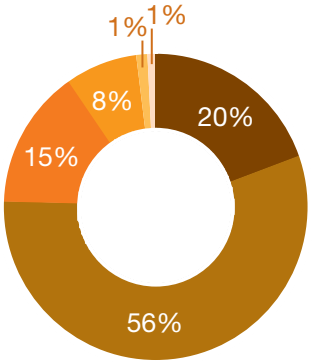
Number of deals by target region
for 83 deals



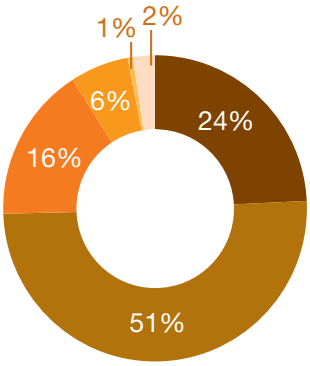
Number of deals by acquirer region
for 83 deals



By value of deals by target region



By value of deals by acquirer region



Asia Pacific | North America | Western Europe | Middle East | South America | Africa | Eastern Europe

Large deals in 2008

Month announced	Target name	Target nation	Acquirer	Acquirer nation	Status	Value of transaction in US$ bln	Category
Jul	Rohm & Haas Co	United States	Dow Chemical Co.	United States	Pending	15.5	Commodity Chemicals
Jul	Dow Chemical Co	United States	Investor Group	United States	Pending	4.00	Commodity Chemicals
Jul	Hercules Inc.	United States	Ashland Inc	United States	Completed	3.32	Specialty Chemicals
Sep	Ciba Specialty Chemicals	Switzerland	BASF SE	Germany	Pending	2.70	Specialty Chemicals
Feb	Abraaj Capital Ltd-Fertilizer	Egypt	Orascom Constr Ind SAE	Egypt	Pending	2.75	Fertilizers & Agricultural Chemicals
Jan	Qinghai Salt Lake Ind (Grp) Co	China	Qinghai Digital Net Invest	China	Completed	1.98	Specialty Chemicals
Mar	Dyno Nobel Ltd	Australia	Incitec Pivot Ltd	Australia	Completed	1.85	Commodity Chemicals
Jul	Saskferco Products Inc.	Canada	Yara International ASA	Norway	Completed	1.59	Fertilizers & Agricultural Chemicals
Jul	Qinghai Bindi Potash	China	Jilin Pharmaceutical Co Ltd	China	Withdrawn	1.21	Specialty Chemicals
Jan	General Chemical Industrial	United States	Tata Chemicals Ltd	India	Completed	1.01	Specialty Chemicals
Nov	Lucite International Ltd	United Kingdom	Mitsubishi Rayon Co Ltd	Japan	Pending	1.60	Commodity Chemicals

*Transaction amounts in this table exclude assumed debt.

Large-deal summary for 2008

The following outlines the large deals announced in 2008.

Rohm and Haas/The Dow Chemical Company

Dow Chemical Co. (DC) definitively agreed to acquire all the outstanding common stock of Rohm and Haas Co. (R&H), a manufacturer of polymers and resins, for $78 in cash per share, or a total value of $15.513 billion. The transaction was approved by DC and R&H's boards of directors and was subject to customary closing conditions and shareholder regulatory approvals.

The Dow Chemical Company/Investor Group

An investor group, comprised of Berkshire Hathaway Inc. and Kuwait state-owned Kuwait Investment Authority, agreed to acquire preferred shares convertible to 10.4 percent stake, or 96.805 million shares in Dow Chemical Co., a manufacturer and wholesaler of chemicals, for $4 billion, in a privately negotiated transaction.

Hercules/Ashland Group

Ashland Inc. (AI) agreed to merge with Hercules Inc. (HI), a manufacturer and wholesaler of chemicals, in a transaction valued at $3.323 billion, including the assumption of an estimated $700 million in liabilities. AI offered $18.6 in cash and 0.093 shares per HI share. Based on AI's closing stock price of $17.3 on November 12, 2008, the last full trading day prior to the announcement, each HI share was valued at $1.609. The transaction was subject to regulatory and shareholders' approvals and other customary closing conditions.

Abraaj Capital/Orascom Construction

Orascom Construction Industries SAE (OC) agreed to merge with the fertilizer production operations of Abraaj Capital Ltd. (AC), a Dubai-based private equity firm, for 14.996 billion Egyptian pounds (10.092 billion United Arab Emirates dirhams/$2.748 billion US). The consideration was to consist of 4.773 billion Egyptian pounds (3.212 billion dirhams/$874.5 million) in cash, the assumption of 6.003 billion pounds (4.04 billion dirhams/$1.1 billion) in liabilities and the issuance of 12.77 million OC new ordinary shares valued at 4.22 billion pounds (2.84 billion dirhams/$773.277 billion). The shares were valued based on OC's closing stock price of 330.48 pounds (222.398 dirhams/$60.554) on February 20, 2008, the last full trading day prior to the announcement. The transaction was to include AC's units Egyptian Fertilizers Co. and Notore Chemical Industries Ltd., and its strategic alliance with Dana Gas PJSC.

Ciba Specialty Chemicals/BASF

BASF SE of Germany launched a tender offer to acquire the remaining 87 percent interest, or 60.086 million ordinary shares, which it did not already own, in Ciba Specialty Chemicals Holding Inc., a Basel-based manufacturer, wholesaler, and distributor of chemicals, for 50 Swiss francs (31.524 euros/$44.976 US) in cash per share, or a total value of 3.004 billion francs (1.894 billion euros/$2.702 billion). The offer was conditioned upon at least 66.6 percent of shares being tendered. The transaction was subject to regulatory and shareholders' approvals.

Qinghai Salt Lake Ind/Qinghai Digital Net Invest

Qinghai Digital Net Investment Share Holding Group Co. Ltd. (QD) merged with Qinghai Salt Lake Industry (Group) Co. Ltd., a chemicals manufacturer, in exchange for 2.976 billion new QD ordinary shares, valued at 14.284 billion Chinese yuan ($1.98 billion US), in a reverse takeover transaction. The shares were valued based on QD's closing stock price of 4.8 yuan ($0.666) on January 24, 2008, the last full trading day prior to the announcement. Upon completion, QD was to become the surviving entity. The transaction was approved by shareholders and regulatory authorities.

Dyno Nobel Ltd/Incitec Pivot Ltd

Incitec Pivot Ltd. (IP) acquired the remaining 87 percent interest, or 713.401 million ordinary shares, which it did not already own, in Dyno Nobel Ltd (DN), an explosives manufacturer, for 1.988 billion Australian dollars ($1.849 billion US). IP offered A$0.7 ($0.651) in cash and 0.014 new ordinary share for every ordinary DN share. Based on IP's closing stock price of A$149 ($138.585) on March 10, 2008, the last full trading day prior to the announcement, each DN share was valued at A$2.786 ($2.591). The transaction was effected via scheme of arrangement. The transaction had been subject to court and regulatory approvals, was approved by shareholders, and has completed due diligence.

Lucite International Ltd/Mitsubishi Rayon Co. Ltd

Mitsubishi Rayon Co Ltd. (MR) of Japan agreed to acquire the entire share capital of Lucite International Ltd. (LI), a Southampton-based manufacturer and wholesaler of methyl methacrylate, from Charterhouse Capital Partners LP (CC), Ineos Group Ltd., and other undisclosed sellers, for an estimated 1.024 billion British pounds (156.51 billion Japanese yen/$1.6 billion US). The transaction was subject to regulatory approvals. Originally, in August 2008, CC announced that it was seeking a buyer for its LI unit. MR was named potential bidder.

Saskferco Products Inc/Yara International

Yara International ASA acquired Saskferco Products Inc. (SP), a manufacturer of nitrogen fertilizers, from Mosaic Co. (MC) and Investment Saskatchewan Inc. (IS), for an estimated 1.6 billion Canadian dollars ($1.59 billion US). The transaction had been subject to customary closing conditions and regulatory approvals. Originally, in June 2008, MC and IS announced that they were seeking a buyer for SP.

Qinghai Bindi Potash/Jilin Pharmaceutical Co Ltd

Jilin Pharmaceutical Co. Ltd. (JP) withdrew its agreement to acquire the entire share capital, of Qinghai Bindi Potash Fertilizer Co. Ltd., a potash fertilizers manufacturer and a 70 percent-owned unit of Lenghu Bindi Potash Fertilizer Co. Ltd., in exchange for an estimated 900 million new JP ordinary shares, valued at 8.226 billion Chinese yuan ($602.359 million US). The shares were valued based on JP's closing stock price of 9.14 Chinese yuan ($1.342) on July 14, 2008, the last full trading day prior to the announcement. The transaction was approved by the board of directors and still subject to the shareholders' and regulatory approval.

General Chemical Industrial/Tata Chemicals Ltd.

Tata Chemicals Ltd. acquired all the outstanding stock of General Chemical Industrial Products Inc., a manufacturer of natural soda ash, from Harbinger Capital Partners and other shareholders, for $1.005 billion. The transaction had been subject to shareholder and regulatory approvals.

Large deals in 2007

Month announced	Target name	Target nation	Acquirer	Acquirer nation	Status	Value of transaction in US$ bln	Category
Jun	ICI PLC	United Kingdom	Akzo Nobel NV	Netherlands	Completed	16.26	Specialty Chemicals
Jul	Lyondell Chemical Co	United States	Basell NV	Netherlands	Completed	12.36	Specialty Chemicals
May	GE Plastics	United States	SABIC	Saudi Arabia	Completed	11.60	Commodity Chemicals
Dec	Dow Chemical Co-Petrochemicals	United States	Petrochemical Inds Co KSC	Kuwait	Withdrawn	9.50	Commodity Chemicals
Apr	Orica Ltd	Australia	Investor Group	United States	Withdrawn	8.34	Commodity Chemicals
Jul	Huntsman Corp	United States	Hexion Specialty Chemicals Inc	United States	Withdrawn	6.24	Specialty Chemicals
Jul	Natl Starch & Chem Co-Adhesive	United States	Henkel AG & Co KGaA	Germany	Completed	5.51	Specialty Chemicals
Jul	SigmaKalon Group BV	Netherlands	PPG Industries Inc	United States	Completed	3.04	Specialty Chemicals
Nov	Nufarm Ltd	Australia	Investor Group	China	Withdrawn	2.77	Fertilizers & Agricultural Chemicals
Dec	UAP Holding Corp	United States	Agrium Inc	Canada	Completed	2.62	Fertilizers & Agricultural Chemicals
Oct	Arysta LifeScience Corp	Japan	Industrial Equity Invest Ltd	Ireland-Rep	Completed	2.19	Fertilizers & Agricultural Chemicals
Jun	PQ Corp	United States	Carlyle Group LLC	United States	Completed	1.50	Specialty Chemicals
Jun	Egyptian Fertilizers Co SAE	Egypt	Abraaj Capital Ltd	Utd Arab Em	Completed	1.41	Fertilizers & Agricultural Chemicals
Jul	LG Petrochemical Co Ltd	South Korea	LG Chem Ltd	South Korea	Completed	1.20	Specialty Chemicals
Jul	Taminco NV	Belgium	Investor Group	United Kingdom	Pending	1.09	Industrial Gases
Jul	Aromatics(Thailand)PCL	Thailand	PTT PCL	Thailand	Completed	1.08	Specialty Chemicals
Feb	Lyondell Chemical Co-Inorganic	United States	Cristal	Saudi Arabia	Completed	1.05	Specialty Chemicals
Sep	Chandra Asri Petrochemical Ctr	Indonesia	Barito Pacific Timber Tbk PT	Indonesia	Completed	1.05	Specialty Chemicals
Aug	HT Luxembourg Sarl	Luxembourg	Arcapita Bank BSC	Bahrain	Completed	1.04	Commodity Chemicals
Oct	Foseco PLC	United Kingdom	Cookson Group PLC	United Kingdom	Completed	1.00	Specialty Chemicals

Financial Crisis: managing through the downturn

The current financial crisis and the tightening of credit have impacted M&A activity dramatically. With few new M&A deals in the pipeline, companies are turning their focus in new directions to find opportunities for growth. Some companies are reviewing past deals to drive more complete integration and further streamline business operations to extract working capital, cut costs and drive efficiencies. Others are examining under-performing assets and planning divestitures. Finally, some far-sighted managers, despite the challenging market conditions, are dusting off old strategic plans to identify potential acquisition candidates that were once viewed as too expensive. In any case, most companies have realized that the end of easy credit could spell a slowdown for debt-fueled transactions and are placing a renewed premium on organic growth, cost containment, and operational excellence.

Operational excellence, however, does not stem from a myriad of new business concepts. To the contrary, it is "back to basics," a time to focus on flawless execution of business plans. Today, the mantra has become, "better, faster, smarter." In dealing with the critical short-term risks of liquidity and financing and preparing for an extended economic downturn, we are assisting our clients with the following:

- Developing and maintaining a robust financial forecast
- Identifying key forecast risks and developing appropriate responses
- Ensuring adequate sources of liquidity
- Driving efficiency in working capital processes
- Aggressively managing costs
- Exercising discipline in capital investments
- Assessing and monitoring credit exposures throughout the value chain

These seven steps are the key to managing risks, avoiding the pitfalls and capitalizing on emerging opportunities inherent in times of financial and economic turmoil. Those companies that address their short- and longer-term issues in this way may benefit in many ways—among them: greater visibility into their cash needs and enhanced decision-making efficiency and control; improved understanding and ability to manage performance variables; access to sufficient sources of liquidity to remain viable through an extended downturn; less need to finance working capital; increased liquidity and ROI through disciplined capital investment; lower costs and a culture of cost-consciousness; reduced credit exposure in commercial transactions; less exposure to counterparties; and prevention of supply chain disruptions.

While there are risks to manage and challenges to surmount, a crisis can also be an opportunity for management to address structural issues within the business that had previously been too difficult to confront. A crisis can unite stakeholders to face the difficult challenges necessary to enhance competitiveness including undertaking large restructurings. As credit continues to tighten across many industries we expect to see opportunities for well-capitalized players to take advantage of rare opportunities to address strategic objectives through transformational transactions. We have already begun to see this in the financial services and utility sectors where the stronger players are beginning to subsume weaker ones, and we anticipate seeing similar consolidation across multiple sectors as leading players seek to leverage their relative financial strength to further their competitive advantages.

Specialty case study: identifying, assessing, and managing risks

Client: large, global chemicals company

Client Issue	Given a series of large risk events (commodity price movements, natural disaster, supply chain disruption, unforeseen changes in product markets, etc.) the company's board and management were concerned that, in a rapidly changing business environment, the company may not sufficiently understand or manage its most significant risks.
Approach	PwC assisted the client to perform a robust enterprise risk assessment. We began by identifying key objectives and events that may adversely impact the achievement of those objectives. Considering current risk responses, we then assessed the adequacy of those risk responses and identified areas of focus for additional risk mitigation. Based on this initial assessment, management performed further analysis into natural disaster, supply chain, commodity and political risks and made multiple changes to how each was managed. In addition, the company modified its annual strategic and business planning processes to sustain the risk identification, assessment and management processes within normal operating protocols.
Impact	Management now has a deeper understanding of its risk profile and has new confidence that it is managing its most significant risks effectively (with tolerance) and efficiently (low cost). In addition, the company has a process in place to be able to identify and assess risks on a "real time" basis ensuring that it is not surprised by future events and that it continues to allocate resources to the most significant risks.

PricewaterhouseCoopers chemicals experience

Deep chemicals specialists

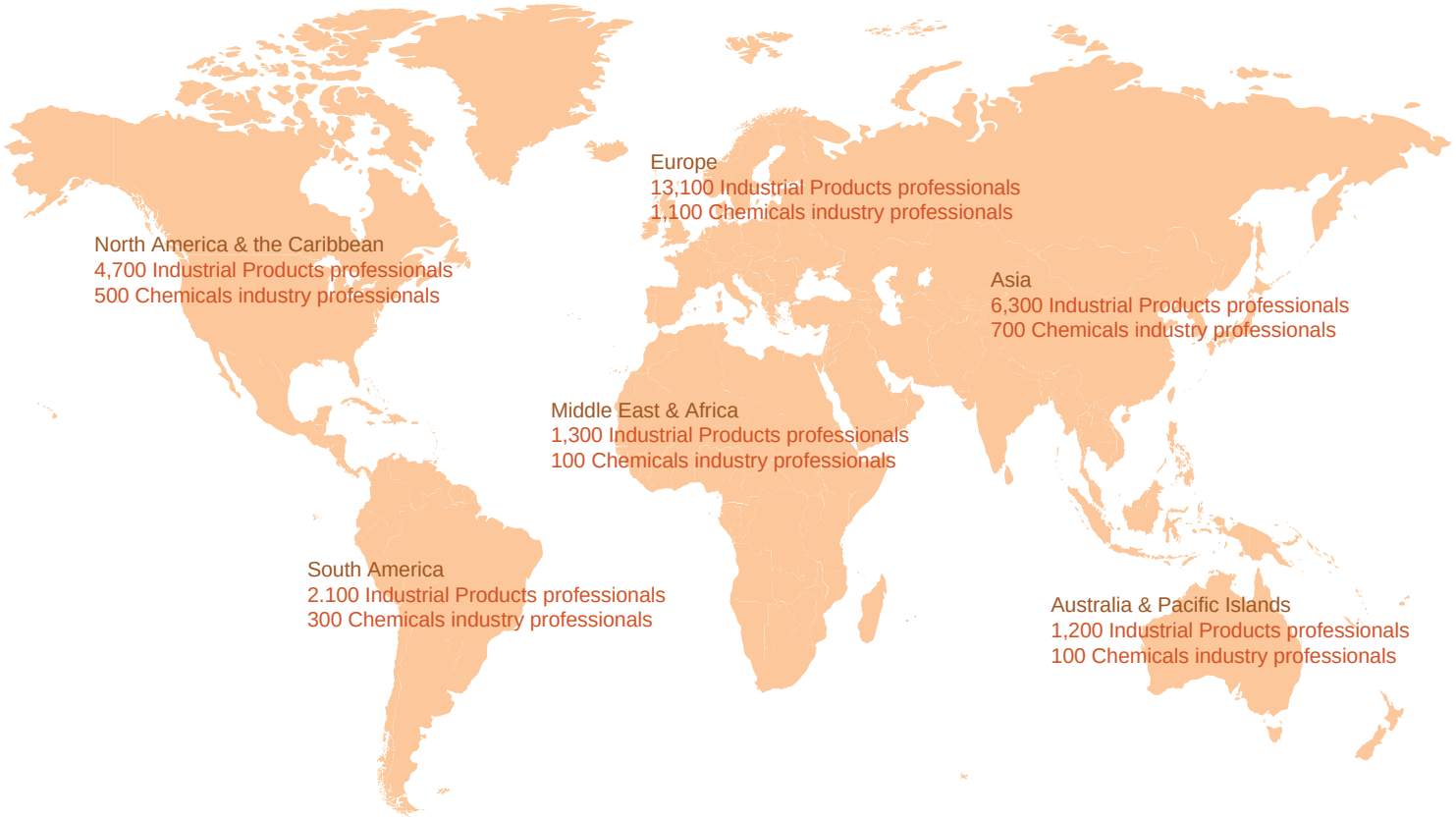
PwC continues to have the leading market share in the industry. Our Chemicals Industry Practice is comprised of a global network of more than 2,800 partners and client service professionals. Our chemicals team encourages dialogue on emerging trends and issues by sponsoring conferences for industry executives. PwC is a sponsor of leading industry conferences and frequently authors articles for, or is quoted in, leading industry publications. We are proud to have relationships with Chemical Week, ICIS, American Chemical Council and the Chemical Heritage Foundation. Our involvement in these organizations represents our commitment to furthering industry dialogue with chemicals industry leaders. Our specialists are concentrated in areas where the chemicals industry operates today and in the emerging markets where the industry will operate in the future.

Quality deal specialists

PwC's Transaction Services practice, with more than 3,800 dedicated deal specialists worldwide, has the right industry and functional experience to advise you on all factors that could affect the transaction, including market, financial accounting, tax, human resources, operating, IT and supply chain considerations. Teamed with our Chemicals Industry Practice, our deal specialists can bring a unique perspective to your deal, addressing it from a technical aspect as well as from a chemicals industry point of view.

Local coverage, global connection

PwC's chemicals industry practice consists of over 2,800 professionals who serve the chemicals industry, and is a part of an Industrial Products group that consists of more than 28,700 professionals, including approximately 16,700 providing Assurance services, over 7,000 providing Tax services, and 5,000 providing Advisory services.



Contacts

PricewaterhouseCoopers global Chemicals practice

PricewaterhouseCoopers' Chemicals practice is a global network of professionals who provide industry-focused assurance, tax, and advisory services to more than 200 public and private chemicals companies. Our leadership team consists of:

Global Leader
Saverio Fato—Cleveland, OH, US, +1 (216) 875 3030
saverio.fato@us.pwc.com

Global Tax Leader
Michael Burak—Florham Park, NJ, US, +1 (973) 236 4459
michael.burak@us.pwc.com

Global Advisory Leader
Volker Fitzner—Frankfurt, Germany, +49 (69) 9585 5602
volker.fitzner@de.pwc.com

Global Client Service Advisor
Gideon Miller—Houston, TX, US, +1 (713) 356 4165
gideon.miller@us.pwc.com

US Leader
Tracey Stover—Philadelphia, PA, US, +1 (267) 330 2425
tracey.a.stover@us.pwc.com

US Transaction Services Director
Bruce Chalmers—Philadelphia, PA, US, +1 (267) 330 1477
bruce.chalmers@us.pwc.com

US Transaction Services Manager
Simon Bradford—New York, NY, US, +1 (646) 471 8290
simon.bradford@us.pwc.com

US Industrial Products Director
Neelam Sharma—Florham Park, NJ, US, +1 (973) 236-4963
neelam.sharma@us.pwc.com

US Industrial Products Sector Analyst
Tom Haas—Florham Park, NJ, US +1 (973) 236-4302
thomas.a.haas@us.pwc.com

US Industrial Products Marketing Manager
Diana Joslin—Florham Park, NJ, US, +1 (973) 236-7264
diana.t.joslin@us.pwc.com

Germany Leader
Volker Booten—Berlin, Germany, +49 (30) 2636 5217
volker.booten@de.pwc.com

Central and Eastern Europe Leader
Pawel Peplinski—Warsaw, Poland, +48 (22) 523 4433
pawel.peplinski@pl.pwc.com

United Kingdom Leader
Richard Bunter—London, UK, +44 (0) 191 269 4375
richard.bunter@uk.pwc.com

Greater China Leader
Angel Dou—Beijing, China, +86 (10) 6505 3333, Ext. 515
angel.dou@cc.pwc.com

PricewaterhouseCoopers global Transaction Services (TS) practice

PricewaterhouseCoopers' Transaction Services practice offers a full range of tax, financial, business assurance and advisory capabilities covering acquisitions, disposals, private equity, strategic M&A advice, advice on listed company transactions, financing and public/private partnerships. The team consists of:

Global Leader
Colin McKay—New York, NY, US, +1 (646) 471 5200
colin.mckay@us.pwc.com

US Leader
John McCaffrey—San Francisco, CA, US, +1 (415) 498 6150
john.p.mccaffrey@us.pwc.com

Europe Leader
Phillippe Degonzague—Paris, France, +33 (01) 5657 1293
philippe.degonzague@fr.pwc.com

Asia-Pacific Leader
Todson Page—Tokyo, Japan, +81 (03) 6266 5767
todson.page@us.pwc.com

PricewaterhouseCoopers Research and Analytics group

Senior Manager, Industrial Products Analytics
Michael Portnoy—Tampa, FL, US, +1 (813) 348 7805
michael.j.portnoy@us.pwc.com

Senior Manager, Mergers and Acquisitions Research
Ernest Fierro—Tampa, FL, US +1 (813) 348 7484
ernest.fierro@us.pwc.com

Methodology

Chemical compounds is a quarterly analysis of deals in the global chemicals industry. Deal information was sourced from Thomson Reuters using the Thomson-defined industry sector of chemicals and allied products. 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, 2008, and December 31, 2008, 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 Europe and Eastern Europe categories based on UN definitions) and the Middle East (defined as a separate category based on US CIA World Factbook). 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.

Deal activity during 2006 and 2007 listed in this report exceeds the 2006 deal activity as enumerated in the Q4 2007 M&A report because the source continually updates deal activity in prior periods as deals are discovered. For this same reason, the total 2008 results are different from the sum of Q3 YTD 2008 plus Q4 2008 results.

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