

# Chemical compounds\*

Global Chemical Mergers and Acquisitions analysis  
Quarterly briefing—Fourth quarter 2007

Unless otherwise noted, all data was sourced from Thompson Financial and all reference to \$ are USD.

Chemicals sector defined by PricewaterhouseCoopers.



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Global Chemicals  
Industry Leader



Bruce Chalmers  
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Services

## Perspective: our thoughts on 2007 and 2008 deal activity

2007 proved to be a very interesting year for M&A in the chemical industry as total deal activity jumped from \$53 billion in 2006 to \$109 billion in 2007. This increase was driven by slightly increased volume compounded by a greater number of deals with transaction values over \$1 billion. Beyond the high-level headline, the industry had some fundamental shifts with major acquisitions made through cross-border deals that may accelerate a reshaping of the industry that has been building for several years.

On a macro level, the overall M&A market was influenced by an active lending environment for the first half of the year, followed by a midyear disruption in the US credit markets and a continued decline in the value of the US dollar. With a tightening of the debt markets, many expected to see a major contraction of M&A activity during the second half of the year. The chemical industry M&A pipeline proved to be strong enough to maintain its momentum during this period of turmoil with more than 50% of 2007 deals (over \$50 million) announced in the second half of the year. This resilience was further exhibited when several large deals were completed in the second half of the year, including Azko's acquisition of ICI (\$16 billion), Basell's acquisition of Lyondell (\$12 billion) and PPG's acquisition of SigmaKalon (\$3 billion).

2007 was also marked by more aggressive bidding activity from certain emerging market players, which resulted in a shift in ownership of several high-profile chemical businesses. GE plastics was acquired by SABIC, which links a significant plastics position with a major petrochemical producer deeply rooted in a region with low-cost feedstock. In the inorganic segment, Cristal's acquisition of Lyondell's titanium dioxide business (previously Millennium Chemicals) catapulted a small, regional Middle Eastern player to a leading global position. We expect to see this trend continue with active foreign bidders including Indian and Chinese companies.

Looking at the M&A activity from a segment perspective, it is clear that 2007 trends will likely drive change going forward. Notwithstanding the deals mentioned above, the petrochemical sector had several other large shifts including the bid for Huntsman, Basell's acquisition of Lyondell and Dow's joint venture with Petrochemical Industries Company KSC. The coatings segment, which has seen significant consolidation through middle-market deals in the past, had two major shifts with Akzo's acquisition of ICI and PPG's acquisition of Sigma Kalon, both of which are expected to fuel reactions from competitors.

We expect that the macro environment in the US debt and currency markets, including the resultant impact on global debt markets, is likely to continue to impact M&A activity going forward. Although we do not expect the chemical M&A market to maintain its 2007 pace, we do expect that middle-market deals will remain active and that the bidding leverage will be strong with strategic investors, particularly foreign strategic bidders for US assets.

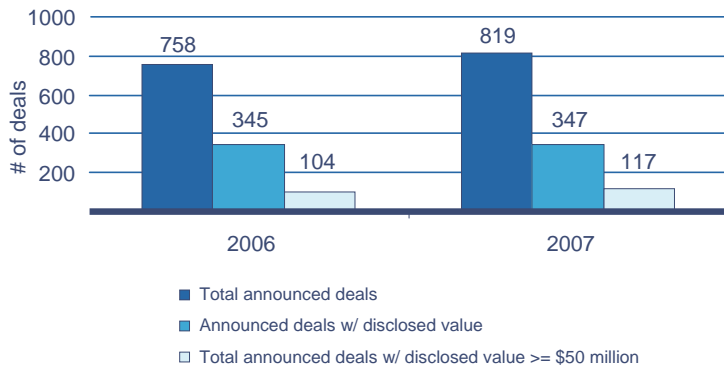
We expect that 2008 will be an interesting year for chemical industry M&A with non-US strategic bidders being well positioned and several companies announcing that they are performing "strategic reviews," which is often a precursor for portfolio changes. Additionally, as the debt markets normalize, we expect to see divestitures move forward that may have been held back in the second half of 2007.

Saverio Fato  
Partner

Bruce Chalmers  
Director

## 2007 deal value driven by large deals greater than \$1 billion

### Deal activity by number of deals



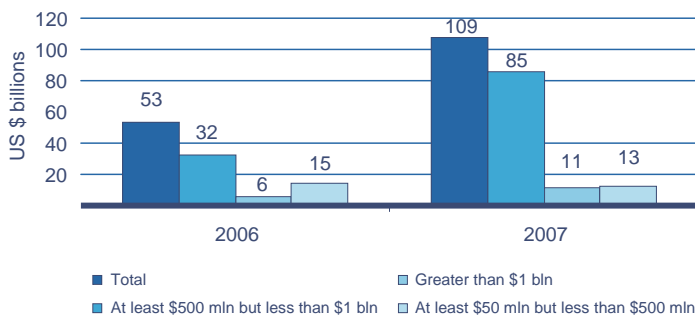
2007 deal volume (by number of announced deals) was up slightly over 2006 with 61 additional deals, 13 of which had announced transaction values of \$50 million or more.

The strength of the first half of the year was no surprise given the momentum carried through from 2006. There was some uncertainty for the second half of 2007 that was created by the midyear debt market turmoil. However, the chemical industry M&A activity proved to be resilient in the second half of 2007.

Note: 2006 deal activity in this report exceeds the 2006 deal activity as enumerated in the Q3 2007 M&A report because the source continually updates deal activity in prior periods as deals are discovered.

### Deal activity by total deal value

Measured by value of deals with disclosed value at or above \$50 million

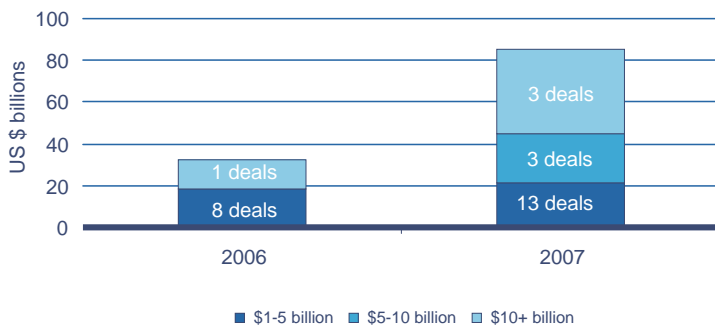


The remainder of the analysis is focused on announced deals with transaction values greater than \$50 million. Although there were many deals with transaction values less than \$50 million, their average deal size was relatively small with 241 deals in 2006 worth approximately \$2.5 billion (\$10.2 million on average) and 230 deals in 2007 worth approximately \$2.4 billion (\$10.4 million on average).

Total deal value for 2007 exceeded total deal value for all of 2006 (\$109 billion vs. \$53 billion, respectively). This was primarily driven by a high volume of large deals (greater than \$1 billion transaction value). 2006 had nine large deals during the entire year; 2007 had 19 large deals.

### Large deals (\$1 + billion)

Value (and number of deals in category)



Furthermore, as shown in the chart to the left, the average size of large deals increased significantly in 2007 with three deals that were greater than \$10 billion and three that were greater than \$5 billion (but less than \$10 billion). In 2006, only one deal was greater than \$10 billion and none was greater than \$5 billion (but less than \$10 billion). The three large deals in excess of \$10 billion in 2007 were ICI, Lyondell Chemical and GE Plastics.

## Deal activity by investor type – Private Equity activity not significantly impacted by midyear debt crisis

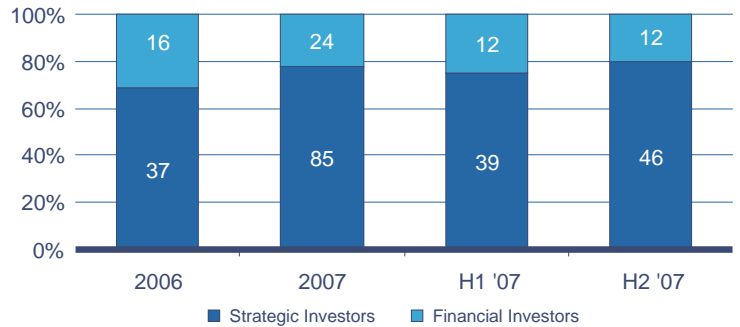
Despite the high level of private equity deal activity in recent years, the majority of deals (as measured by deal value) have been announced by strategic bidders.

Similar to the level of overall deal activity remaining resilient with the midyear debt crisis, the level of deal activity by financial investors remained relatively constant between the first and second halves of 2007.

Although this data reveals the strength that strategic bidders have relative to financial bidders, it does not fully reflect the true level of financial bidder activity and the impact that they have had on the bidding process. Some of the bidding processes have had financial bidders that have influenced the prices such that strategic bidders have been required to pay more to win bids. Additionally, some of the winning bidders were portfolio companies of private equity firms. Although the acquiring legal entity was a strategic bidder, the deal process was influenced by the ultimate shareholders (i.e., financial investors). As an example, Apollo's portfolio company Hexion has been a recently active strategic bidder, and it is currently in the acquisition process for Huntsman. (See the large deal section on pages 4-9 for additional information.)

Deal activity by investor type

Measured by percentage of deal value (actual deal value shown in chart)



## Regional distribution of 2007 large deals (by target nation)



<sup>1</sup> Denotes if strategic buyer is a portfolio company of a financial organization  
See the Large deal section on pages 4-9 for additional information

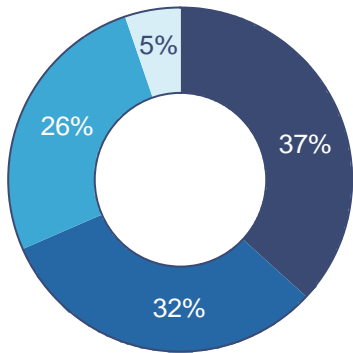
## Regional distribution of deals – Middle Eastern acquirers active in large deals

The regional distribution of deals, split by deal value, indicates that North America, Western Europe and Asia Pacific continue to be the most active regions, particularly for the larger deals. As seen in previous periods, other regions tend to only be active in smaller deals. However, as noted in our analysis, Middle Eastern acquirers were particularly active in deals with values greater than \$1 billion in 2007. Of the 19 deals with transaction values greater than \$1 billion in 2007, five were by Middle Eastern acquirers for a total transaction value of over \$24 billion. (See the large-deal section on pages 4-9 for additional information.)

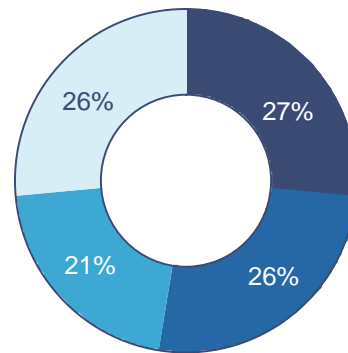
### Regional distribution of 2007 deals (by number of deals)

By target region

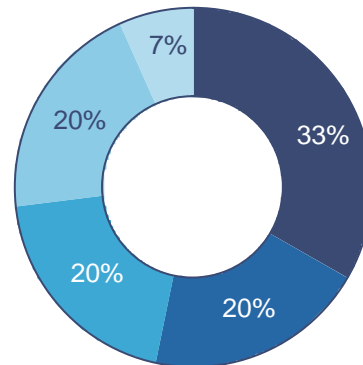
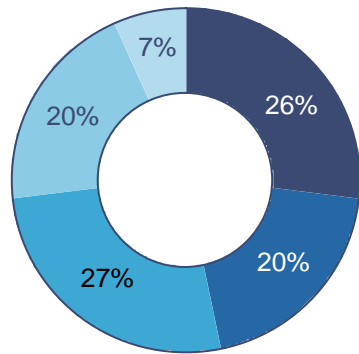
19 deals worth at least \$1 billion



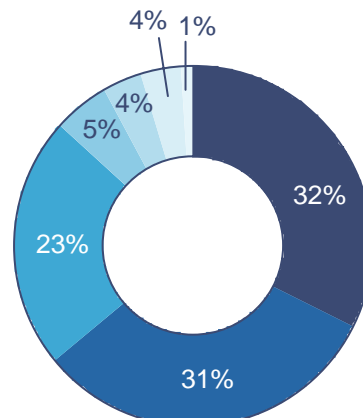
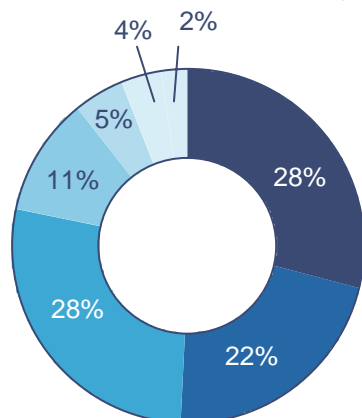
By acquirer region



15 deals worth at least \$500 million (but less than \$1 billion)



83 deals worth at least \$50 million (but less than \$500 million)



## Large deals in 2006 and 2007

### Large deals in 2006

Month announced	Target name	Target nation	Acquiror	Acquiror Nation	Status	Value of transaction in US\$ billion
Jan	BOC Group PLC	United Kingdom	Linde AG	Germany	Completed	14.05
Jan	Engelhard Corp	United States	BASF AG	Germany	Completed	4.86
Sep	GE Advanced Materials	United States	Apollo Management LP	United States	Completed	3.80
Mar	Degussa AG-Construction Chem	Germany	BASF AG	Germany	Completed	3.34
Nov	HC Starck GmbH und Co KG	Germany	HC Starck SPV	United States	Completed	1.49
Dec	Bunge Fertilizantes SA	Brazil	Fosfertil	Brazil	Pending	1.37
Feb	Groupe Materis	France	Wendel Investissement SA	France	Completed	1.21
Aug	MacDermid Inc	United States	Investor Group	United States	Completed	1.14
May	Hawkeye Holdings Inc	United States	Thomas H Lee Partners LP	United States	Completed	1.08

### Large 2007 deal summary

#### ICI/Akzo

The acquisition provides the opportunity to create a global leader in coatings and one of the largest specialty chemicals companies in the world with complementary brands, assets and skills, and leading positions in attractive specialty chemicals markets. The enlarged Akzo Nobel group will benefit from a diversified and broad geographic presence, a significantly strengthened Decorative Coatings business and highly attractive platforms for growth in emerging markets. Akzo Nobel intends to find a new owner for ICI's Specialty Starches activities and plans to retain ICI's Specialty Polymers business. (Akzo Nobel Press Release October 1, 2007.) On January 2, 2008, the boards of Akzo Nobel and ICI announced that the Scheme of Arrangement is effective. As a result the shares of ICI ceased trading on January 3, 2008, with the shareholders of ICI being entitled to receive 670 pence per share, and, if entitled, £1.00 of loan notes for each £1.00 of cash consideration entitled under the loan alternative. (Akzo Nobel Press Release, January 2, 2008.)

#### Lyondell/Basell

Basell and Lyondell announced on December 20, 2007, that they completed their merger, with Basell acquiring Lyondell's common stock for \$48 per share for a total enterprise value of \$20 billion, including the assumption of debt.

Volker Frautz, CEO of LyondellBasell, commented that, "with the combination of Basell and Lyondell, we have created a global leader in the petrochemical industry, with exceptional capabilities in both chemicals and fuels."

The merger created one of the world's largest independent chemical companies, with Lyondell's three business segments—ethylene, co-products and derivatives; propylene oxide and related products; and refining—complementing and significantly strengthening Basell's polyolefin business.

The combined entity has annual revenues of \$42.8 billion (proforma 12 months ended September 30, 2007), 60 manufacturing sites in 19 countries and 15,000 employees worldwide. (Lyondell Press Release, December 20, 2007.)

#### GE Plastics/SABIC

GE, the listed Connecticut company, said it sold GE Plastics to Saudi Basic Industries, a petrochemicals manufacturer, for \$11.6 billion in cash plus assumption of liabilities. GE Plastics is a \$6.645 billion supplier of plastic resins widely used in automotive, healthcare, consumer electronics, transportation, performance packaging, building and construction, telecommunications and optical media. It is headquartered in Massachusetts and employs 10,300 people in 60 locations worldwide with outstanding records of quality and environmental performance. (Mergermarket Press Release, May 21, 2007.)

The combined business has been renamed Sabic Innovative Plastics. Brian Gladden, former vice president and general manager of GE Plastics resins division, was named CEO.

Gladden commented that the market strategy of the combined entity, "will remain the same ... focusing on innovation and higher end engineering plastics, with products that are differentiated." Sabic has also expressed interest in building the business through further acquisitions, particularly in the higher temperature and higher performance materials segments. (Chemical Week, September 12, 2007.)

The acquired business complements to SABIC's existing business without any overlaps. SABIC's intention is to grow the business globally, and add high-performance plastics to the product range.

GE selected SABIC as the winner of the auction based on price and SABIC's premier position as one the world's fastest growing, innovative companies. (Sabic Press Release, May 21, 2007.)

## Large deals in 2007

Month announced	Target name	Target nation	Acquiror	Acquiror Nation	Status	Value of transaction in US\$ billion
Jun	ICI PLC	United Kingdom	Akzo Nobel NV	Netherlands	Completed	16.26
Jul	Lyondell Chemical Co	United States	Basell NV	Netherlands	Completed	12.36
May	GE Plastics	United States	SABIC	Saudi Arabia	Completed	11.60
Dec	Dow Chemical Co-Petrochemicals <sup>1</sup>	United States	Petrochemical Inds Co <sup>1</sup>	Kuwait	Pending	9.50
Apr	Orica Ltd	Australia	Investor Group	United States	Pending	8.34
Jul	Huntsman Corp	United States	Hexion Specialty Chemicals Inc	United States	Pending	6.24
Jul	SigmaKalon Group BV	Netherlands	PPG Industries Inc	United States	Completed	3.04
Nov	Nufarm Ltd	Australia	Investor Group	China	Withdrawn	2.77
Dec	UAP Holding Corp	United States	Agrium Inc.	Canada	Pending	2.62
Oct	Arysta LifeScience Corp	Japan	Industry Equity Invest Ltd.	Ireland-Rep	Pending	2.19
Jun	PQ Corp	United States	The Carlyle Group	United States	Completed	1.50
Jun	Egyptian Fertilizers Co SAE	Egypt	Abraaj Capital Ltd	Utd Arab Em	Completed	1.41
Jul	LG Petrochemical Co Ltd	South Korea	LG Chem Ltd	South Korea	Pending	1.20
Jul	Taminco NV	Belgium	Investor Group	United Kingdom	Pending	1.09
Jul	Aromatics(Thailand)PCL	Thailand	PTT PCL	Thailand	Intended	1.08
Feb	Lyondell Chemical Co-Inorganic	United States	Cristal	Saudi Arabia	Completed	1.05
Sep	Chandra Asri Petrochemical Ctr	Indonesia	Barito Pacific Timber Tbk TP	Indonesia	Completed	1.05
Aug	HT Luxembourg Sarl	Luxembourg	Arcapita Bank BSC	Bahrain	Completed	1.04
Oct	Foseco PLC	United Kingdom	Cookson Group PLC	United States	Pending	1.00

<sup>1</sup>Transaction is expected to be a 50/50 joint venture.

### Dow Chemical Co-Petrochemicals/ Petrochemical Industries Company

The Dow Chemical Company (Dow) and Petrochemical Industries Company (PIC) of Kuwait, a wholly owned subsidiary of Kuwait Petroleum Corporation (KPC), announced plans to form a 50/50 joint venture that will be a market-leading, global petrochemicals company.

The joint venture, to be headquartered in the United States, will manufacture and market polyethylene, ethyleneamines, ethanolamines, polypropylene and polycarbonate. The JV is expected to have revenues of more than \$11 billion (pro forma) and employ more than 5,000 people worldwide.

Andrew N. Liveris, Dow chairman and CEO, commented that, "For Dow, this marks an important milestone in our transformational strategy: growing our basics businesses through joint ventures; reducing our capital intensity; and freeing up cash to invest in our portfolio of performance and market-facing businesses."

From the KPC perspective, KPC CEO Saad Al-Shuwaib said that "by selectively investing in downstream petrochemical businesses, we are maximizing the value of Kuwait's hydrocarbons resources while diversifying our national economy and increasing job opportunities."

The transaction is subject to the completion of definitive agreements, customary conditions and regulatory approvals, and it is anticipated to close in late 2008. To form the new company, Dow will sell to PIC a 50% interest in the business assets included in the transaction. In turn, both PIC and Dow will place their shares of the assets into the joint venture, with each party then taking a 50% equity interest in the new company. The value of the five Dow global businesses that will form the joint venture is approximately \$19 billion. Dow will receive approximately \$9.5 billion (pre-tax) from PIC for the 50% interest. (Dow Press Release, December 13, 2007.)

### Orica Ltd/Investor Group

On April 18, 2007, Orica announced that it rejected a non-binding and indicative proposal from a consortium (comprising Bain Capital

Partners, Blackstone Capital Partners, Pacific Equity Partners and Morgan Stanley Principal Investments) offering to acquire Orica for a cash consideration of \$32 per share by way of a scheme of arrangement. (Orica Press Release, April 18, 2007.)

There has been no further public announcement concerning this transaction; however, Orica has continued its acquisitive track, most notably acquiring Excel Mining Systems on September 24, 2007, for \$670 million. (Orica Press Release, September 24, 2007.)

The Excel Mining Systems transaction was completed on October 26, 2007. (Orica Press Release, October 29, 2007.)

## Huntsman Corporation/Hexion Specialty Chemicals

Hexion Specialty Chemicals Inc., an Apollo Management LP portfolio company, announced the signing of a definitive agreement to acquire Huntsman Corporation (NYSE:HUN). Huntsman has terminated its previous merger agreement with Basell (which resulted in a \$200 million break-up fee).

“This transaction provides Hexion and Huntsman with a great opportunity to create a world-class company with leading-edge products and technologies, a greatly expanded global reach, particularly in the high-growth Asia-Pacific region, and an outstanding team of people,” said Craig O. Morrison, chairman and CEO of Hexion. “Our combined company will be one of the world’s largest chemical companies and a leader in our ability to serve customers with an expanded portfolio of specialty materials and a significantly enhanced global presence.”

Joshua J. Harris, founding partner with Apollo Management LP, said: “This acquisition will build Hexion into one of the world’s largest specialty chemical companies. The combined enterprise will have annual sales of more than \$14 billion and more than 21,000 associates and 180 facilities around the world. We are pleased to welcome the Huntsman team and look forward to building on their many accomplishments in the industry.” (Hexion Press Release, July 12, 2007.)

Huntsman and Hexion Specialty Chemicals have received a request from the Federal Trade Commission (FTC) for additional information in connection with Hexion’s previously announced \$10.6 billion acquisition of Huntsman. “Both parties intend to continue to cooperate fully with the FTC,” Hexion said in recent regulatory filings. “The effect of the second request is to extend the waiting period imposed (by antitrust law) until 30 days after both companies have substantially complied with the request.” Hexion has a leading 34% global market share in epoxy resins and has some overlap with the epoxy business of Huntsman, which ranks third worldwide, analysts say. (Chemical Week, October 17, 2007.)

Both companies reported net losses in their separate Q3 earnings releases; however, in both cases, the losses had improved from the prior year’s Q3 period. Craig Morrison, Hexion’s chairman, president and CEO, commented that both companies “continue to work

diligently to satisfy all closing conditions” and complete their merger “as quickly as possible.” (Chemical Week, November 21, 2007.)

Hexion recently announced that both it and Huntsman have agreed to allow additional time for the Federal Trade Commission to review their proposed merger.

As a result, the merger is not expected to close before May 3, 2008. To accommodate the extension, Hexion has also given notice to Huntsman that on April 5, 2008, it will exercise its option to extend the Termination Date under the Merger Agreement for 90 days. Thus, if the conditions to Hexion’s extension right are met on April 5, 2008, the termination date under the Merger Agreement will be extended until July 4, 2008.

“This extension is not unusual in a transaction of this size involving numerous global locations,” said Craig O. Morrison, Hexion’s Chairman and CEO. “We are fully cooperating with regulatory agencies and will continue to work closely with Huntsman and the agencies in order to obtain the regulatory approvals required to complete the merger.” (Hexion Press Release January 25, 2008.)

Sources have commented that post merger, Apollo (owner of Hexion) is likely to divest Huntsman’s TiO<sub>2</sub> operations, and possibly two other units within Huntsman’s performance products business. The TiO<sub>2</sub> business had sales and EBITDA of \$1.1bn and \$0.1bn in 2006 respectively, while the total business performance unit achieved \$2bn sales and \$0.2bn EBITDA in the same period. (Chemical Week, January 28, 2008.)

## SigmaKalon Group/PPG Industries

PPG completed its purchase of SigmaKalon Group from global private investment firm Bain Capital on January 2, 2008. SigmaKalon is a global producer of architectural, protective, marine and industrial coatings, and a leading coatings supplier in many parts of Europe and other key national markets across the globe, including a growing presence in Africa and Asia. SigmaKalon sells architectural coatings directly to professional painters via a network of service centers, and it maintains a network of approximately 500 company-owned stores and approximately 3,000 independent wholesalers that give it direct access to customers. SigmaKalon was created in 1999 from the merger of Total’s Kalon Group and PetroFina’s Sigma Coatings, and it was acquired in 2003 by Bain Capital. Sales have increased from approximately \$1.7 billion in 2003 to approximately \$2 billion in 2006, with the acquisition expecting to add approximately \$3 billion of sales.

“The SigmaKalon business has performed well financially and would be a strong complement to our existing coatings businesses,” said Charles E. Bunch, chairman and chief executive officer of PPG. “It would give us an excellent footprint in the European architectural coatings segment, where today we have very nominal participation. This acquisition would give us a more balanced coatings business in Europe, approximately doubling our European sales, and expand our global coatings portfolio by more

than 40 percent.”Bunch added that the acquisition would also strengthen PPG’s participation in higher growth markets, such as Southern and Central Europe, Africa and Asia, and fits well with PPG’s growing presence in protective and marine coatings, spurred by several other recent acquisitions. (PPG Press Releases, July 19, 2007, and January 2, 2008.)

## **Nufarm/Investor Group**

On November 5, 2007, Nufarm said it had received a non-binding and conditional proposal from a consortium comprising China National Chemical Corporation (ChemChina), The Blackstone Group (Blackstone) and Fox Paine Management III, LLC (Fox Paine), relating to a proposal to acquire 100% of Nufarm shares for \$17.25 per share. Additionally, Nufarm will pay a dividend of up to \$0.30 per share based on the company’s earnings and cashflow prior to the transaction, for a total consideration of \$17.55 per share.

The deal would combine Nufarm with certain agricultural chemical businesses of ChemChina (the largest state-owned, diversified chemical enterprise in China, with significant focus on agricultural chemicals) to create the global leader in off-patent crop protection.

The board unanimously recommended that the shareholders accept the offer and entered into a period of exclusivity with the consortium on November 5, 2007, that expired on December 10, 2007. At this time, the consortium advised the board that it would be unable to formalize its proposal prior to the expiry of the period of exclusivity, thus discussions between Nufarm and the consortium ceased, and the deal was withdrawn. (Nufarm Press Releases, November 5, 2007, and December 10, 2007.)

## **UAP Holding Corp/Agrium Inc.**

Agrium Inc. and UAP Holding Corp. announced that they entered into a definitive agreement for Agrium to acquire UAP. Under the terms of the agreement, a wholly owned subsidiary of Agrium will commence a tender offer to purchase all of the outstanding common stock of UAP for \$39 per share in cash for an aggregate transaction value of approximately \$2.65 billion, including an estimated \$487 million of assumed debt. The all cash purchase price represents a premium of 30% over the closing price of \$29.91 per share on November 30, 2007.

Agrium is a major retail supplier of agricultural products and services in both North America and South America, and it is a leading global producer and marketer of agricultural nutrients and industrial products, while UAP is the largest independent distributor of agricultural and non-crop products in the United States and Canada.

Mike Wilson, president and CEO of Agrium, stated that, “The acquisition will significantly expand our geographic base and our product diversity, and will offer an opportunity to leverage strengths of both companies.” He also stated: “We anticipate we will be able to generate annual synergies of approximately \$115 million by 2010, with a majority of this captured in 2009. We expect that these

synergies will be achieved primarily by improved margins through enhanced purchasing efficiencies.”

Agrium expects that the last 12 months’ combined entity retail EBITDA, excluding synergies, will be \$417 million.

The parties expect to complete the transaction in early 2008, and completion of the tender offer is subject to customary conditions, including that shares representing at least a majority of the UAP common stock on a fully diluted basis are validly tendered into the offer, and that customary regulatory approvals are obtained. (Agrium Press Release, December 3, 2007.)

## **Arysta LifeScience/Industrial Equity Investments Limited**

Industrial Equity Investments Limited (IEIL), an international investment company located in Ireland and owned by the Permira Funds, announced that it signed a definitive agreement to acquire Arysta.

Arysta LifeScience is the world’s 10th largest agrochemical company. The company markets a portfolio of more than 150 products in more than 125 countries with approximately 2,200 employees.

Margaret O’Connor, chairwoman of IEIL, commented, “We are delighted to be acquiring a truly global business headquartered in Japan and look forward to supporting the management in their growth going forward.”

The enterprise value is approximately JPY 250 billion (USD 2.2 billion), and completion of the transaction, which is subject to regulatory review and approvals, is anticipated to occur in first quarter 2008. (Arysta Press Release, October 22, 2007.)

## **PQ Corporation/Carlyle Group**

CCMP Capital Advisors, LLC (CCMP Capital), on behalf of J.P. Morgan Partners, LLC (JPMP), has reached an agreement for The Carlyle Group (Carlyle) to acquire Niagara Holdings Inc., parent company of PQ Corporation. PQ is a leading producer of specialty inorganic chemicals, catalysts and engineered glass products. The transaction value is approximately \$1.5 billion.

Andrew Marino, principal of Carlyle, said: “We are excited about becoming PQ’s new major shareholder. We look forward to supporting Mike Boyce and his team in continuing PQ’s growth plan.” Carlyle’s intention is to continue the implementation of PQ’s growth strategy. (Carlyle Press Release, June 1, 2007.)

On October 11, 2007, Carlyle announced that PQ has agreed to combine with INEOS Silicas, a division of INEOS, the global manufacturer of petrochemicals, specialty chemicals and oil products. The combined entity will generate revenues in excess of

\$1 billion, with Carlyle and INEOS owning 60% and 40%, respectively, of the entity.

Mike Boyce, chairman and CEO of PQ, commented that “a combination with INEOS Silicas offers an immediate way to achieve an enhanced global presence” and that the “size and growth profile of this new company will allow for better access to capital for future investments in growth opportunities.” (Carlyle Press Release, October 11, 2007.)

### **Egyptian Fertilizers/Abraaj Capital**

The Middle East and North Africa (MENA) region is witnessing growth in both foreign and domestic investment. The acquisition of Egyptian Fertilizers Company (EFC) exemplifies confidence in Egypt’s increased attractiveness as an investment destination.

The size and scope of this transaction represents a landmark for the region and the private equity industry in MENA. EFC is one of the most efficient firms in the high-growth global fertilizer industry. EFC will continue to lead the sector in Egypt, while also increasing its international reach.

This announcement signals Abraaj Capital’s ongoing commitment to the economic development of Egypt, following the landmark investment in Cairo-headquartered EFG-Hermes last year. (Abraaj Press Release, June 3, 2007.) There has been no further public announcement/press concerning this transaction since what was reported in our Q3 2007 report.

### **LG Petrochemical/LG Chem**

LG Chem plans to acquire LG Petrochemical Co. and merge the two Company’s operations. The acquisition involves shareholders receiving 0.48 LG Chem shares for every LG Petrochemical share they currently own.

The combined company will have approximately 1.66 million t/y of ethylene capacity, and that the merger is expected to strengthen feedstock purchasing power and improve the financial structure of the group. (Regulatory filing—extract from [www.petrochemicalnews.com](http://www.petrochemicalnews.com).) There has been no further public announcement/press concerning this transaction since what was reported in our Q3 2007 report.

### **Taminco/Investor Group**

The investor group includes CVC Capital Partners and Taminco management, which will own 75% and 25% of the company respectively. Before the transaction took place, Taminco bought the amines business of Air Products, which positioned them as the global market leader in methylamines, methylamine derivatives and higher amines. The investor group expects to further build Taminco through organic growth and acquisitions. The company was sold by the private equity firm, AlInvest Partners. (Taminco Press Release,

July 4, 2007.) There has been no further public announcement/press concerning this transaction since what was reported in our Q3 2007 report.

### **Aromatics/PTT PCL**

The large Thai company PTT PCL successfully bid for two separate companies, Aromatics and Rayong Refinery, and combined them to form one larger company. The new company will operate PTT Group’s integrated refinery and aromatics petrochemical business, as well as downstream product chain. After the completion of ongoing capacity expansions, the new company will be Thailand’s largest integrated refinery in terms of total production capacity, refining capacity (280,000 barrels per day) and aromatics production (2.2 million tons per year). The amalgamation is expected to be complete at the end of 2007, with shares in the newCo ready for trade at the beginning of 2008. (Aromatics Press Release, July 23, 2007.) There has been no further public announcement/press concerning this transaction since what was reported in our Q3 2007 report.

### **Lyondell Chemical Inorganic (Millennium)/Cristal**

Lyondell Chemical Company (NYSE: LYO) and the National Titanium Dioxide Company Ltd. (Cristal), announced that they have signed an agreement for a proposed sale by Lyondell of its worldwide inorganic chemicals business to Cristal in a transaction valued at approximately \$1.2 billion, including the assumption of certain liabilities directly related to the business. Cristal is a global producer of titanium dioxide exporting to more than 70 countries. Lyondell stated that the transaction would include a cash payment of \$1.05 billion, and estimated its after-tax proceeds at \$975 million.

“This transaction would allow us to accelerate our debt repayment and focus our resources on capturing the synergies between our refinery and our chemicals business to achieve the greatest value for our shareholders,” said Dan F. Smith, president and CEO of Lyondell.

Lyondell’s Millennium Inorganic Chemicals subsidiary is the world’s second-largest producer of titanium dioxide, with an annual capacity of 670,000 metric tons. Titanium dioxide is a white pigment commonly used in such consumer products as paint, toothpaste and sunblock.

Privately held National Titanium Dioxide Company Ltd. noted that it intends to continue operating the assets it will acquire from Lyondell. “The acquisition of Millennium Inorganic Chemicals is an exciting component of our continued growth story and increases our global presence, as we’ll gain facilities in Europe and Australia as well as North and South America. We have been impressed with the high quality of the employees, products and R&D,” said Dr. Talal Al-Shair, Chairman and CEO of Cristal. Approximately 2,900 employees are affiliated with the inorganic chemicals business.

Closing of the transaction is subject to regulatory clearance, compliance with labor and employment regulations, and other conditions that are typical for transactions of this type. Closing is anticipated to occur in the first half of 2007. (Lyondell Chemical Company Press Release, Feb. 26, 2007.) The sale was completed on May 15, 2007. (Lyondell Chemical Company Press Release, May 16, 2007.) There has been no further public announcement/press concerning this transaction since what was reported in our Q3 2007 report.

### **Chandra Asri Petrochemical Centre/Barito Pacific Timber Tbk PT**

On September 21, 2007, it was announced that Barito Pacific Timber Tbk PT acquired a 70% interest in Chandra Asri, a petrochemical products manufacturer and a joint venture among Indonesian state-owned Indonesian Bank Restructuring Agency, Marubeni Corp and Glazers & Putnam Investment Ltd, for 9.722 trillion Indonesian rupiah (\$1.050 billion).

Barito's principal activities are manufacturing plywood, blockboard, particle board and woodwork. The wood products manufactured include pallets, reeded decking, doors, furniture parts and handicrafts. Other activities are manufacturing of adhesive and logging. Operations are carried out in Indonesia.

Chandra Asri produces ethylene, propylene and pyrolysis gasoline for the Indonesian and regional export markets.

The transaction was subject to shareholder approval, and it remains pending (Thomson M&A).

### **HT Luxembourg Sarl (HT Troplast)/Arcapita**

The Carlyle Group and Advent International announced the sale of HT Troplast, the European developer, manufacturer and marketer of PVC window and door profiles, to international investment firm Arcapita. Financial details of the transaction were not disclosed.

The Carlyle Group and Advent International acquired HT Troplast from RUETGERS AG in January 2005. Headquartered in Troisdorf, Germany, the company currently has 3,750 employees across production and distribution sites in 21 countries worldwide.

The focus of the investment has been two-fold: to concentrate on improving the profitability of the core division, PVC profiles, and to position the business to maximize its full growth potential.

The company successfully sold its two non-core divisions in 2005: Trocellen, a provider of cross-linked polyolefin foam products, to Furukawa Electric and Otsuka Chemical; and Dynos, a leading producer of vulcanised fiber, to M2 Capital Partners.

Significant investments have been made in HT Troplast's manufacturing sites to enable the company to meet strongly growing demand in Europe. The company has expanded its international sales efforts and, in particular, established strong regional market positions in the high-growth Central and Eastern European markets. As a result, turnover from 2004 to 2006 grew at double-digit rates, resulting in net sales of more than \$800 million in 2006. The company also increased its profitability, which was previously below industry benchmarks.

Ron Sheldon, director of Advent International, and Ralf Huep, managing director of Advent International in Frankfurt, commented: "HT Troplast's position as a clear market leader was reflected in the high level of interest that its sale attracted. What's so exciting is that it still has major growth potential in strategically significant markets such as Ukraine, Romania, Turkey or Asia." (Carlyle Group Press Release, August 17, 2007.)

The European Commission granted clearance, on October 5, 2007, to the acquisition of sole control of HT Luxembourg S.à.r.l., the holding company of HT Troplast Group (Luxembourg) by PVC (Lux) Holding Company S.à.r.l. (Luxembourg), controlled by Arcapita Bank B.S.C.(c) (Bahrain). (Europolitics, October 8, 2007; copyright 2007, Europe Information Service, all rights reserved.)

### **Foseco PLC/Cookson Group PLC**

The boards of Foseco and Cookson reached an agreement on the terms of cash offer by Cookson for the entire equity of Foseco, for 295 pence per share, valuing the equity of Foseco at £497 million, or a premium of 31% to the closing price on October 1, 2007.

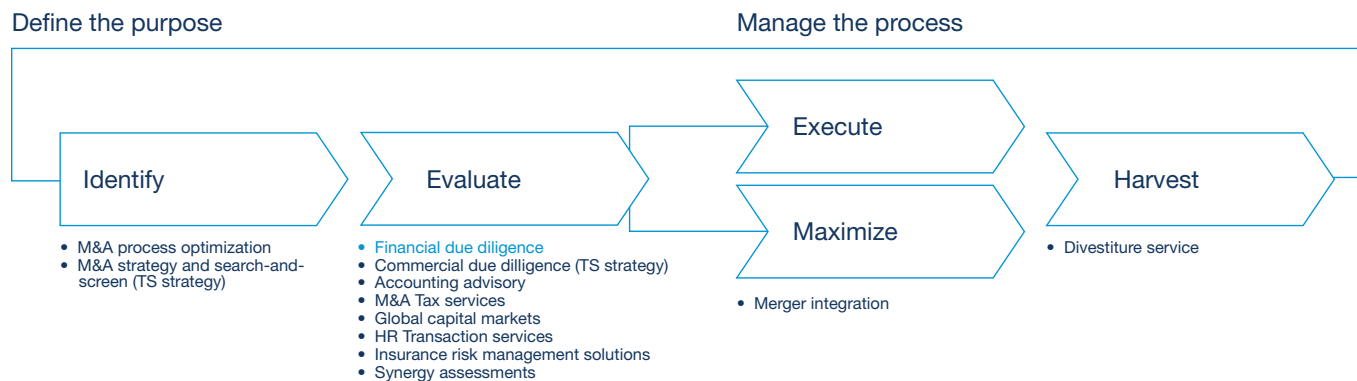
Cookson is a materials science company specializing in the ceramics, electronics and precious metals markets. The ceramics division focuses on the supply of advanced flow control refractory products to the global steel industry.

Robert Beeston, chairman of Cookson, said, "as a leading supplier of consumable products for use in the foundry and steel-making industries, Foseco is highly complementary to our ceramics division's activities" and that "the integration of the two businesses will generate significant synergies through the ability to cross-sell each business' products and services, elimination of duplicate overhead costs and increased purchasing efficiencies." Cookson believes that the acquisition is expected to deliver £18 million in cost synergies in the second 12-month period after completion of the acquisition.

The offer for Foseco by Cookson remains conditional, inter alia, upon the receipt of all necessary antitrust clearances. Foseco and Cookson continue to work toward obtaining such clearances by the end of March 2008 with the intent that the scheme should become effective on April 4, 2008. (Foseco Press Releases, November 8, 2007, and January 11, 2008.)

# Delivering value by mitigating risk, reducing costs, enhancing profitability and increasing efficiencies

## PwC Transaction Services deal continuum



## PricewaterhouseCoopers Financial Due Diligence (FDD) practice

This Group’s focus is to identify real risks, issues, and uncover hidden opportunities which can most impact the value and success of a deal.

Our quality of earnings, debt and debt-like items, working capital and other analysis can capture significant economic value and accounting considerations. Wherever possible we substantiate these with factual evidence and propose workable solutions. This helps our clients position and negotiate value and risk management aspects of agreements to their advantage.

FDD also combines key messages of other specialist diligence performed by us (HR & benefits, taxation, commercial, insurance, IT and operations). By bringing together value considerations in all of these areas, it becomes easier to evaluate each individually and collectively to make informed decisions.

Our expertise includes leading the process from inception through post transaction lifecycle with a team of industry, transaction and other specialist expertise. Engaging the FDD Group early in the deal process enhances the ability to properly negotiate and structure the transaction to maximize the value and minimize the risk.

## Financial Due Diligence case study—Assessing carve-out related impacts of acquisition chemical company with significant worldwide presence

<b>Issue</b>	In a highly competitive auction process, speed was a competitive advantage, but complexity of the business and carve-out created a extra proliferation of significant risks to identify and navigate effectively.
<b>Approach</b>	<p>PwC brought to bear a deep chemical deal and functional specialist team to identify and evaluate relationships between (a) financial performance, working capital and other matters and (b) shared key raw material, freight and logistics arrangements, back-office (finance, HR &amp; benefits, treasury, tax, IT) activities, customer and sales arrangements, and other benefits derived from related parties.</p> <p>The PwC team had a side-by-side working approach with our client so key issues were identified, assessed and proposed solutions elevated quickly. Real-time evaluation included input on economic, accounting and other “what-if” scenarios for alternative courses of action.</p>
<b>Impact</b>	The PwC team’s industry and functional knowledge of “what to look for” and “where to look” coupled with a side-by-side approach enabled issues to be (a) quickly identified (b) ranked for consideration in negotiations with the seller, (c) factored into valuation and contractual protection as deemed appropriately, and (d) seller counterproposals similarly evaluated. In combination, these factors contributed to our client’s competitive position in the auction process, led to the acquisition of knowledge to build a roadmap for a smooth transition for merging the target’s operations upon closing the transaction.

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## Consultant's corner

**BRUCE CHALMERS AND PAUL CRISCUOLO**  
**PRICEWATERHOUSECOOPERS**

MANY IN the chemical industry have now grown accustomed to dealing with private equity firms. But now, as these entities begin to exit their substantial investments, buyers will need to adapt to negotiating with them. These negotiations can be different from those with traditional corporate sellers because of the unique nature of private equity firms and their business model.

Private equity funds typically have a relatively finite lifespan, with funds raised, invested, investments exited, and capital returned, all in less than 10 years.

One of the key differences encountered in the negotiation of private equity deals relates to the indemnification of liabilities.

Many chemical transactions have significant valuation issues related to risk exposures that may take many years to manifest to a point that would allow them to be quantified with any reasonable level of accuracy.

Historically, the buyer's method of dealing with these issues was to gain comfort on the exposure through due diligence and valuation, and to manage any uncertainties through indemnification language in the purchase agreement.

In the latter, the seller retains responsibility for at least a portion of the exposure, thus allowing the purchaser to mitigate the risk associated with the deal.

Similarly, corporate sellers have often been willing to accept indemnification of many of these exposures in order to facilitate the transaction.

The merit of the seller's indemnification must be weighed against its ability or posture toward indemnification. And the length of time the seller's indemnity will cover must also be considered.

And buyers, too, may find negotiating indemnification from private equity sellers is different from their experience with corporate sellers.

Understanding this difference and the reasons for private equity sellers' limitations on indemnifying exposures will help companies prioritize their due diligence

procedures.

If the buyer wants the seller to pay certain costs related to uncertain exposures, it is imperative that they agree on how to deal with these costs, which could range from cost sharing to limited or full indemnification.

As long as the exposure can be delineated and the cost clearly identified when incurred, this can be a straightforward solution to addressing exposures that could have otherwise become potential deal breakers.

### TIME LIMITATIONS

But private equity sellers have an inherent difference that makes it difficult for them to indemnify exposures that may take many years to materialize.

More specifically, private equity firms make acquisitions with a discrete pool of funds that are raised, invested, liquidated and returned to their investors within a relatively short period of time.

During the life of a fund, private equity firms will buy and resell assets (or take the company public) typically within a three to five-year period. Once all funds are returned to the investors and the fund is closed, there is nothing of substance left to fund payments required, if any, under the

several years, such as the closure of a landfill or a plant nearing the end of its useful life.

### A TAXING ISSUE

Similarly, tax exposures are often difficult to quantify with any reasonable certainty due to the fact that the triggering event for any tax exposure will be a third-party audit conducted by the related taxing authority.

Although the relevant taxing authority often has a limited number of years in which to perform these audits (for example, generally within three years after a return is filed in the case of US federal tax law) and identify any potential exposures, the ultimate determination of any liability may take even longer.

Note that certain tax exposures may be mitigated by the transparency created through the recent adoption of FIN 48 by the US Internal Revenue Service. Under FIN 48 standards, taxpayers are required to disclose and quantify uncertain tax positions.

One potential option is to negotiate that a portion of the purchase price be set aside in escrow to cover specific pretransaction liabilities that will not be settled until after the transaction.

However, even under circumstances

**If the buyer wants the seller to pay certain costs related to uncertain exposures, it is imperative that they agree on how to deal with these costs**

terms of an indemnification.

This requires the buyer to determine how to value the risk of pretransaction exposures that will not materialize until sometime post-transaction, perhaps even after the private equity fund is closed.

For example, like many corporate sellers, private equity sellers saddled with environmental exposures often find them difficult to quantify, and a lack of relevant data creates uncertainty as to the extent of the issue, remediation requirements, and magnitude and timing of related costs.

Sometimes the triggering event for environmental exposures will not occur for

where a seller agrees to escrow a portion of the purchase price, the seller's time frame for closing out its funds will only make this approach practical for liabilities that will be settled in the short term. It would be rare for a private equity seller to agree to escrow for more than a one-year period.

Buyers will need to estimate the valuation impact of longer-term exposures and determine if such exposure fits their risk tolerance.

Taking this approach requires firms to prioritize their due diligence efforts to assess these exposures at the front end of the

process, and determine whether enough information can be gathered to delineate the risk.

There is no substitute for robust due diligence, which not only identifies risks, but also quantifies the financial implications. This will certainly require technical reviews of environmental reports and possibly environmental reviews during the deal.

### ADJUSTING FOR RISK

Once the buyer starts to get a rough picture of the potential risk, they will then need to determine if the risk can be properly dealt with in the purchase price.

If risk uncertainty does not fit the buyer's risk appetite, the buyer can decide to walk from the deal, attempt to secure indemnification or cost sharing, or insurance.

There is an environmental liability insurance market which provides coverage for first-party liabilities, that is, clean-ups, and third-party liabilities.

Several major insurers offer products to meet buyer needs for such coverage in the deal environment. This coverage is not cheap, and like all insurance coverage, it has limitations in terms and policy limits.

If insurance is deemed desirable, the insurer should be brought into the process as soon as possible, as their underwriting needs will be comparable to the buyer's environmental due diligence needs.

Insurance may not be a silver bullet,

but it can be an important risk-mitigation device. One distinctly desirable feature of insurance is that it helps the buyer to ring fence exposure, and reduce uncertainty. The buyer can bear the cost of the premiums or attempt to negotiate cost sharing with the seller.

Any cost sharing or indemnification agreement needs a specified trigger as to when monies will actually be expended, or costs indemnified.

Will a post-deal wait-and-see approach be mutually satisfactory? Or should more determinant triggers such as Phase II environmental analysis conducted by mutually agreeable environmental engineers immediately post-deal be a more favorable way to deal with indemnification or cost sharing?

While a buyer may want certainty, so does the seller. The seller will need to know how much and when. As such, open-ended cost sharing, hold-backs or indemnification may not be acceptable, and may inhibit what each party desires – a consummated deal.

Additionally, the buyer should communicate these priority issues as quickly as possible to the seller in order to maximize the opportunity for finding a mutually agreeable solution early in the process, rather than finding it to be a deal breaker later.

Identifying these issues early on will allow the time required to engage the proper experts to assess the magnitude of



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» Paul Criscuolo has been a practicing state and local tax consultant for approximately 10 years. He specializes in state and local income tax consulting, including all aspects of planning and audit/controversy resolution.

Paul obtained his bachelor of business degree and Juris doctorate from Seton Hall University School of Law in New Jersey, US, and his LLM in taxation from Georgetown University Law Center, Washington D.C.

» For more information, go to [www.pwc.com](http://www.pwc.com)

the risk and value likely outcomes.

In addition to the technical expertise required, having financial, insurance risk management and legal resources with significant private equity expertise on the due diligence and negotiation team will ensure a successful deal process. ■

## Deep chemicals industry experience

PwC provides audit, tax and advisory services to 84% of all chemicals companies in the US with revenue greater than \$500M and 74% of all US-based Industrial Products companies. Our Chemicals team encourages dialogue on emerging trends and issues by sponsoring conferences for industry executives. One such conference is the annual *Chemical Week Senior Financial Officers Conference*, where industry leaders discuss challenges and opportunities facing the chemicals industry and finance professionals. 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.

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### 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:

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## Quality deal specialists with Chemicals industry experience

PwC's Transaction Services practice, with over 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—over 4,000 partners and client service advisors worldwide—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.

### PricewaterhouseCoopers global Chemicals practice

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

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