



CHEMICAL INDUSTRIES
ASSOCIATION

Private equity in chemicals

A report commissioned by the
Chemical Industries Association
and prepared by Cogency

Prepared by:

Cogency

Sponsored by:

GRESHAM
Private Equity Solutions

Sponsored by:

KPMG

Private equity in chemicals

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Foreword

Over recent years there has been a growing interest in the role of private equity in the chemical industry – an interest that has been stimulated by the level of merger and acquisition activity taking place within the industry and the Stock Exchange's apparent lack of interest in the sector. To explore the reasons behind this, the Chemical Industries Association decided in late 2003 to commission this "Private equity in chemicals" report.

In commissioning this report, CIA was also keen to make a significant contribution to the work of the Chemicals Innovation and Growth Team (CIGT) and it is interesting that the findings echo the CIGT's recommendations on improving the skills base of the industry and its performance on innovation. This report expresses concerns over the industry's lack of skill in strategic marketing, commercial creativity and financial discipline, giving added substance to those CIGT recommendations.

We hope the Chemistry Leadership Council, as the delivery arm of the CIGT, considers this to be a useful contribution to its work and that the report promotes significant debate within industry about rising to the challenges. At a broader level, CIA will continue to play its part in the delivery of the CIGT recommendations.

A handwritten signature in black ink that reads "Judith Hackitt". The signature is written in a cursive style with a long, sweeping underline that ends in an arrowhead pointing to the right.

Judith Hackitt
Director General
Chemical Industries Association

Acknowledgements

Private equity in chemicals

Cogency Chemical Consultants Limited would like to thank the Chemical Industries Association for commissioning this piece of research and for its full co-operation in the preparation and publication of the findings.

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Most important of all, we wish to acknowledge the enthusiastic and constructive participation of the sixteen private equity houses without whom this work would not have been possible. We appreciated sincerely their open, candid and forthright contribution to this report. They were:

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Private equity in chemicals

This report documents current attitudes of private equity investors toward the chemical industry in the United Kingdom and Europe based on a programme of interviews with sixteen leading PE houses.

The European chemical industry is in a period of intense corporate activity, with an estimated €10 billion of assets available for acquisition. PE investors are expected to raise their share of global deals from the current level of around 25% to closer to 30% of transacted value, and as high as 40% in Europe.

Chemicals and materials currently represent about 3% (€0.9 billion) of European PE investment which totalled €27 billion in 2002.

Chemical sector definition remains an issue. Most PE houses position commodity and specialty intermediates in the sector, but confusion continues at the input and output ends of the value chain.

Private equity investors fell into three primary groups defined by the enterprise value of the target investment. Small, mid and large capitalisation value players target deals in the range €10-100 million, €100-500 million and €500-4000 million, respectively.

The UK market was identified as “a good place to do business” but described by some mid and large cap players as “essentially played-out”. Most expect continental Europe, in general, and Germany in particular, to present the greatest number of opportunities in the next 12-18 months.

PE views the chemical industry as more cyclical and more volatile than other investment sectors and, as a result, imposes additional selection criteria over and above its base requirements of good management, predictable cash flow and a good exit angle. Additional criteria vary between the small, mid and large cap players.

The management or leveraged buy-out (MBO/LBO) dominates the entry route for chemical sector investors. In the small cap market, PE houses have an expressed

preference for originating deals, and in the mid and large cap sectors, most deals are sourced through investment banks and corporate finance intermediaries, and typically involve an auction process.

PE interest in the opportunity-rich chemical sector is consistent across small, mid and large cap sectors. Experience of the sector gained in the last 10 years suggests that chemicals sector investments have generally been better for small cap investors, average for mid cap investors and distinctly variable for the large cap players.

PE houses commented heavily on management quality in the chemical industry in Europe. It is viewed as highly qualified and very able in technical, engineering and operational areas, but lacking in strategic marketing skills, commercial creativity and financial discipline. The main cause of the problem was identified as a lack of exposure rather than a lack of talent.

What PE investors seek in the chemicals sector varies by value sector but all share a desire for clear “defensibility”. Research showed that small cap investors seek safe harbour in niche businesses with barriers to entry, mid cap investors are prepared in addition to include well-invested intermediate producers, and large cap players seek competitive advantage based on operational cost leadership, sector leadership or diversity of manufacturing base.

Investors seek to avoid turnarounds, and companies with a poor track record in marketing, capital expenditure control, cash generation and addressing HS&E performance issues. There was a strongly expressed aversion to highly cyclical and over complex businesses.

Current investors have learned a lot about sector complexity, vulnerability, inter-dependency and inability to react quickly to price and supply and demand fluctuation. They continue to struggle to read and predict the cycle.

Interviewees expressed serious misgivings about the definition and misuse of the term “specialty” as it is used in the chemical industry, and confusion about what constitutes a commodity. The lack of differentiation and definition was identified as one cause of this problem.

PE houses said they had become increasingly aware of the importance of commercial due diligence to deal selection and execution.

The trade sale dominates exits. The absence of flotation opportunities due to weak interest from the stock market for chemicals, combined with the need for timely, profitable exits for PE players has given rise to a growing secondary buy-out market.

There was unanimous agreement that increasing private equity participation in the chemical industry is positive. In the view of the PE sector, it will drive a more entrepreneurial culture, create sustainable value for investors, improve cash management, financial discipline and management quality and impose better corporate governance.

Preface

This report is in response to growing interest in the chemical industry by the private equity (PE) asset class. Sixteen leading private equity houses active in the UK, European and global chemicals sector were interviewed during December 2003 and January 2004 and their views are documented in this report.

The primary aims of the exercise were to examine and assess:

- Current attitudes towards the UK and wider EU chemicals industry
- What different PE houses look for in an investment, what they avoid and their preferred value creation strategies
- What existing investors have learned from their experience of chemical asset ownership
- The potential impact of increasing private equity investment on the short, medium and long term economic sustainability of the industry

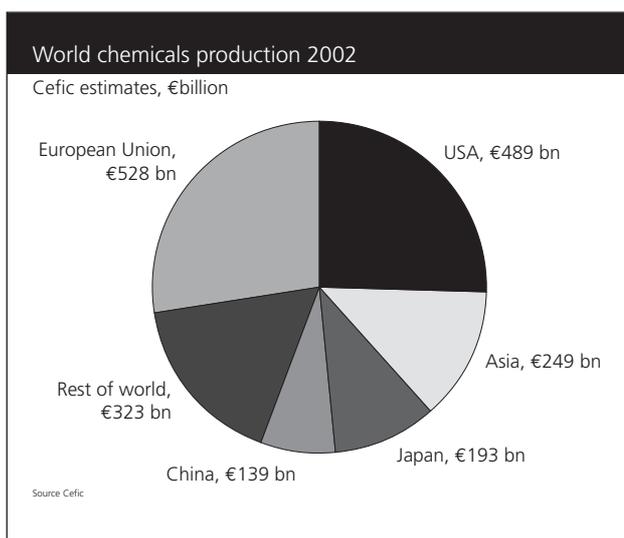
The timing of this research is important. It coincides with a period of intense corporate turbulence in chemicals globally and rapidly growing investment by private equity houses in the industry. It also contributes to a commitment by the UK Chemical Industries Association to support innovation in the chemical industry, encompassing both technology and financial structure, on behalf of its membership, their owners and investors.

Output from the research provides a check-list of key issues, reflections and ideas for chemical industry leaders and other sector stakeholders. For financial investors in the industry, it offers an opportunity to reflect on their collective experience of this important industry against a background of increasing investment opportunity.

This report includes a number of terms specific to the private equity sector. If you wish to source information about these or any other terms or nomenclature common to this industry, we recommend use of the European PE industry website glossary (www.evca.com).

The European chemical industry

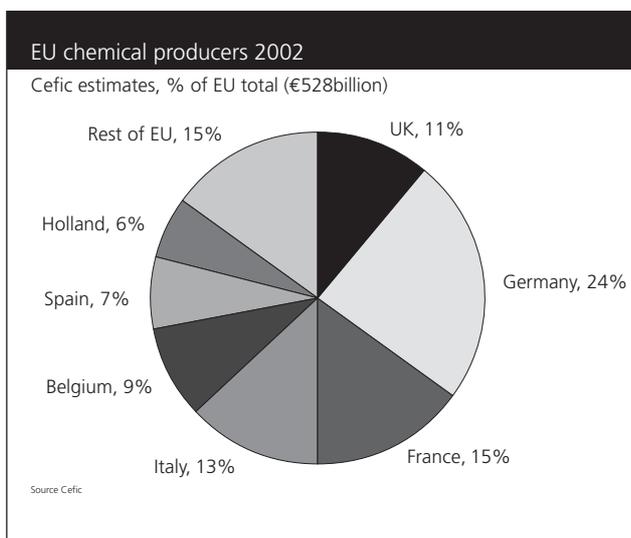
The chemical industry remains one of the largest and most important manufacturing sectors in both Europe (EU) and the United Kingdom. Indeed, according to recent figures released by the European Chemical Industry Council (Cefic), the EU remains the largest chemicals producing area in the World, generating €528 billion in revenues out of estimated global market production revenues of €1921 billion.



The data also confirms the increasing importance and competitive threat posed by the Far East chemical industry, and to a lesser extent the Middle East. Japan, China and the rest of the Asian region now generate revenues of ca. €580 billion from their respective chemical manufacturing activities. This underlines the importance of addressing fundamental structural issues in the more developed but higher cost base industries of the EU and North America.

Within the EU, Germany, France and the UK continue to contribute half of the region's revenues. It is these three countries that have drawn the greatest interest from the private equity asset class in the past few years, and they are anticipated to remain at the forefront of PE industry focus as a consequence of the continued restructuring and refocusing of corporate portfolios, and wider industry consolidation.

In the analysis and reporting of data, Cefic explicitly referred to the issue of market definition, stating that there is no common definition of the chemical industry and its segmentation among its member countries. Expansion of



the current 15 EU Member States later in 2004 to include 10 new members, primarily drawn from the former Eastern Bloc, will only serve to exacerbate this issue by adding a further level of confusion and complexity of definition.

The problem of what is or is not included in the chemical industry is most apparent at the extremes of the value chain. Conflict exists, for example, about the positioning of oil products and their processing, ores and minerals and plastics at the input end of the chain, and at the other end whether products such as paint, household cleaners and cosmetics should be included as chemical industry outputs or consumer and retail products. The same is true for technical products applied in industries such as mining, construction and metal processing industries, where participants choose to position themselves as part of the user industry rather than in chemicals.

It is not surprising therefore that definition of the chemical industry exercised the minds of those private equity industry executives which co-operated in this study. It also means that caution is necessary when interpreting industry statistics.

This lack of clarity about market definition has given rise to a wide range of different trade associations representing the interests of industry segments. This has been, and will continue to be an issue for European governments, legislators and other competent bodies and industry stakeholders involved in financial and environmental regulation, licensing and the reputation of chemicals in the wider community.

The UK chemical industry

The chemical industry continues to be one of UK plc's largest manufacturing sectors, and its largest generator of export revenues. According to 2002 performance data published by the CIA, and on the basis of its own market definition, the industry generated revenues of £46 billion, equivalent to 2% of UK GDP, and 10% of manufacturing industry's gross value added. Interestingly, American Chemistry Council (ACC) data for 2002 confirms US sector revenues (US\$458 billion) also represent 2% of GDP, and almost 12% of domestic manufacturing value.

By contrast, the German VCI (Verband der Chemischen Industrie) estimates its domestic chemical industry revenues (€132.5 bn) represent just over 7% of German GDP in 2002, confirming the size and importance of its chemical industry, both domestically and within Europe.

The UK chemical industry has changed dramatically in the last 10 years:

- Exports have risen in parallel to the declining domestic manufacturing base
- The mix of products has shifted markedly towards specialties and fine chemicals from the historic base in large asset based commodities
- Ownership of UK Chemicals plc has changed; it is now estimated that over 70% of UK manufacturing in the sector is owned by non UK investors

Chemicals Innovation and Growth Team (CIGT)

The continued financial health, performance and reputation of the UK chemical industry have been the subject of intense investigation over the last three years under the direction of the Chemicals Innovation and Growth Team (CIGT), a joint industry-Government initiative led by the Department of Trade and Industry (DTI).

The CIGT included a broad range of key industry stakeholders, with a major contribution from the Chemical Industries Association. It had clear terms of reference:

- Evaluate the key factors that will impact on the chemical industry globally and identify the opportunities and

challenges for the United Kingdom over the next 15-20 years

- Formulate a vision of what the future chemical industry might look like and how to get there
- Make recommendations to industry, Government and other (stakeholders) for specific actions

The DTI published the findings of the CIGT in December 2002 (“Enhancing the Competitiveness and Sustainability of the UK Chemicals Industry”). The report covered a range of major issues including social responsibility and environmental reputation, operational excellence, the need to attract talented individuals and commercial competitiveness.

Beyond this, there is a need for a more creative approach to capital funding and financial improvement to achieve profitable growth.

As part of its commitment to support its membership, the CIA commissioned new market research into the reasons behind increasing private equity investment in chemicals at a time when the institutional equity markets appeared to have fallen out-of-love with the sector.

Research project approach and methodology

Cogency adopted a semi-structured interview approach designed to explore in depth the different market position and operating philosophy of each of the participants.

The survey included two component parts. The first addressed PE market positioning, chemical market definition, and areas of focus for investment.

The second part collected opinions about:

- Attractiveness of the chemicals sector for investors, and the creation of value
- What PE investors have learned. This includes good and bad experiences, things to avoid, and things that reflect favourably on chemicals versus other investment sectors
- Quality of management in the chemical industry, and its relative performance against other investment sector opportunities

- Exits options; PE house preferences and the impact of increased PE ownership on exit availability
- Investment fund strategies, and the impact of timing and fund conditions on investment geography, market segment and future capital availability
- Impact of increased PE ownership on the long term economic sustainability of UK/EU/global chemicals

Profile of interviewees

Cogency selected a mix of private equity houses on the basis of market position and experience to ensure a representative sample. It is currently estimated that over 40 private equity houses include chemicals assets within their portfolio investments. Sixteen of the most active industry players participated in the research including:

- PE houses active in the small, mid and large capitalisation value markets (defined by deal value)
- Investors focusing on UK, EU and global markets, respectively. This included interviews with investment groups located in Germany, France and Switzerland in addition to the UK and the European office of US PE houses to ensure a wider view of geographic and cultural issues
- Investors ranging from the aspirational to those with sector focus and more than 15 years experience in the chemical industry
- Investment houses that are independently owned and those that operate as subsidiaries of larger financial institutions, more commonly known as “captives”

All the participants were open, candid and forthright in their views and Cogency would again like to record its sincere thanks to all those participating for their willing and constructive co-operation.

The findings of the research are detailed in Part 3 of this report. It was agreed that none of the comments or information received would be attributed to individuals or their employers. This facilitated a more open and wide-ranging debate, providing greater insight and direction for the CIA, its co-sponsors and other recipients of this report.

Part 2: Private equity market overview

What is private equity?

According to the European Venture Capital Association (EVCA):

Private equity provides equity capital to enterprises not quoted on a stock market. Private equity can be used to:

- *Develop new products and technologies*
- *Expand working capital*
- *Make acquisitions*
- *Strengthen a company's balance sheet*
- *Resolve ownership and management issues*
- *Address succession in family-owned companies*
- *Support the buy-out and buy-in of a business by experienced managers*

Venture capital is, strictly speaking, a subset of private equity and refers to equity investments made for the launch, early development, or expansion of a business.

We targeted only private equity investors for the purposes of this research.

PE houses vary widely in terms of both market focus and operating philosophy. They fall into two main categories:

- Subsidiaries of other financial institutions such as clearing banks, investment banks and insurance companies
- Independent partnerships or limited companies

Market positioning of the PE house often reflects the history and experience of its partners, leading to a variety of operating styles and philosophies.

Common to all is the ability to offer better returns on capital investment compared to equities (stocks and shares). The prospect of higher reward comes with the increased risk of highly leveraged investments, using high debt gearing or other financial instruments as part of the financing structure of deals executed in this asset class.

More information on the type and number of private equity and venture capital houses can be found on the highly informative websites of the British Venture Capital Associations (BVCA) and EVCA. Contact details are provided at the end of this report for those interested in obtaining

more detail about the PE industry, alongside a list of other useful sources of information and advice.

A brief history

Private equity has its beginnings in the 1930s and first came to public notice with the emergence of the leveraged buy out (LBO) in the USA after World War II. Its real popularity came in the 1970s and 1980s with the growth of new financial instruments and expanding global debt markets.

The growth of PE investment in the last 10 years has been phenomenal. According to Venture Economics, a leading industry stakeholder, the amount of money raised globally by PE funds for investment has grown from just a few billion US dollars in 1992 to a cumulative \$1200 billion by 2002. The US and UK markets are considered "mature", with greater growth likely in continental Europe.

European funds have grown in parallel with global activity. EVCA statistics show annual inward funding levels (PE and VC) reaching just over €27 billion in 2002, with investment spending at a similar level. Investments are dominated by the UK, Germany and France, which collectively represent close to 70% of the total invested. These three countries also account for 75% of the funds raised.

In the UK, the BVCA has currently 165 members representing the majority of players in the market. It recently published its report on 2002 activity and pointed to investment close to €9 billion overall, with around €7.5 billion going to UK investments, the balance into overseas enterprises. Private equity takes the vast majority of the funds, with only 3-4% used as venture capital.

In common with the US and European markets, management buy outs dominate investment in the UK, at ca. 45% of invested capital. Most of the UK money finds its way into the small and mid cap sectors.

Source of funds

Investment funds raised by the PE houses come from the capital markets led principally by banks and pension funds. Together they represent about 45-50% of the total. The

remainder comes from a long list of providers including government agencies, insurance companies, corporate and academic investors and private individuals.

For the banks and pension funds, private equity represents risk capital, and it plays an important part of their investment strategy of achieving a balance of risk. Typically, banks and pension funds invest 5-6% of their capital in PE funds, the majority going into equities (~40%) and bonds (~40%).

UK economic impact

Private equity has been quick to publish data on the positive impact of its investment on the UK and EU economies.

The BVCA produces regular reports monitoring the impact of PE investment on the UK economy and its latest highlights that PE-backed companies create jobs at a faster rate than other private sectors, and, over the last five years to 2003, employment growth in PE companies has grown by 19% per annum against a national average of 0.5%. These figures also include venture capital investment in start-ups. Within the mid-market, employment growth has been at a lower level.

It also claims that sales have grown faster than the national average, exports have grown faster and PE has improved substantially the financial stability of the companies in its ownership. Since this now includes around 18% of the private sector workforce, this is not an insignificant boast.

Chemicals sector interest

PE investments in chemicals were first reported in the late 1940s, but the sheer size and increasing cyclical nature of the industry through the energy crises and political turmoil around the 1980s led to greater PE interest, particularly when the industry was in a trough, profits were under pressure, capital hard to find and entry price multiples low.

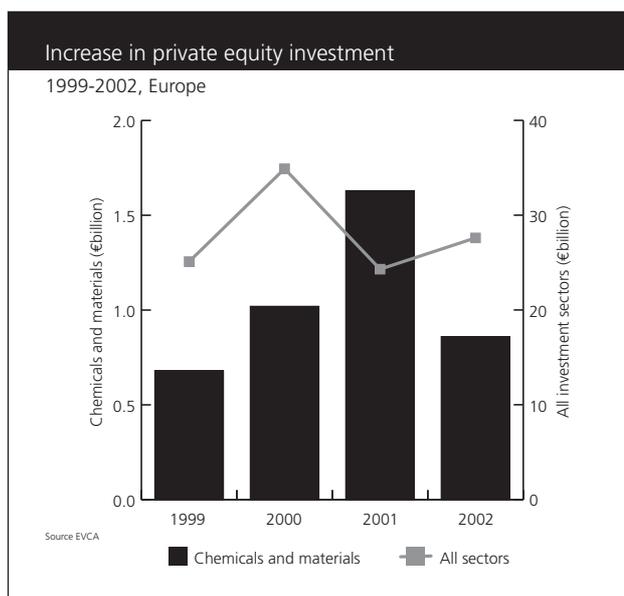
For the chemicals sector, the big change occurred in 2000. Changing economics and accelerating consolidation led to trade buyers paying high multiples in the race to build

larger, more integrated corporate entities in the late 1990s. PE benefited from the surge in mergers and acquisitions (M&A) as the market downturn hit over stretched trade players, creating an opportunity-rich market for financial investors.

Today, private equity is a major player in the chemical industry with a raft of familiar names sitting within its collective portfolio in the more mature PE markets of North America and Europe. The list includes Rockwood Specialties, Borden, Cognis, Symrise and Avecia to name just few of the larger enterprises. The list may soon include Brenntag and Celanese if the recently announced deals are concluded as expected.

It has also given rise to a number of larger privately held chemical groups which have transformed themselves into global leaders using private equity as the lever. Harris Chemical, Huntsman and Ineos are prime examples of the art.

The following chart follows the recent development in European investments in all sectors, and the chemical industry in particular.



The next step

To paraphrase a well used saying "opportunity is the mother of investment".

Cogency estimates that:

- Excluding the recently announced but not yet concluded Brenntag and Celanese deals, and
- Before any clear statement of continued portfolio restructuring by ICI, Total Atofina and BASF

there is currently some €10 billion of chemicals sector assets on-the-block in Europe alone, with every expectation that PE investors could take up to a 50% share of the deals available. Most disposals are already announced and sale processes underway.

Globally, private equity is playing an increasingly important role in the M&A market generally. Evidence presented at the Young & Partners LLC *Chemical Strategy, M&A and Financial Trends Conference* in the US in October 2003 showed PE and other financial buyers leading over 20% of sector deals through 2000-2003, climbing from around 5% of the deals completed in the period 1996-1999.

The wave of “opportunities” in the chemical industry is running parallel to increasing optimism about general economic recovery. Although still showing only early signs of recovery in Europe, confidence among industry leaders, investors and the M&A industry is growing. The UK is still a key market for investors.

Gresham, one the UK’s leading small cap PE houses, reported in its January 2004 *MONITOR* magazine that over 54% of mid market companies anticipate deals in the next 12 months, with 90% confidence in securing their goals.

KPMG tells a similar story. According to figures released recently by KPMG’s Private Equity Group, deal value climbed in the UK buy out market to a two year high in Q4 2003, with lots of pipeline activity suggesting 2004 will be a busy time for vendors and buyers alike. The report adds a note of caution, that the market is not without its challenges, but opportunities for both investment and exit will increase.

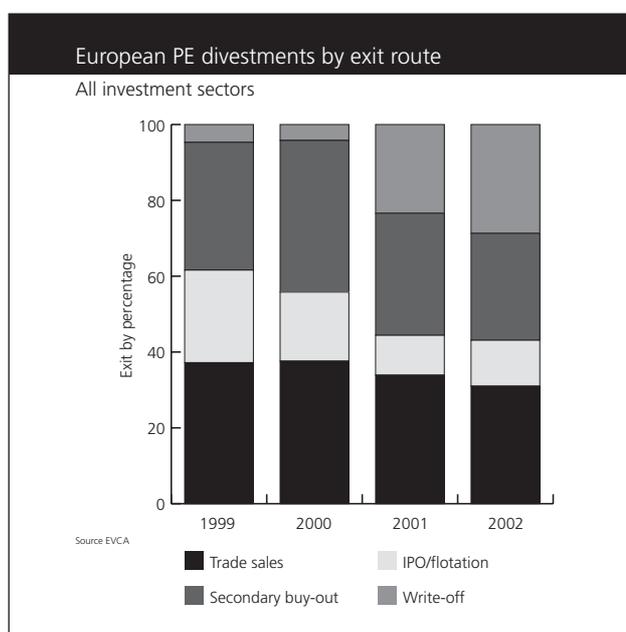
Wither the exit?

Recent history tells a story of limited exit opportunities for the PE houses, particularly at the top end of enterprise values. Exits fall into four basic categories:

- Flotation or initial public offering (IPO)
- Trade sale
- Secondary buy out
- Write-off or receivership

Economic conditions, the financial health of trade buyers, stock market sentiment and the quality of businesses for sale all influence the mix of options available to PE houses at any given time.

EVCA statistics for the last four years confirm the importance of the trade exit for all industries and also the decline of the flotation and the increase in write-offs experienced by PE players active across Europe. The rise in write-offs is closely linked to over investment in technology and dot com companies in the late 1990s, and the poor market conditions within the venture capital sub-set. Nevertheless, it does confirm the “risk capital” status of private equity investments.



Recently published data for UK market exits from the Centre for Management Buy-Out Research at the University of Nottingham (CMBOR for short, EXIT report, January 2004) confirms that within the UK at least, over 80% of the business failures were for deals below £10 million, many related to venture capital activity.

The risk of business failures in the chemical industry was explored in our research with PE houses, keen to share their views and experiences about all available exit options.

CMBOR data also confirms the rising popularity of the secondary buy-out. Although offering only a partial solution to the PE houses, they add to liquidity and accommodate different objectives among shareholders, particularly if PE wants its cash but management want to continue as shareholders.

Exit issues, cyclical, volatility, the search for competitive advantage and chemical market recovery are all matters characterising the sector currently. Private equity views about these and other important matters are detailed in our research findings.

Part 3: Research findings

1. Definition of the chemicals sector

Our research generated a wide range of opinion about the definition and structure of the chemical industry. Interview responses reflected issues raised earlier in this report about the problems of definition experienced by other industry stakeholders and there was no consistent interpretation of terms such as basic chemicals, commodities, specialties and added value products and services.

The issues relate to the extremes of the value chain. All respondents included commodity and specialty chemicals in the market, mainly on the basis that these are production driven activities requiring a significant asset base and the application of process know-how.

The chart represents the collation of all the comments received, and groups the chemical industry in four main segments:

- basic building blocks
- commodity and added value intermediates
- specialties and additives
- formulated products and services

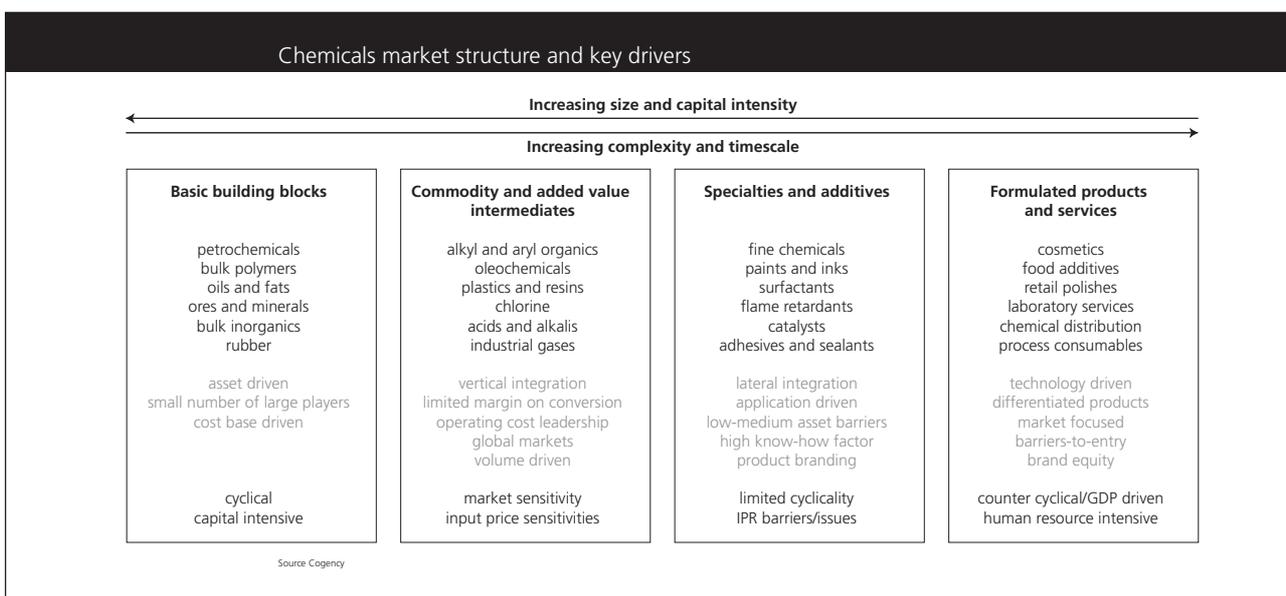
The chart highlights the two key parts of the value chain identified by all the PE investors as “core” to the sector, and includes statements relating to key characteristics and primary drivers for each of the four main industry segments.

A majority of the PE houses adopt a broad definition of the sector, although as we detail later in this report, they adopt a much more narrow focus for investment.

Several PE houses reflected the definition of their main discussion partners:

- Four mid cap and large cap markets, adopt an internal definition which parallels that of the investment banks to ensure that they retain access to all opportunities *on-the-block* and available for investment.
- Two accept the definition of the management teams leading the business; if the latter believe the target operates in the chemical industry then this positioning is acceptable to the PE investor.

Importantly, financial criteria were at the root of most of the criteria applied by the PE houses rather than the nature and structure of the market. To a large extent, this reflected concerns expressed about the use of ill-defined terms to position businesses and several interviewees commented that vendors sometimes refer to their businesses as “specialty” but actually operate in low margin, highly competitive sectors with little or no true competitive advantage, i.e. they are really commodities. Conversely, one or two identified “commodity” businesses which demonstrate a track record of added value as a result of creating competitive advantage through such factors as sector and/or geographic leadership, unparalleled service or limited input cost exposure.



Selected comments included

Broad definition and comprehensive:

"We have a very broad definition of chemicals; it includes everything from bulk commodity through to high value intermediates."

"We have a fairly wide definition of chemicals, e.g. we include pharmaceutical intermediates, adhesives, paint and inks, etc."

"Our definition (of chemicals) is pretty broad." (several companies said this)

Definition by exclusion:

"...broad... but exclude basic building blocks, and pharmaceuticals and healthcare which display different business fundamentals."

"...broad, encompassing commodity and specialty chemicals manufacturing. Would we include say, paints? Probably not; it shares a manufacturing and technology base with chemicals, but the value is added not in production, but in marketing and product positioning."

"Pharmaceuticals is outside our chemicals definition."

"Chemical distribution is a difficult one to position. It is tied inextricably to the chemical industry, sharing a vulnerability to environmental issues, pricing volatility and competitive positioning, but is essentially about logistics and distribution efficiencies and not manufacturing."

"We make a distinction between business-to-business and retail/consumer – so for example we would classify paint as 'consumer', not as chemicals. Also we would include fine chemicals and pharmaceutical ingredients, but not OTC drugs and cosmetics."

"We exclude basic building blocks, defining chemicals as intermediates and specialties."

The generalist approach:

"...no clear definition of chemicals because we are a totally generalist house."

"It is difficult to generalise about chemicals market structure and definition."

Definition by association:

"...broad definition of the chemicals market, as defined by the industry itself and including sectors such as commodities, food nutrients, and pharmaceuticals, reflecting a wide range of end market applications."

"If the manager brings in a deal and says it is a chemical business, then we'll call it a chemical business – we are really not too worried about how we categorise businesses."

"...broad approach to chemicals, including materials and services. We mirror the investment banks which represent the main source of our deals."

2. Level of interest and/or involvement in chemicals

All private equity houses are opportunistic. Setting this aside, those active in the chemicals sector have developed focus, allocate executives experienced in chemicals, and spend time analysing the dynamics and drivers of their respective target segments.

The recent increase in opportunities to acquire chemicals sector enterprises has also prompted new market entrants among the PE houses. Aspirational investors have been on a steep learning curve in the last two years.

Sector interest has been most evident in Europe, where:

- Chemicals sector consolidation and restructuring by global chemical companies in response to the economic cycle and debt burden
- There has been increased competitive pressure from the Far East

The same opportunities have also drawn a greater interest from the large, experienced US market players which have been building resources in Europe in preparation for high profile LBOs.

Many of the PE houses currently active in the sector have a long experience of the chemical industry and include several assets in their portfolio.

Dedication of sector-specific human resources is most prevalent in the mid and large cap deal sector. This is predicated on the basis of:

- Creating natural contacts for external deal providers, management teams and specialist sector advisors
- Developing a deeper understanding of the complex dynamics and issues which impact entry and exit multiples in the sector, especially those related to economic cyclicity, price volatility and HS&E and other regulatory pressures
- Separating the "wheat-from-the chaff"

The following specific comments were noted

Level of interest:

"Chemicals is one of four defined sectors (for us)."

"We are basically opportunistic, but we do include chemicals in our industrials portfolio, and employ a number of staff with direct market experience."

"We are both opportunistic and focused in chemicals."

"Although generalist, it makes sense to identify areas of existing investments and learn more about sector dynamics."

"We have a focus by industry, but our approach is still opportunistic, i.e. we don't have a particular formula."

"We currently have a limited chemicals portfolio, but aspire to increase our position in intermediate businesses."

Current involvement in chemicals:

"Basic industries is a key sector (for us) and includes chemicals. We have sector expertise and existing investments in the (specialty) chemical sector."

"Currently, we have two investments in the sector and have exited two others."

"Chemicals represent about 8% of our current active portfolio."

"No current investments – would like to get into the sector."

"We do not currently seek to invest in chemicals. Why? Because PE is about quality management and assets and you need both. We have found typically that these two essentials rarely come together."

Resource allocation to chemical investments:

"We retain a number of sector specialists reflecting a past history of sector investment." (large cap)

“Chemicals is one of five or six sectors on which we focus, and we have dedicated teams of experienced professionals supporting each.” (large cap)

“We are focused on the chemicals sector. It is one of four or five sectors to which we dedicate staff and also use external, expert advisors.” (large cap)

“We have no-one specifically dedicated to the sector, although of course we do have people looking at it and also need to have relationships with the investment banks to get on their list.”

“Allocation of resources reflects the structure of the investment banks so that natural contacts exist and we remain on their list.”

“The message to our investors is that we are a generalist fund... however we are interested in chemicals and are actively looking – to interface with the M&A world we do need a sector profile.”

“The chemical industry fits neatly in our Industrials Group, and is one of four areas of investment focus. We retain sector expertise in all these areas. Industrials is one of three areas of MBO interest.”

3. Deal size and market positioning

We preface comments under this heading with a short note about the approach to value adopted by the PE sector. A PE house typically values its deals in terms of equity investment. For the purposes of this research, we have chosen to define the PE sector, and the position of the interviewees operating within it according to deal size, sometimes referred to as enterprise value. This provides a level of confidentiality for the interviewees in regard to their respective deal structuring and funding arrangements, and a common, more easily recognised basis for analysis and comparison by the recipients of this report.

Respondents were asked to confirm their preferred deal size, and where appropriate, specify their “sweet-spot” deal value. In general, it was clear that most of the respondents positioned deals in the context of their investment fund size and conditions. The sweet-spot inevitably falls well within the limits of investment range.

The first chart opposite collates the information provided by the sixteen houses participating in the research. In general terms, they fall neatly into the three categories used by the industry itself, reflecting the market capitalisation value of the company or business in which they invest.

The second chart positions the PE houses within the context of the overall PE market structure, and reflects some of the key drivers specific to the three categories identified.

The research also highlighted a tendency for some PE houses, mainly those in the mid cap sector, to change their sweet-spot definition to reflect the industry in which they invest. Three respondents define a larger sweet-spot for chemicals than typically chosen for other investment sectors to reflect the need for critical mass in a complex manufacturing business and reflecting the capital intensity inherent in the upstream commodity and high volume intermediate chemical businesses.

Specific comments noted

Market position:

“...we are driven by the level of equity we want to invest.”

"We don't really have a sweet-spot – we are interested in any deals within our maximum and minimum band, and we do not wish to dilute our message."

"The small cap market (in the UK) is less competitive and there are more opportunities."

Sweet-spot definition:

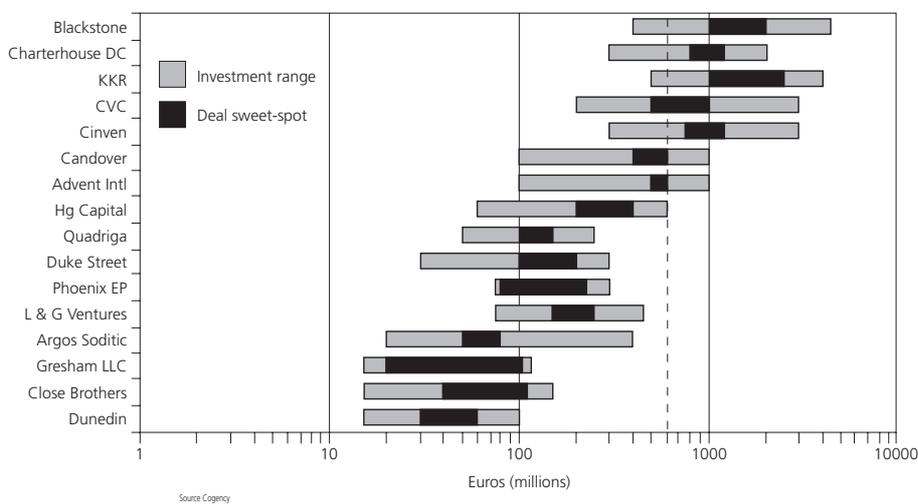
"Of our five sectors, this (the chemicals sector) sweet-spot is less than leisure market deals (larger deals, easier access to debt) and more than media ones."

"The chemicals sector sweet-spot investment is typically larger than other sectors we target. This reflects our desire to buy well-positioned companies (number one or two in either market sector or geographic region), with the capacity for bottom line improvement through consolidation and/or industry reorganisation."

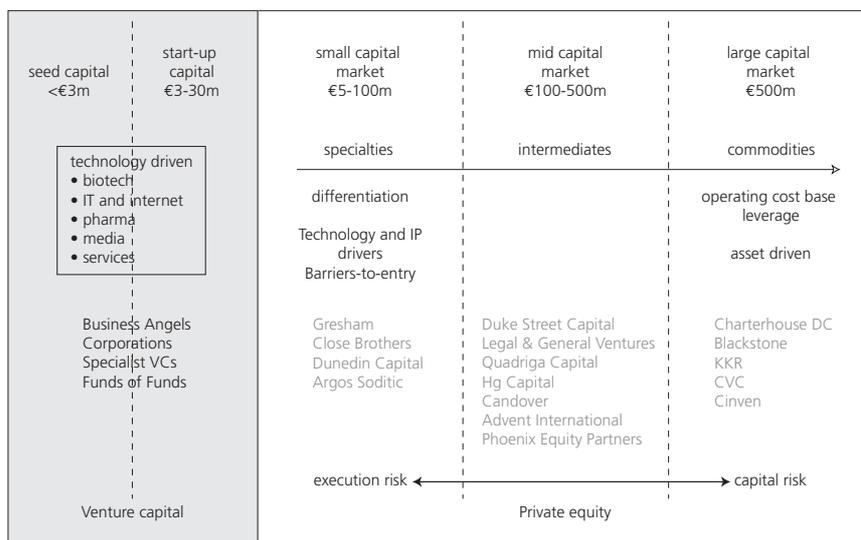
"The max/min range is the same for all the sectors we are interested in."

"...deal sizes are common to most sectors; we don't differentiate between our 7-8 defined markets sectors."

Deal size (enterprise value)



PE market structure and key drivers
Defined by enterprise value



4. Geographic focus

Geographic focus is linked to target deal size and the location of the investment house. In essence, small cap market specialists operate nationally, mid cap players invest regionally and the large cap PE houses have a global view, but concentrate on businesses in the region where offices are located.

All of the small cap PE houses interviewed had a national focus. Two investors added that they also have a mandate to look at deals in directly neighbouring countries.

Geographic restrictions result from the funding conditions imposed by the institutional investors in their funds, who seek to avoid competitive bidding situations between PE houses operating with a national remit.

Mid and large cap PE houses adopt a similar approach to investment geography. Those investment offices located in Europe target investments headquartered in Europe, but operating regionally and globally. Their investments are differentiated by deal size only. Target businesses often include significant assets in other parts of the world, predominantly as a function of their product or market focus. In addition, in the case of large corporate vendors, two possible scenarios exist:

- The parent is registered in a jurisdiction outside Europe, but the operating division or strategic business unit slated for disposal operates out of a European base, or
- The parent is headquartered in Europe, but the division to be sold is headquartered outside Europe

Within Europe, there is added complexity driven by a number of factors including:

- Significant cultural differences across an enlarging European Union, not forgetting the presence of Switzerland at its (geographic) heart
- Variation in political support for and regulation of the private equity asset class
- Differences in the practice, laws pertaining to corporate activity and M&A transactions, and the tax treatment and implications thereof
- The level of development, maturity and acceptance of private equity
- Language barriers

These issues impact all private equity deals in Europe but respondents additionally identified a number of issues which are directly relevant to the chemicals sector:

- Unions active in the chemical industry in most EU Member States have long been exposed to global competitive pressures and are more accepting of change and more constructive in their response to industry restructuring in the search for economic sustainability
- Management and staff employed in UK companies are the most familiar with and trusting of private equity involvement in business leadership – by implication, there are still countries where a degree of mistrust exists
- Germany and France are top of the PE hit-list because of:
 - Industry consolidation being restricted in the past by government support for ailing sectors
 - Historical economic stability
 - Employment policies
 - The chemical industry in these markets being regarded as over-invested, over-resourced and under-managed
- Southern Europe and Eastern Europe both present opportunities because of their respective history and domestic industry structure, but the investment fundamentals are not yet attractive enough and they remain secondary to Central and Northern European targets

PE investors recognise that the UK market has conditions ideal for PE investment. However, in the chemicals sector, investment opportunities are restricted to small enterprises – mid and particularly large cap players perceive the UK chemical industry as already heavily consolidated and therefore “played-out”.

Specific comments include

Market position and geographic priorities:

“All our investments are in the UK and we have a regionalised approach (within the UK).”

“We are a European focused investor, with a preference for UK headquartered business.”

“We have a European fund, but ideally seek to acquire global businesses with UK headquarters.”

"We are a Western European fund. There is no specific requirement for businesses to be in the UK, although we have a basic rule that management should be based in Western Europe, ideally 50% or more of both revenue and profit should also be generated in the EU."

Country attractiveness:

"(We are) a European fund. UK and France offer better opportunities. It is difficult to earn a good return in Germany because of a limited number of quality deals at a reasonable entry multiple."

"We are a European (mid market) fund, targeting primarily German speaking Europe."

"Swiss and German companies are now suffering the effects of a long period of cheap capital during which they over invested in assets."

"Central and Southern Europe offers plenty of opportunity for strong niche businesses, reflecting a lack of sector consolidation. Germany should be next."

"Germany is high on the target list. It remains the leading chemicals market and deal flow is expected to increase in the short-medium term."

"We have a relatively recent exposure to European chemicals. We would not venture into Eastern Europe at this time because of the poor quality of the asset base, uncertain user-markets and currency exposure. In the latter case, the expanding EU membership should provide added comfort."

The UK conundrum:

"UK opportunities for PE are now played out; companies that are for sale are largely under-invested and consequently the quality of assets is poor – certainly worse than those in Germany."

"We are a UK mid market player, and the UK market for the type of chemical assets we seek is pretty much "farmed out."

"Opportunities in the UK market are limited. Ten years ago, 70% of our investments were in the UK and the balance in Continental Europe. Today it is the other way round."

"UK unions are flexible and understand change in what has long been a global market. This provides a major benefit over the UK's European neighbours."

"The UK is a far less parochial market than some continental markets."

"The UK is a good place to do business because it has a more flexible labour market, flexible management and more developed private equity sector."

"The MBO, and private equity, is a much better understood concept in the UK than elsewhere in Europe."

"UK unions are flexible and understand change in what has long been a global market. This provides a major benefit over the UK's European neighbours."

5. Investment target profile

The questionnaire was designed to identify those criteria that PE houses apply to chemicals sector investments over and above the three well documented selection criteria, these being:

- Cash flow
- Management quality
- Exit angle

Evidence presented by the interviewees confirmed that the chemical industry is more volatile than most investment sectors as a consequence of:

- A high level of complexity; in products, end-use markets and level of internationalisation
- Significant fluctuation in input cost and raw material availability
- Vulnerability to global events and political turmoil (reflecting internationalisation of the chemical industry)
- Economic cyclicality or sensitivity, especially at the commodity end of the industry

In direct response to these influences, PE houses have adopted targeting strategies designed to minimise exposure to downside risk and create what all respondents described as “defensibility”. Indeed, thirteen of those interviewed used this term in connection with several additional investment criteria they impose.

Just how this manifests itself in their targeting strategy reflects their respective position in the PE market. There are material differences in approach to targeting between small, mid and large cap market players.

Small cap markets

In small cap markets, all respondents expressed a strong preference for downstream specialty chemical producers and companies offering added value products and services. Several reasons were identified;

- There are more smaller, narrow focus, niche businesses in the €10-100 million deal size bracket
- Specialty businesses are well downstream of the base

chemicals and commodity intermediates, perceived to be the most cyclical market segments, providing added protection against input price volatility

- Specialty businesses often exhibit competitive barriers-to-entry based on technology (intellectual property) or application expertise, i.e. they are differentiated businesses
- Such businesses typically have a significantly lower level of capital intensity

Mid cap markets

Mid cap market players have learned to accommodate some of the sector dynamics, combining a strong preference for businesses in the intermediate and specialty chemicals segments, but set against a number of added investment criteria including:

- A strongly expressed preference for “well-invested companies”. This:
 - Provides added protection against capital risk
 - Restricts additional capital demand to essential maintenance and HS&E spending or justified development capital driving top-line growth
 - Minimising ever attendant issues surrounding HS&E
- Robust systems, including enterprise resource planning (ERP), with minimum reliance on integrated (with a corporate parent) systems
- Ease of clean separation from an integrated parent, with limited inter-dependency of raw materials, site services and resources and other supply contracts

It was also evident that there is a growing confidence amongst mid market players to participate in the more commodity oriented intermediate segment. Interviewees admitted that this was partly in response to the raft of opportunities currently available in this segment in Europe, but a number of the leading players in the sector confirmed that the prime drivers were:

- An increased number and quality of sector specific advisors
- Growing confidence in their own ability to support segment players based on in-house exposure to existing chemical assets in the portfolio

Large cap markets

In the large cap sector interviews, there was a strong flavour that, as far as cyclical and volatility is concerned, “if you can’t beat it – read, understand and accommodate it”.

A number of the experienced players now play the cycle rather than run away from it, to the extent that their investment timing and tactics influence the interest and behaviour of other large cap sector players. That said, each of the large cap players had very tight targeting criteria linked to experience and optimum value creation strategy.

It was also clear that, when a PE house positions itself for the large deals, that arise only infrequently, there is a need to be proactive in targeting those divisions, businesses or indeed public companies which fit their respective criteria. Several participants said that they maintain a regular and frequent dialogue with the owners of potential targets.

This topic is addressed in more detail in the next section of the research findings.

Specific comments expressed

Seeking competitive advantage:

“(We like) well invested businesses with predictable cash flow, a sign that some risks have already been addressed (particularly against competition from regions with weaker legislative, environmental, H&SE standards.”

“We are not interested in turnarounds or significant asset driven units. Target deals need to be essentially non-cyclical with strong top-line growth.”

“We like trade partners for our investments. They offer extra financial flexibility and, alongside drag-along, tag-along exits, provide increased financial defensibility.”

“We seek businesses with a defensible franchise, something special that the business is capable of delivering like customer loyalty or some other significant barrier-to-entry.”

“We are looking for transportable chemistries and products (good gross margin) with limited forward capital investment needs and national or regional leading market position.”

“We seek niche-oriented, added value units and effect businesses in all markets.”

“Targets can be specialty or commodity, provided that they have ‘something special’ which provides defensibility; this can be process or system related, cash efficiency or a market driven by regulation or other approval processes.”

“We want an enterprise with a unique selling proposition (USP). We then look at how defensible the business is, where margin pressure is likely to come from, how the business can defend itself and how we can drive top line growth.”

“We have a proven record of buy-and build execution. This informs our investment size; we like to retain funds for add-ons.”

Types of enterprise targeted (small cap):

“We are looking for downstream specialties such as added value surfactants and food additives.”

“Specialties are favoured over commodities, with a desire to identify and include added value service sectors.”

Types of enterprise targeted (mid cap):

“We have preference for volume chemicals because they have the capacity to provide substantial, sustainable cash flow.”

“(We are) seeking added value products and services, and avoiding base producers and other large asset driven sectors – there is a capital disconnect.”

“We also include companies providing services to the petrochemicals and other production sectors.”

“...A preference for specialty chemicals and added value businesses closer to the consumer markets. This includes formulated products and applications expertise.”

“We have extended our focus to include cyclical intermediates in addition to our traditional target of acquiring platform businesses in specialty markets.”

“Better access to professional advisors than in the past has underpinned our confidence to consider cyclical commodity businesses with added defensibility.”

Types of enterprise targeted (large cap):

“We seek to acquire businesses with competitive barriers-to-entry.”

“We target mostly specialties (with significant critical mass).”

“In addition to the usual criteria on any PE deal, we take a long hard look at the cycle which is more pronounced in the chemicals sector. The most cyclical businesses are those with a large asset base and almost by definition, these are commodity operations.”

“We seek to acquire large specialty groups in preference to commodity operations, but would consider the latter if there is strong vertical integration and low cost operating position offering greater defensibility.”

6. Types of deals and deal sourcing

Interviewees were asked to comment on the type and source of deals considered, and their respective preference for and experience of deal sourcing.

Notwithstanding the succinct response of one that “A good deal is always better than a good source”, the respondents described a variety of deals available to them including:

- Management buy out (MBO, often referred to as a leveraged buy out or LBO in North America)
- Management buy in (MBI, or BIMBO when the deal leader co-operates with the incumbent management team)
- Institutional buy out (direct purchase of the enterprise from the vendor usually without incumbent management involvement)
- Public to private transaction (P2P, taking a stock market company listed back into private ownership)
- Secondary buy out (often described as a “pass-the-parcel” deal, the “secondary” involves the refinancing of a business already in PE ownership)
- Investment or expansion capital (investment into an existing business to accelerate business growth, and working with existing owners, either public or private)

A complete glossary of terms including deal descriptions is provided by industry associations representing the private equity industry (British Venture Capital Association, www.bvca.com and European Venture Capital Association, www.evca.com).

This list is not exhaustive. The most favoured deal type, the MBO, was identified as the basis of the most successful example of private equity investment. There is extensive evidence to support this assertion, much of it from independent industry research groups and corporate finance advisors.

In contrast to the widespread preference for the MBO, and growing interest in secondaries, interviewees showed a much greater reluctance for turnaround acquisitions and family owned businesses.

Knowing when a deal is available is key to establishing “an inside track”, particularly where an auction process is likely. Inevitably, therefore, PE houses retain a reactive relationship with all potential deal sources.

Small cap players have a strong preference for a proactive stance to deal origination, based either on a platform of strong relationships with advisors and management teams, or expertise in targeted sectors.

Whilst both large and mid cap players demonstrated a preference for a proactive stance to deal origination, interviewees from both groups recognised that the size of deal they seek will almost always be sold through an auction process lead by an investment bank or corporate finance intermediary.

One large cap player said that it maintains on-going communications with large corporations likely to generate investment opportunities. This practice is more common in large and mid cap markets.

Selected comments of deal sourcing

Deal preferences:

"With a focus on large value deals – and they are few and far between – the common route in is through either the LBO or principal finance."

"The MBO remains the most favoured, and traditionally most successful, deal type, but increasingly, we find ourselves prepared to act a principal finance player, and probably at a higher entry multiple in the search for top quality businesses."

"MBOs are better than MBIs, and big company spin-outs tend to include an experienced management team which knows and understands its plants, products and operating systems."

"Business spin-outs are attractive; they are typically well invested, and come with management and support services (payroll, ERP and structured HS&E processes)."

"With the notable exception of turnarounds, we will consider most deal types and typically use corporate finance and other recognised advisors."

"Family owned businesses can bring major issues related to tax, human resource development, management control style and a company valuation gap."

Reactive deal sourcing:

"We use all sources offering a good knowledge of our target markets."

"We source most of our deals through the investment banks, and accept that this means we will always be required to participate in auction processes. That said, secondary buy-outs are on the increase and will become more commonplace." (large cap)

"Almost everything we consider is in an auction, with the process being led by an investment bank. Of course we try to identify the opportunities early to get an inside track – and this is based on contacts." (mid cap)

"Inevitably in our sector of the PE market, we work closely with the investment banks but 60-70% of our executed deals are with a strategic (trade) partner, on the back of providing capital flexibility and liquidity to existing sector players." (large cap)

"Our position dictates that we co-operate closely with the investment banking community, and usually have to go through an auction process." (large cap)

"(We are) predominantly sourcing deals from the investment banking community and corporate finance houses in our target sector." (large cap)

Proactive deal sourcing:

"We generally prefer to find deals ourselves; but deals bought to us by high quality intermediaries are well-packaged so far easier to assess. We are prepared to get involved in limited auctions of perhaps two to four bidders, but we are not interested in major auctions with 12 to 15 bidders." (small cap)

"We choose to operate at the lower end of the market as this is driven by relationships; anything over £75 million is almost certain to go to a full auction." (small cap)

"(Deal source) splits 33% direct sources, 33% from small M&A and other private advisors, 33% large corporate finance/investment banks. The majority of executed deals

(>60%) arise from our own sourcing activities, and less than 10% from the latter category.” (small cap)

“We are no different to the others (in our segment of the PE market) and talk to the top dozen European chemical companies regularly.”

7. Chemicals sector attractiveness

Our research investigated the reasons behind increased attention on chemicals sector deals from the PE sector in the recent past, and the performance of sector investments relative to other industries.

Industry dynamics

Respondents understood the importance of industry dynamics and other sector fundamentals on the availability of good investment prospects in the chemical industry. Many opportunities should respond positively to the PE business model.

Research found that the level of interest in chemicals is consistent across small, mid and large cap PE investors. The chemical industry remains “opportunity-rich” for the PE industry but interviewees highlighted the fact that not all the opportunities are “quality” deals and investors need to be discerning in deal selection.

Enduring chemicals sector interest was put down to a high level of corporate M&A activity, or “liquidity”. In response to cyclical and volatility, corporate managements undertake regular reassessment and rebuilding of the business model, leading to fragmentation, repositioning and consolidation of industry segments.

The recent surge in interest is based on:

- Increased availability of enterprises for sale
- The lack of capital liquidity among trade and strategic buyers
- A belief that the economic and, more importantly the chemical cycle, has “troughed”
- The still-fresh wounds incurred by PE investors in high technology and dot com markets deals, drawing investors back into lower growth but more reliable cash generating industries

Interviewees confirmed that the mid and large cap houses are key players in the consolidation phase, and the small cap players looking to “sweep up corporate orphans” often undervalued in corporate ownership.

Relative sector performance

In terms of industry performance relative to other sectors, opinions were divided on PE market lines.

Small cap investors were generally pleased with sector investments. Two PE houses said return on investment in chemicals has been better than other portfolio investments.

Mid cap investors believe their chemicals sector investments have been no better or worse than other areas of focus and/or experience.

Large cap investors referred to the variability of return on investment; good in parts, occasionally bad and sometimes ugly. Overall, however, the view was that investment returns were generally worse than other sector areas. A direct consequence of this experience is that large cap investors confirmed they were more likely to intervene, and “upgrade” management capability, and earlier rather than later. This reflected the level of capital risk associated with big value deals, most of which are typically commodity intermediate players, or large disparate and occasionally complex specialty chemical conglomerates.

Specific comments noted

Sector interest:

“The chemicals sector in Europe offers increasing consolidation and importantly, sustainable demand because the products of this industry are not fashion items but essential building blocks for modern life.”

“Marketing and service driven chemical companies provide more predictable cash flow, defensible market positions and reduced threat of substitution versus certain high tech industries.”

“Chemicals is a fragmented sector, with a number of the larger multinationals in trouble, boosting M&A activity and liberating spin-outs and add-on opportunities.”

“Good liquidity (high corporate activity) is always good for PE.”

“The chemicals sector is reasonably attractive but not wonderful – a few years ago there were cases of naïve vendors and considerably less competition to purchase...The sector is heating up and there is a danger of PE houses over-paying.”

“The only chemical investments we would make at the moment are in Western Europe.”

“We believe chemicals could grow to be a significant PE sector in Eastern Europe, but currently our focus is purely on the West. We believe there is considerable scope for consolidation here – this has already taken place in the US.”

“Consolidation has also largely happened in UK but is currently happening in Germany and we believe it will happen in France.”

“We have a record of buying and selling within owned companies to improve the quality or earning and enhance exit options and value.”

“The EU chemicals sector is ‘opportunity-rich’ for us.”

“We have re-focused on chemicals in the recent past because:

- There are a lot of assets currently available*
- We anticipate a cyclical recovery in the chemical industry*
- Few industry sectors offer the same rosy mix of opportunity.”*

Response to the PE model:

“Chemicals has inherent top line growth potential in Europe, but is hindered by a lack of management focus and attention, and limited access to capital in depressed economic circumstances.”

“There is a lot of latent development in the sector – new technologies have not been exploited to the full, and many businesses have not been good at this.”

“Chemical companies have suffered from too many boom years, and are now suffering the consequences.”

“Regular M&A activity means that exits are always possible.”

“Early market experience identified chemicals as a problem sector, and therefore attractive to the PE sector.”

Chemicals sector relative performance (small cap):

“Chemicals sector investments have proved no better or no worse than deals in other sectors.”

“Our experience shows chemicals investments have typically been marginally better performers than other market sector investments – but it is important to retain focus.”

Chemicals sector relative performance (mid cap):

“We are highly opportunistic, therefore a deal in the chemical sector is no more or less attractive than one anywhere else.”

“Most of the other sectors in which we are investing have high growth characteristics – the chemical sector generally is GDP or perhaps GDP +1%. However, chemicals represents a very significant industrial base in Europe, and has been undervalued.”

“The chemicals sector could not be described as ‘stellar’ by any means, with only a few notable exceptions.”

“We recognise that chemicals is essentially asset driven, but performs as well as our other target sectors.”

Chemicals sector relative performance (large cap):

“Accepting that the sector has not always performed well for PE investors, are we still interested in chemicals? Definitely yes!”

“The (chemicals) sector is no better or worse in the round than in other investment sectors, we have good, bad and average deal experience.”

“Chemicals sector performance is typical of other capital intensive manufacturing markets.”

“(We have) completed 110 deals in 25 years and our experience is that chemical deals show very average performance.”

“Returns on chemical assets have been very poor, and well documented in the past. You have to take the long term view for a more accurate picture (>20 years).”

“You have to buy at the right time of the cycle, and the PE industry, like good wine, has ‘vintages’. The 1998/1999 vintage will be very poor due to high entry multiples, but the 2002/3 crop of deals is expected to provide a much better return. This applies across most investment sectors.”

“A typical profile is a stable business, good cash flows and fairly limited growth. Also prices lag inflation – this is partly because companies continually improve their cost base, but also because they adopt a cost-plus approach.”

8. Value creation strategies

Interviews generated a number of common beliefs and attitudes about PE investor behaviour and philosophy.

One recurring theme was the importance of aligning of investor interests with those of the management team. This concentrates focus on those things which add value for both management and the PE house.

The prime measure of value for a PE investor is the multiple of cash investment generated on exit. Two factors drive this multiple:

- Ability of the PE house/management team to pay down debt during its ownership, and
- Achieving a profitable exit at the appropriate time

Both factors depend heavily on the creation of value in the business, creating a business which is in a better state on exit than on entry, both financially and in terms of its market position and attractiveness to a new buyer.

Identifying the options available to investors and their management is not rocket science; execution is much harder! The table below describes the most commonly identified value creation strategies.

Value creation strategies	
Organic growth (top-line sales)	Provision of development capital to support market expansion and/or new product commercialisation.
Market consolidation	Participate in geographic/product market consolidation and industry restructuring.
Buy and build strategy	Identify and execute add-ons to the initial platform investment.
Focus and simplify	Re-engineer existing business by reducing complexity and concentrating on core competence.
Operating cost leadership	Operating cost and working capital reduction to improve cash flow. Accelerated debt repayment in low growth, reliable cash flow businesses.

All respondents accepted that the choice and successful execution of strategy requires:

- Understanding of market dynamics and the economic cycle

- Recognition of those issues inside and outside of with management control
- Management ability to foresee changes impacting on value creation
- A proactive approach to creating and sustaining competitive advantage

Small cap companies seek to achieve competitive advantage through product differentiation and/or customer relationships. Large cap players seek operating cost leadership. Large cap company owners also highlighted the need to operate "focus and simplify strategies" for portfolio companies, in addition to taking advantage of inherent skills in capital efficiency, cost control and financial discipline.

Comments noted include

Small and mid cap sector strategy:

"We seek to acquire businesses with good growth prospects, and will support buy-and-build and growth specific capital requests."

"Small cap players need a tangible 'edge' to compete against global competition; this can encompass a wide range of barriers-to-entry including location, market

structure, IPR protection and limited risk of duopoly or monopoly situations."

"We have three classic routes to creating value, that all run in parallel:

- De-gearing - we look to pay down the debt
- Improving profit
- Selling on a higher multiple."

"We aim to invest either in the lowest cost operator or

in a business that has the potential and a clear plan to become this."

"Buy-and-build strategies, if effectively executed, will support profitable arbitrage on exit."

"We have no particular formula – the business plan may be based on market growth, on market share growth (although management has to work harder to give us confidence in this), cost reduction, better cash management, perhaps a re-focusing of the business, maybe even further acquisition or partial divestment."

"We try to identify enterprises that are well positioned in their markets, but with opportunities for improvement in bottom line through acquisition, consolidation and restructuring."

"Continental European companies tend to be rather fat – if we buy the division of one, there is a very good chance that we can squeeze extra cash out."

Large cap sector strategy:

"Our philosophy is to support the corporate development of our own portfolio companies."

"We have a record of buying and selling within owned companies to improve the quality or earning and enhance exit options and value."

"We are keen to support internal growth projects and capture the gain available from operating improvements, breakthrough technologies and better management focus."

9. Management quality

As befits the importance of management quality to the success of private equity investments, this topic generated forthright discussion and collection of a series of informative views relating to:

- Management strengths and weaknesses
- Exposure to and understanding of commercial and financial issues
- Importance of aligning management interests with those of the investor

PE executives recognised the high level of education and intellectual ability of chemical industry management in the key areas of technology, manufacturing and engineering, but identified a significant shortfall in commercial and financial ability.

The reasons for this were the subject of much comment, and there was unanimous agreement that it was due in large part to the historical structure and development of the industry. Most respondents balanced their comments by expressing their belief that, with early exposure to "capitalist rather than socialist" management principles, sector management had all the right skills to demonstrate strong leadership quality.

Perceived shortfalls in management ability and breadth of experience were manifest in several key areas:

- Concentration on investment, rather than return on investment
- Selection and execution of pricing strategies – or lack thereof
- Decision making capability
- Lack of entrepreneurial spirit

Much of the criticism arises from concerns that within the large European chemical corporate concerns, good managers lack exposure to some fundamental business issues, specifically those relating to marketing and finance. Interviewees identified limitations arising from:

- A long history of being production driven. Businesses grew by adding to their portfolio on the basis of, for example:

- Manufacturing similar products using the same raw materials
- Maximising capacity utilisation
- Desire to add value to by-products
- Looking upstream and downstream of product platforms to improve cost base control
- Restricted lateral movement of chemical industry management to and from other sectors of the economy. The highly technical nature of the chemical industry and use of “its own language” has limited cross-over of commercial management in particular, as companies have typically valued technical understanding above market strategy and financial innovation
- Limited decision making capability. The sheer size and complexity of some of the corporate structures means that middle management is more used to taking instruction than taking decisions, with limited exposure to the really tough decisions about future direction and value creation
- Alignment of interest. There was a suggestion that middle and senior management spend more time worrying about short-medium term career opportunities than business-critical issues affecting the company’s medium-long term performance
- Working capital and overhead cost control. Small operators have much greater visibility of costs than the large corporate players and it shows in the management approach to working capital, provision of benefits, expense control and other cash management issues.

Such issues reflect large corporate culture more than uniquely chemicals sector traits and respondents were quick to assert this view. Nevertheless, it was recognised that these issues became apparent at the CEO/CFO level in spin-out companies. Since this is the prime source of investment opportunity for PE investors in the chemicals sector at the moment, the problem received much attention.

Differences in opinion on management quality between the small, mid and large cap investment sectors were few, but it was apparent from our research that early intervention is more likely in large cap investments, primarily because like large ships, they take longer to turnaround.

Research also found that management quality issues were more apparent in some markets than others, reflecting the maturity and development of the PE asset class. US managements were said to be most commercially aware,

followed by the UK. Some continental European markets, notably Germany, were said to suffer more than others, being the most polarised in terms of having exceptional engineering and scientific skills but limited commercial creativity.

Noted comments of importance

Importance of management to the deal:

“We buy in to track record and reputation, and provide motivational elements to support greater entrepreneurialism.”

“The main reason for buying a company is comfort with the management.”

“We look for the value that management will be able to create in the business during the period of ownership... we must have confidence in the business plan that management submits.”

“We would always prefer to have smart guys running an average business than average guys in a good business.”

Alignment of management and PE interests:

“The key to delivery is to align the interests of management with the PE house and other stakeholders. Incentivisation can play a pivotal role.”

“One key to success of the business is a careful construction of the incentives for senior management.”

“Sector management is not particularly well paid compared to other industry sectors. And when their interests are aligned to company performance, there is a paradigm shift in thinking and performance.”

General comments on management quality:

“Chemicals sector management teams are generally very well educated and experienced but lack commerciality and a basic understanding of financial dynamics.”

“Management is too focused on investment, and not return on investment!”

"Cash is an unknown concept in some chemical companies."

"All MBO teams need at least one capitalist."

"There are too many scientists and engineers pushing projects which will fail to meet commercial and financial investment criteria. PE owners introduce a greater sense of investment realism."

"Chemical companies are not market focused; the portfolio is driven by manufacturing capability so companies build a list of products serving a wide range of different, disparate markets."

"Existing management capabilities are often a long way behind other sectors."

"It's a gross generalisation but the sector is dominated by manufacturing thinking and insufficiently market focused. It has a lot of very bright people who know how to make things but neglect to see how they can improve the company performance."

"Even in specialty niches, companies (management) often don't use differentiation in the right way and follow a cost-plus approach."

"The chemical industry generally has many very highly qualified and well-educated people, but they are predominantly technical – and this ability is not mirrored by commercial ability."

"A very general comment is that chemicals sector management often has relative low commercial savvy. PE houses need to be wary of this because management is often very intelligent, and tells a very good technical story."

"Chemicals sector management has limited skills in CAPEX management, innovation management and marketing."

"There is often a need for an intervention, usually meaning one or more new management people."

Corporate spin-out related issues:

"Generally good quality, but they are not generally working

to their full potential. Historically, management teams have been restricted by large company culture and limited exposure to the real commercial issues."

"Chemicals sector management is typically well educated but management teams coming out of large corporate employers are limited in aspiration."

"Management shows a tendency to be production focused, and suffers from a 'big company' mentality. Industry managers typically demonstrate less entrepreneurial, more risk-averse character reflecting global industry structure issues. That said, they are no worse or better than most industry sectors."

"Overall mixed, but in our experience below par. One aspect is that good engineers don't necessarily make good business leaders, although there are some stunning contradictions to this. Often, management misses the big picture reflecting experience of operating smaller units of much larger corporations, but this is a problem not specific to chemicals."

"Managements are more used to taking orders than tough decisions."

"Two areas of concern persist; at CEO level, there is poor experience of taking the tough decisions, and at CFO level, where a deep understanding of the true product and operating cost dynamics are weak. This is most evident in spin out companies from the larger corporates."

"(Sector management is) generally good, but this is not a sector specific observation. Spin outs can be awful."

"Overall, management quality is good but management teams coming out of conglomerates have low commercial savvy."

"...many managers are long serving, big company people, with exposure to P&L but little experience of cash management."

Impact of geography and culture:

"European chemicals sector managements are technically well qualified and increasingly better educated in business

(through MBA study etc) but still lag the US where there is a much more entrepreneurial approach. This problem is particularly apparent in Germany.”

...and just to be different:

“In our experience, chemicals sector management is a plus factor. We like engineers and their direct pragmatic management style. In terms of doing the business we have had good experiences.”

“There is significant incremental scope for managing businesses better.”

“We have been definitely surprised, even given the weak economic climate, of the improvements that we can make in businesses simply by managing them better.”

10. What PE houses look for

From earlier sections, different PE houses target different types and profiles of business; this question was aimed more at identifying some of the characteristics that make a business more attractive to PE, irrespective of its field of activity within chemicals.

The report has already amply documented PE houses’ requirement for good management, positive cash flow and a clear exit route. However, when asked what other characteristics they look for, interviewees provided a rich and varied list of factors.

Some of these were ‘double-edged swords’ – for example, if a target’s assets are shared with a corporate owner, this is usually seen as a negative (see “What PE houses avoid”); but one house added “...but then most potential buyers would see this as a significant problem...if we think we can extract the business more smoothly than others, we can turn a complexity problem into an opportunity”.

No particular pattern or grouping can be applied here – they are basically random comments. However, we believe they merit recording.

Significant comments noted

“All targets must have at least three years cash generative trading history...this rules out start-ups and turnarounds.”

“A diversified portfolio of technology to improve business defensibility... but this is of little value if you don’t have a management team capable of recognising and reacting to market changes before they become an issue.”

“Top line growth and operating cost reduction potential is a good start. Many business units exiting multinational companies are ‘fatter’ and ‘less focused’ than independent and PE owned operators.”

“A well diversified trading base, with extensive supply chain control makes the business ‘more defensible and transportable’.”

“We favour buy and build opportunities – but here we particularly need:

– A launch investment with sufficient critical mass to carry add-on deals

– Management with the capability to execute efficiently – and you must not over-stretch managements ability to deliver.”

“...Existing market presence (the PE house), management experience and a track record of delivery.”

“Better barriers-to-entry – and they still exist in chemicals in Europe.”

“You need to look at the wider capacity utilisation in the industry to understand that it is subject to distinct pricing cycles, so we require evidence of good financial discipline in such businesses.”

“...complexity generates opportunities for PE houses to bring focus.”

“We say the quality of management is key, but often the primary way of assessing management is through the quality of their business plan.”

“We are most comfortable investing in a market leading business, even if this means we pay a bit more. In times of economic uncertainty we look for a solid base so the business has a better chance of surviving. Certainly we are not interested in business plans that are predicated solely on a significant economic upturn.”

“A well-invested plant with excess capacity can often be quite attractive.”

“A well invested asset base provides some protection for earnings in bulk intermediate markets. Operating cost leadership is an obvious additional requirement.”

“Mismanaged companies are attractive to us. There are generally early wins in working capital and financial discipline which have a significant impact on investment return.”

“Sector leadership is important. We like leadership positions in those business areas we invest in.”

11. What PE houses avoid

In part, this is the corollary of the preceding point, e.g. since PE houses generally say that “good management” is a prerequisite, by implication they avoid businesses where they perceive the management team is weak.

Of course, such deductions must be treated with caution, e.g. we were told on several occasions that the PE house “would intervene” and introduce one or two new managers if necessary, and a key means of adding value PE houses identified is to improve the management of businesses; however the basic point remains that they must have confidence in the team that would run the business were the deal to be concluded.

Extending this, the four characteristics they appear to dislike most are:

- Low confidence in management’s abilities
- Poor market share
- No obvious exit
- Badly performing businesses (i.e. turnaround situations)

Several other factors were raised. Once again, there are differences between small, medium and large cap players.

- Two small cap houses stated their dislike of family businesses (we would presume there is a limited number of family businesses in Europe that are large enough to be considered by mid and large cap).
- Small cap houses do not wish to become involved in auctions. Of course this does not mean mid and large cap actually like auctions, but rather they have little alternative but to participate since virtually no enterprises over a certain threshold are sold outside of auction in Europe. However, they frequently made references to the need to seek a unique angle or ‘getting the inside track’.

There was a general aversion to commodity and highly cyclical business. Note these two characteristics, although frequently cited in the same sentence, are not synonyms – most commodities tend to be cyclical, and cyclical businesses are often commodities, but there is not a necessary linkage. Indeed, those that expanded on their dislike of commodities gave additional contributory factors.

Several raised shared facilities as a stumbling block; the difficulties of extracting a business unit from a major corporation are significant and easy to underestimate.

HS&E issues were discussed, but perhaps surprisingly only one PE house saw this as an issue to be avoided – the others saw it as simply another issue that it was their role to assimilate and take into account when negotiating the deal.

A number of other characteristics were mentioned by just one or two houses – these included:

- Over investment in capacity
- Unproven new technologies
- Volatility of raw material prices
- Businesses supplying fragmented end-markets
- Secondary buy-outs

Specific comments noted

Privately owned businesses:

“Family owned businesses can bring major issues related to tax, human resource development, management control style and a company valuation gap.”

“We tend to avoid private, family run companies because they pay too little attention to the talent pool, operate less professional systems and procedures and adopt an emotional approach to business valuation.”

Auctions:

“We are prepared to get involved in limited auctions of perhaps two to four bidders, but we are not interested in major auctions with 12 to 15 bidders.”

“We don’t like to participate in auctions where we have no angle.”

Cyclical businesses/commodities:

“We look for a solid base...certainly we are not interested in business plans that are predicated solely on a significant economic upturn.”

“We are wary of true commodity businesses. They are notoriously cyclical, and more vulnerable to volatility in raw materials pricing. It is much worse in chemicals than other investment sectors.”

“Commodities are cyclical, difficult to differentiate, difficult to gear up financially because cash flows are subject to wide fluctuation and significantly more volatile than other sectors we follow.”

“We avoid primary petrochemicals and other commodity and undifferentiated businesses.”

“A process business where customers have good visibility of input prices drives a cost-plus business model and management has less opportunity to influence business profitability; such businesses are not attractive (to us) – we are more interested in speciality or fine chemicals where products are differentiated and there are barriers to entry.”

Other business types:

“Chemical distribution markets are less attractive than manufacturing companies because of the extent and quality of assets.”

“Pharmaceutical companies – these don’t lend themselves to leveraged buy-outs.”

Turnarounds:

“With the notable exception of turnarounds, we will consider most deal types.”

Shared facilities:

“Exits can be seriously hindered by service contracts and shared facilities.”

“Integrated facilities make sense for diversified operator but are a problem for an independent profit centre business.”

“Some business units can be difficult to separate from large integrated players which impacts on time and costs, which impacts the potential value on exit.”

“Complexity; particularly shared assets or resources.”

HS&E:

"Pension, tax and asset impairment issues affect most investment sectors, but the chemical sector is more vulnerable to health, safety and environmental issues. Good pre-due diligence is essential to underpin investor comfort."

"HS&E issues need to be addressed on entry. They should be researched early and thoroughly, introducing price discounting if necessary."

"We seek to avoid tough environmental issues, such as asbestos."

"There are often environmental issues – but these can be managed and it is our job to manage around them."

"Environmental performance is an issue. It is accepted that there is a legacy issue but for on-going concerns, it is about accepting temporary, responsible stewardship, but it is a different play if closures are required."

Miscellaneous:

"Over investment in capacity; PE houses are more prudent investors in assets."

"...Businesses which are over-reliant on untried, untested 'breakthrough' technologies, particularly if the base business is going backwards."

"Lack of market focus, although we recognise this can be both positive (provides an opportunity) or negative, if management don't react positively to outside advice and direction."

"Difficult supply chain issues, particularly if the strategic suppliers are big global players."

"We try to avoid businesses where there is a huge volatility of raw material prices because this greatly reduces management's influence over the business."

"We don't like chemical businesses that are supplying many different end-markets, because these are exceptionally difficult to analyse."

"We are not looking for secondary buy-outs... investors don't like them...there is a feeling that much of the juice has already been squeezed out of the orange."

12. What we have learned about the chemical industry

Interviewees were asked the main things they feel they have learned through their involvement in the chemicals sector.

Perhaps the most common set of observations related to the fundamental drivers and dynamics present in the industry, and the degree to which it is more complex and cyclical than other investment sectors.

There was considerable comment on other important issues including:

- Use and understanding of the terms specialty and commodity
- Environment and reputation
- Utilisation of assets (other than production plant)
- Business valuation and access to debt

Industry fundamentals

The term “complexity” was as often used as “defensibility” in connection with the chemical industry. They are the opposite sides of the risk coin and received a lot of PE house focus.

Complexity extends beyond the usual mix of products, market applications and geography common to other sectors. It takes in all those market drivers which combine to make industry performance difficult to predict. The list of factors raised by interviewees included:

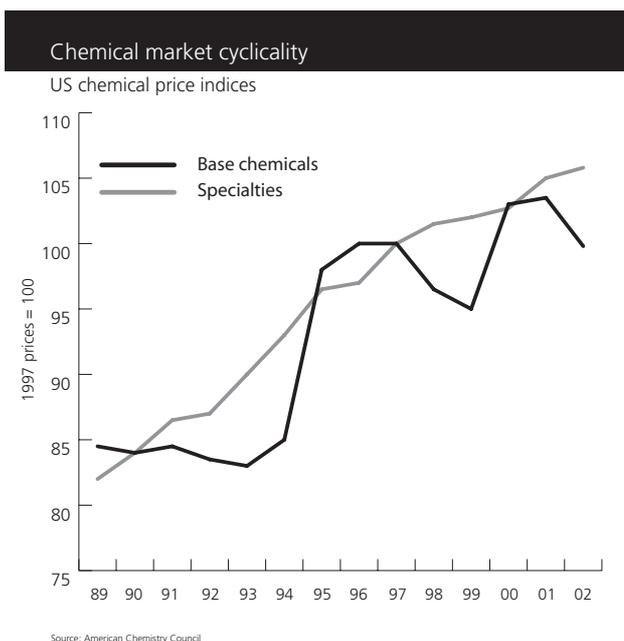
- Volatility: The industry is subject to rapid and occasionally unpredictable change, disproportionately so at the “blunt” end of the value chain where input prices represent such a high proportion of variable costs
- Vulnerability to political and economic events including energy prices, currency fluctuation and regulatory policy. This is also more pronounced in bulk commodities
- Inter-dependency: Many businesses depend on input raw materials from integrated chemical producers having inter-dependent products serving very different end use markets. Chlor-alkali and phenol-acetone are two such examples where the supply-demand balance can move dramatically as a result of changes in use for one of the two products

- Value chain efficiency; or lack of. Interviewees pointed to the inability to pass on price increases or accommodate supply-demand balance fluctuation fast enough

Five said that there was a greater need for commercial due diligence on chemical industry transactions than in other investment sectors as a direct result of these elements of complexity.

That the sector is particularly complex is a double-edged sword according to many of the PE houses. It can trip up the unwary, but conversely can create opportunities for those who really understand the complexities. Several respondents highlighted that there is a need for caution in making generalisations about the sector because of its complexity.

Reading the cycle in chemicals is difficult according to those active in the mid and large cap market. Experienced investors commented on the unpredictability of cycle frequency, duration and magnitude. The following chart, based on recent ACC statistics on price indices for basic chemical and specialty chemical markets (in North America), confirm PE house observations.



Specialty or commodity

A second area that was widely commented on was the distinction between specialty and commodity. There were a number of elements identified:

- Clear definition and understanding of the terms “specialty” and “commodity”
- Use and misuse of the “specialty” tag
- Differences between differentiated and undifferentiated strategies

The main point in question for the investor was the importance of fully understanding what type of business it actually is. Failure to do so undermines the basis for valuation.

Other issues and observations

Responses on the environment were varied. Most of those offering comments took the view that environmental issues go with the territory and, provided good pre due diligence was performed, they were manageable. The same was not true about reputation, which is a much more subjective topic and the focus of one interviewee who recognised that this was an issue requiring clarity and sensitivity.

A number of others took issue with the lack of effort to take advantage of non manufacturing assets, including land, access and licences.

Specific comments noted

Complexity, sector fundamentals, drivers and dynamics:

“The industry is far more complicated than many other sectors in which we invest.”

“The downside risk in chemical investments can be much worse than you can possibly imagine, and more difficult to predict than most other industries.”

“In theory we will take into account the cyclical nature of the business, but actually business cycles seem to be almost totally unpredictable.”

“The chemicals sector is high complexity...it is absolutely critical that we understand the dynamics of the particular market – and if we can understand better than others, this is a plus point.”

“The chemicals sector is subject to rapid change, particularly commoditisation of markets.”

“Complexity can be good for the PE investor; it offers an opportunity to bring clarity and focus.”

“Chemical companies are far more exposed to foreign exchange volatility, and much more energy intensive than other targeted investment sectors.”

“The level of interdependency is much higher in chemicals. One consequence is that raw material supply is often vested in a small number of very large trading partners, increasing vulnerability during periods of disruption.”

“The chemicals sector is more vulnerable than other industries and investment opportunities to external ‘events’ which are difficult to predict both in terms of their impact on the business fundamentals and sector cyclical nature.”

“Raw material input costs represent a much bigger percentage of operating costs than in other market sectors, yet raw material price control is limited. The demand/supply balance is vulnerable to a wider range of market drivers, and there is always a lag in the ability of operators to pass on price increases.”

“The resource requirement to investigate chemical sector companies is often bigger than other sectors because the businesses are more complex – so in the early stages it is necessary to focus on key questions and not to get too sucked in.”

“Do we like the chemicals sector? Yes, but it is not one business. We investigate the dynamics and philosophy of the bits we like and avoid the bits that don’t appeal.”

“We are wary of true commodity businesses. They are notoriously cyclical, and more vulnerable to volatility in raw materials pricing. It is much worse in chemicals than other investment sectors.”

"The chemical industry still operates too many plants; if industry tidied up (its asset base), it would increase industry attractiveness."

"Growth is a challenge – apart from specific niches, volume growth is in line with GDP but prices lag inflation, i.e. so turnovers may also decline in real terms. There is no significant difference here between the US and Europe."

"Chemical companies offer considerably more incremental scope (over other sectors) for managing the business over and above raw material cost input and overhead cost control."

Specialty vs commodity:

"From observing other deals, many PE houses seem to have been lured into paying specialty chemical multiples for quasi-specialty businesses."

"We must be cautious of over-paying for 'specialty businesses', where management has failed to respond to market changes and that are now really commodity operations."

"There have been several cases where a player in an oligopoly has been acquired, with the acquirer paying specialty chemical prices."

"...a major stumbling block is not recognising the sort of business that is being bought."

"Chemicals is one of the few market sectors in Europe which can be said to have underperformed for private equity driven by a misconception that specialties offer some resilience to economic downturn when actually, many of them perform much more like commodity businesses."

"It is difficult to see who would buy some of the larger specialty businesses that are in fact a whole collection of niche businesses."

"This is a gross generalisation – but our experience is that, in many cases management in the chemical industry has lived and breathed chemistry all their working lives and very easily slip into thinking their products are commodities."

"Specialty chemicals – even very large ones – are often niche businesses. For example, one was sold as a single business, but in practice it really works as 12 or more separate businesses."

"Specialty chemicals is not one market, and parts of the sector have fared much worse than others in the recent past, such as pharmaceutical intermediates."

"PE houses underestimate the complexities of separating an acquisition from its parent."

"Small cap markets offer greater protection against global market cyclicality."

"Chemical markets have higher barriers-to-entry than most markets; products can be specified in by customers to create better defensibility and competitive advantage."

"We look closely at cash flow and cash flow potential – but we don't concentrate on in-depth analysis of market cycles."

"...A strong asset base does provide some defence against a market downturn, with the option of refinancing."

"Fine chemicals have been hit particularly hard recently. For PE, one issue is that they tend to be very cash absorbing...it's often necessary to rework capex to satisfy successive contracts."

Environment and reputation:

"There are several stumbling blocks in chemicals, headed by environmental legacy but the perception is much worse than reality. It is a manageable problem."

"Reputation management is not so easy."

Recognising assets:

"Land and other 'assets' are under-utilised."

"The presence of knowledgeable and pragmatic unions familiar with the global competitive environment is a real plus point for chemicals sector deals."

Valuation, debt and the rest:

“Chemicals is ‘behind-the-times’ on secondary buy-outs, and price expectations need to moderate.”

“The worst auctions are those where only PE houses are competing because bid prices are not based on realistic market multiples – you need a trade buyer involved providing this balance.”

“The most important single element in a good deal is the entry price.”

“Most of the current crop of investment opportunities are in commodity chemicals, so we need to seek out the lowest cost operator(s) and management teams with latent abilities.”

“Commodity operations are difficult to ‘bank’ (secure affordable debt provision). Many of the US deals use bonds to fund highly leveraged LBOs.”

“There have been several major PE disappointments... it is difficult to see how debt providers will continue to raise funds given the current wave of major deals.”

“It’s the bottom of the cycle, there’s a lot for sale and it seems a good time to be buying – but many investors are chasing the same deals and prices may be bid up as a result.”

“Customers will pay more for the quality of service, support or application expertise. These factors raise barriers-to-entry and increase business defensibility.”

“In capital intensive businesses, it is easy to lose focus on capital expenditure and other cost issues, which results in technology or asset base leadership being diluted or diminished.”

13. Exit options and experience

As a topic worthy of discussion and comment, the exit was top of the list and as the output from our research demonstrates, generated a contribution from all PE houses that co-operated.

The first and, perhaps most important reaction to questions about exit options available to chemicals sector investors, was nothing to do with the industry at all.

PE houses accept that the most important driver of exits is the entry price, and buying badly restricts severely their ability to earn an acceptable exit multiple on their investment. Individual investment sector dynamics do play a key role, as does the ability of management to execute a good business plan, but all said there a need to operate with discipline and prudence at the deal valuation stage.

A couple of the interviewees were also keen to stress that there is no basis to believe that the PE industry is any better than industrial sellers in making disposals, and exit prices are driven more by the health and activity of the corporate buyers.

Other general comments relating to the exit debate included:

- Limited exits mean retention times will be increased, adding even greater pressure on PE houses to achieve a good multiple. This can be exacerbated by the funding cycle if PE houses still have too much in the portfolio and investors are looking for early cash returns
- A significant minority retain chemicals assets longer than assets from other focus sectors. This was most apparent in the mid and large cap sectors
- The chemical industry offers, in theory at least, a greater number of potential trade exits. This was predicated on the fact that it has long been a truly global industry with market segment players in most regions of the world. There has always been a lot of corporate turbulence which usually spawns more M&A transactions

Returning to available exit options, the list of alternatives is common to most industry sectors, and includes:

- Flotation on the stock market, usually referred to as an IPO (initial public offering)
- Trade exit (selling to a trade or strategic buyer already operating in the chemical industry)
- Secondary buy out; full or partial sale of the business to another financial investor on the back of a new financing package
- Write-off or receivership

The IPO option

The IPO has only limited value in chemicals, and in Europe, and is open only to the large cap PE houses owning businesses with significant (financial) critical mass. Respondents in all cap sectors expressed views on the IPO option:

- All PE houses operating in Europe believe the IPO is currently “off-the-table” at this time, reflecting the economic cycle and the historical poor performance of chemical companies in the public sector
- Large cap PE players were in agreement that structural issues in the European stock market make the IPO less likely in mid-cap markets than in the USA where the mid-cap market has remained popular with investors. On average, respondents would be happy to consider a US listing for businesses with sales revenues of >€500 million – they add a zero to this before they consider a European stock market listing
- Those with IPO experience also point to the time required to execute an IPO. The process is prescribed and varies by jurisdiction, adding time, complexity and cost

Trade exits

Trade exits dominate in the chemical sector. PE sector interviewees rely heavily of the continuing presence of strategic buyers, and with good reason. Unlike the IPO option, general stock market conditions have a more limited impact on trade exits, partly because sentiment takes second place to strategy.

According to the PE houses, the trade exit window is always open. Just how far open varies but there is usually a deal at the right price if you look hard enough.

Four interviewees highlighted the fact that, as a consequence of the proliferation of over priced deals in the late 1990s, trade buyers have become more discerning in their buying activities, seeking a minimum strategic overlap of 75-80% with captive businesses.

Growth of secondary buy outs

Financial pressure on trade buyers in the last couple of years was identified as one of the factors supporting the growth of secondary buyouts in the chemicals sector.

Increasing popularity of the secondary buy out is tempered by concerns that exit values for secondaries can be the subject of some disagreement and it is important to ensure that businesses still retain sufficient value for subsequent owners to meet their own return on investment criteria. Other responses related to secondaries include:

- Two PE houses said that there are some businesses which have sufficient niche profile to survive outside the big multinationals, and have proved their business model works for successive PE buyers
- Half said that with the IPO window effectively closed, and limited appetite for deals by the large trade players, the secondary buy out offers an exit to PE houses facing funding cycle phasing issues
- You have to get the timing right, both on entry and exit to make the secondary buy out work
- There was a suggestion from a couple of PE houses that secondaries were very much a fall back exit option because they are not particularly popular with fund investors

Exit flexibility

A number of large and mid cap investors identified the need to consider the break-up and selective disposal of component parts of larger conglomerates to ensure debt repayment schedules are met, and the value of the retained business continues to grow.

Seeking staged exits requires constant observation and assessment of exit options, and the ability to execute quickly and effectively to keep selling costs to a minimum.

Write-offs

Part 2 of this report highlighted the growth of failed PE investments (1999-2002) in all investment sectors. Whilst this remains an option in the chemicals sector, and does happen, there is a reluctance to allow chemical businesses to fail because many carry environmental liabilities. Two PE houses referred to the political climate in Europe in particular, which drives EU Member States to offer rescue packages to chemical businesses in trouble disregarding wider industry issues about supply-demand imbalance.

Exit availability by PE market sector

Strong evidence was presented suggesting that small cap investors have the best of it when it comes to exits.

Mid and large cap players rely heavily on the trade exit, and track closely the financial health and capital flexibility of the major trade players.

In reality, the IPO would only be available to the large cap players in Europe, but as one interviewee pointed out, the last significant chemical company flotation was in 1996 and that was deemed to be a failure, the company being swallowed by a trade buyer within three years.

Several PE houses are following closely all attempts at IPOs, regardless of sector. A number of major European PE houses include in their current portfolio chemical businesses offering the potential for flotation. Based on our research, they shouldn't hold their breath.

Specific comments noted

Exit option overview:

"Many PE houses believe they can buck the market on exit multiples. This is a big mistake – we're no smarter than the industrials!"

"Exit multiples are outside the control of the PE houses; they are dictated by the health and dynamics of the big industrials."

"Exits dominate our thinking. There is no point building for

an IPO when you have a large group of disparate business units, and separation and break up means you can be left with all the equity vested in the rump of the business."

"Exit timing is cycle dependent, and on balance we retain chemical businesses in our portfolio longer than in other industry sectors."

"Business retention times are driven more by the opportunity to maximise exit multiples in small cap markets, rather than sector fundamentals and global markets cycles."

"Chemicals are currently out-of-favour in UK equity markets, so a flotation needs to be bigger and sexier than competing sectors to attract attention."

"We think about the exit before we ever invest in any business."

"Our businesses are not quite in the IPO range; therefore we are looking mainly for trade and possibly for secondary buy-outs. Therefore at the point of investing, we consider the strategic value to potential trade barriers. This is fundamental to our appraisal of the business plan."

"If the strategy is buy and build, subsequent acquisitions have to be assimilated – this takes time and pushes out the sale horizon."

"Chemicals has always been a global market; this opens up exit options in all global regions for good businesses."

"There is little visibility of exits at the moment and who is going to buy some of the current businesses in PE portfolios."

"The trade is still licking-its-wounds after the high multiples paid in the late 1990s. We may be in for the long haul, concentrating on cash generation and debt pay down."

Return of the IPO?:

"The IPO window may return but it will have to be a good case because equity investors have been burned before."

"IPOs are a limited opportunity and require extended time to accommodate the 'lock-up' period and secondary placements etc."

"The IPO is cycling back into fashion for large cap markets – driven by macro economics."

"IPOs in chemicals need to be substantially bigger in the chemicals sector to have a chance of succeeding."

"The IPO will return as an exit option because the market is cyclical, and to some extent sentiment driven."

"There are structural issues in chemicals which mean it is almost impossible to exit through a public offering. In this aspect, it differs materially from other investment sectors."

"In the USA, IPOs have remained an exit option. In Europe there is no IPO! You need to add a nought to the threshold value being considered under this option."

"The US is a better IPO market than Europe. The EU doesn't have a base of institutional investors interested in chemicals so deals have to be bigger to attract that interest."

"If IPO's make a return in Europe, they'll be for €1 billion plus companies. Most specialty companies of this size are really built up of a string of disparate bits. PE houses may find they have to break down the business and sell off some parts to trade or perhaps as secondaries."

"We don't include IPOs in our thinking – they might come back, but the chances are they will be limited to €1 billion enterprise value companies or higher."

"IPOs are still attractive for large cap deals, but the scope for IPOs is very limited – the last major one in the chemical sector was in 1996."

"There is still a US market for the IPO >\$1 bn, but in Europe, deals would need to be in the \$3-5 bn range because of structural differences in the equity markets."

"You need to be pretty big to execute a successful IPO in chemicals! The current threshold is in excess of £2 billion (enterprise value)."

"Most of our exits have to be IPOs. Although often bought in distressed circumstances, most assets are good enough and big enough to operate successfully on their own."

Trade exits dominate:

"Trade sales offer the greatest synergies (for the buyer) so prices tend to be better. PE houses need to manage the business repositioning to maximise the exit multiple."

"Trade exits are the cleanest and quickest to execute. Secondaries can be held up by warranties and guarantees, particularly in the chemicals sector."

"Trade exits are strongly favoured over secondary buy-outs, the latter not offering enough additional potential except as a route of last resort in businesses with maturing cash flow."

"Trade deals are highly favoured because they reflect the cyclical philosophies and market positioning of the large industrial chemicals players, which have a tendency to change direction often enough to create corporate disruption and M&A market liquidity."

"Trade sales are overwhelmingly the main option."

"Trade exits dominate in chemical markets. Most sector companies are mini conglomerates enhancing exit opportunity."

"Trade buyers are not interested in buying a business if more than 20-25% is non-core... if it is too diversified, they just will not consider it."

"Trade sales are subject to much more rigour as strategic buyers have become more disciplined (although they still made mistakes) and stick to truly synergistic acquisitions – with larger industrial buyers becoming increasingly selective, it is difficult to see who will buy some of the larger speciality businesses that are in fact a whole collection of niche businesses."

"A trade sale remains the favoured option, but the window opens and closes with the general economic cycle."

Growing secondary buy out interest:

"There is a secondary market for good businesses the trade doesn't see a need for."

"The secondary buy-out market is growing because trade sales are difficult at the moment and the IPO is off the table."

"Investors don't like secondaries, but the counterview is that PE houses are time-constrained by fund commitments, and secondly, companies do need to move on."

"Growth of the secondary buy-out market is a natural consequence of closed public markets and a dearth of cash rich trade buyers."

"Refinancing (secondary buy-outs) are most valuable when the entry multiple is low, 'or you get lucky in the cycle.'"

Retaining exit flexibility:

"Investors need to be prepared to stage exits as market conditions allow."

"Sometimes, you have to spin out units from existing investments to pay down debt."

"There are few genuine buyers for the large disparate groups right now – there is no tension in the market."

Receivership remains a risk:

"Never forget that receivership remains a real exit option, but not by choice. Investments don't always work and the level of write-offs remains a significant proportion of the exits recorded in the European PE industry."

"Receivership is a more limited option in chemicals. As a result of environmental legacy concerns, bankruptcy is often supplanted by government subsidy even when supply exceeds demand."

Strength of the small cap sector:

"It is generally easier to exit in the small cap sector because it is less competitive."

"Most of the deal flow is in the small cap sector, and in-fill acquisitions not transformational acquisitions, on the back of technology or service led business overlap."

14. Funding mechanisms; impact on investment and exit strategies

This area of operational importance to PE houses has only limited impact on PE house investment and exit strategies except in two key aspects:

- Potential limits on equity participation in the larger deals
- Conflict between funding cycles and investment/exit decisions were timing is out of phase

Mid and large cap market players made reference to the number of syndicated deals in PE markets, driven by a combination of shared risk and equity support. Most investment funds have attaching conditions relating to geographic activity and sector exposure.

Although not specific to any particular sector, there is a general acceptance that any given sector will not typically represent more than 15% of a fund, and no specific investment more than 10% of a fund value. Where large, potentially valuable investment opportunities are identified which might involve equity investment beyond the level acceptable to a single investor, PE houses said they were ready to co-invest with like-minded PE houses.

Several major examples of this approach exist in the chemical industry, and the recent news reports suggest that a similar approach is being considered in relation to the potential acquisition of the mg technologies' Dynamit Nobel division.

The other dynamic identified by half the research respondents was the issue of potential phasing conflicts between fund raising and investment/exit execution. Most PE funds operate funds typically over a 10 year cycle, setting aside five years to invest the fund, and five years to realise the gain through exit.

Investing unused funds close to the end of fund life increases the risk of delayed exits, restricting the return of investment benefits to capital providers. Since most PE houses raise funds on average every three to four years, this issue rarely causes major disruption.

Similarly, exits are occasionally accelerated to ensure realisation of funds to repay investors. Again, this doesn't

happen very often, primarily because PE fund managers maintain close management of exit timing within the context of their prime target of maximising the multiples of cash investment.

Additional views were expressed about general funding raising activities. These have been included in the comments section below.

Specific comments noted

Syndicated (large cap) deals:

"Larger investments may exceed internal funding rules. We are happy to co-invest with like-minded PE houses and to provide investment headroom (in other target companies) this way we 'keep our powder dry.'"

"Our primary strategy is to do their own deals – we will syndicate in specific situations."

"We mustn't weight our portfolio too much towards any one sector. Ideally each single investment is 8% to 10% of the fund, with 15% as an absolute maximum; and we would not wish to do more than two deals in any sector."

"Historically we will invest approximately 15% of our funds into the chemical sector."

"We are happy to co-invest on deals where our fund structure limits the equity investment we can make alone."

"We seek about 10 deals per fund and have a working maximum investment (equity) at 15% of the fund in a single investment."

"The top end limit (of enterprise value) is €4-5 billion but as our history shows, we will readily syndicate the big deals."

Potential for timing disconnects:

"We operate on a typical 10 year funding cycle (but usually seven to eight years), five years in, five years out, and there is a real need to realise investments on a regular basis to meet investor commitments."

"The business cycle can often be incompatible with the investment timetable."

"There is potential for conflict between funding cycles and investment/exit decisions when they are out of phase."

General points of interest:

"Portfolio management and fund raising take time; you need a compromise between this and investment/exit execution."

"Over the last few years, successive funds have increased in size, but investment rate has slowed."

"Market volatility and shorter business cycles reflect the increasing efficiency of capital markets. Under these circumstances, the timing of investment and exit become crucial to achieving investor returns."

"It is true that the US and EU markets use different funding instruments, but this has only a minor impact on asset retention times."

15. Impact of PE investment on the economic performance and long term sustainability of the chemicals sector

We are currently facing a dramatic increase in PE ownership of the European chemical industry and PE investors said that the impact of this will be positive for all stakeholders. Interviewees prefaced their comments with the assertion that “we are open to the accusation that... they would say that wouldn't they” but provided a series of considered opinions supporting their view.

Opinions addressed both the short-medium term economic performance of the industry, and longer term issues of competitive resilience and sustainability. Interviewees also identified a number of the consequences of increased investment on issues such as:

- Retention time for portfolio companies
- Future availability of capital for investment funds
- Corporate M&A activity levels

Improved financial discipline

PE houses operating in small, mid and large cap sectors said that financial performance and competitiveness would improve as result of increased financial discipline and better cash management. This included a better understanding of:

- Value pricing strategies
- Increased access to growth capital
- Tighter capital investment rules

Cash and reduction of debt drives the business management philosophy, but not to the detriment of growth and value enhancement of the enterprise. In essence, PE houses buy a “history” and sell a “future”. The absence of a stable and sustainable business platform significantly undermines the exit value of the business and in turn, reduces the return on investment for the PE house. PE investors take a longer term view of business value.

Enhanced M&A market liquidity

Four respondents identified the role of PE houses in facilitating market restructuring and consolidation.

Increased PE investment contributes:

- Increased deal flow, maintaining corporate transactional activity
- More aggressive repositioning of businesses for exit
- Removal of “roadblocks” to deal execution

Business culture and management quality

One respondent expressed the view that sector management skills will improve with increased PE sector involvement. Exposure of lower and middle management to the financial realities and commercial necessities of business life earlier in their career would have long term benefit, adding to the inherent and widely recognised technical skills they already possess.

Several believed that the change in culture alone, more entrepreneurial and higher reward for delivery, will improve the approach and morale of many managers.

Views were balanced by recognition that successful MBO teams need to be both tenacious and committed – it isn't a part-time occupation.

Increased retention time, exits and others

Six PE houses commented about the effect on portfolio retention times as a consequence of increased PE sector involvement in chemicals, agreeing that retention times have the potential to increase. With exits already few and far between (investments are ca. 50% ahead of exits in 2003/4), a backlog could build as investment increases. Several players also reiterated the view that exit activity is primarily driven by cash liquidity, and the position of the large trade players in the strategy cycle.

Mid and large cap investors confirmed that this issue is more likely at the top end of the market, with small cap players believing they are better protected as the exit window is always bigger at the low end. Large cap sector

investors saw the return of the IPO, if and when it cycles back into fashion, as a bonus for exit dynamics.

One interesting view expressed by a large cap player pointed to a possible capital squeeze in the future if the cycle of investment/exit became too concentrated into a limited time period.

Specific comments arising

Improving financial performance and capital availability:

“PE investment in chemical markets must be good for chemicals since it aims to improve profitability, competitiveness and commercial sustainability.”

“The PE industry is more reluctant to invest significantly in asset base which can create an artificially higher regional demand for products. Trade operators usually invest forward, but not always on the back of sound analysis.”

“Over investment is most prevalent in commodity markets.”

“PE houses can also act as a partner to fund acquisitive growth or to provide development capital for technology driven companies suffering from the current lack of interest evident in the wider capital markets.”

“PE also offers co-operation on back-to-back deals with trade buyers to facilitate acquisitions involving unwanted assets offering limited strategic fit, reducing risk and complexity for trade purchasers.”

“Regarding the future of PE, in the US the allocation of capital to PE continues to increase despite the relative maturity of the investment sector.”

“Increased PE investment in European chemicals should be positive with the added focus and discipline on value creation and cash management, but chemicals remains a risky business and facing:

- increased regulation from the competent authorities*
- relocation of the client base to the East, particularly for commodity chemicals*
- technological advancement.”*

Commercial sustainability:

“PE houses invest for financial benefit and as such they improve cash and management disciplines to the benefit of the industry in the medium to long term.”

“The PE sector is driven by asset value enhancement, building better, more financially efficient, sustainable businesses than those they acquired. This must be good for the chemicals sector in the medium to longer term.”

“PE focuses on performance, improving business quality, and seeks to avoid creating a business bubble.”

“PE investment forces the maximising of value of the business, and so must improve the chances of the business surviving against Far Eastern threats.”

“PE investment in the chemical industry must be positive in the medium term because of the improved financial discipline.”

Corporate activity:

“Consolidation must happen in many parts of the chemicals sector, and this is easier in private equity hands than under corporate ownership:

- There are not the same labour issues*
- PE can restructure easier*
- PE will generate healthier, more focused businesses – although this doesn’t necessarily mean fewer companies.”*

“The more sector liquidity there is, the safer you are and PE activity increases liquidity.”

“PE drives sector consolidation and restructuring in a fragmented industry sector – this has to be good for chemicals.”

“EU PE sector fundamentals and financing arrangements facilitate greater entry/exit flexibility than in the US where LBOs are much more highly leveraged using high yield bond issues.”

“PE needs to be proactive in bringing focus to the chemicals sector to support the return of institutional investors by making it more understandable (transparent) for the market.”

"M&A activity will be sustained regardless of the level of PE ownership."

Management quality and business culture:

"(Chemicals sector) management and leadership quality will be enhanced because the next generation of industry leaders will have been exposed to financial disciplines much earlier in their career."

"Working with PE investors provides more specialised advice and support which has to be good."

"Increased PE investment is unlikely to impact exit options; more M&A activity always spawns more corporate opportunities."

"Private equity makes things happen that perhaps wouldn't happen under other ownership – perhaps the incentives simply make management pedal harder, perhaps we force them to just be a little bit more ruthless and make tough decisions; we certainly set them different objectives to corporate owners, particularly with regard to cash management. Also management really can see how they are adding to their own wealth so there is a real incentive for them to perform well."

"Private equity:

- Provides a more entrepreneurial culture*
- Drives value creation (the only way PE houses can make money is by growing the value of the business)*
- Doesn't impose artificial targets that public companies often do... PE can actually take a longer view*
- Imposes greater pricing discipline, driven by value, not volume or market share*
- Also imposes better corporate governance."*

"PE can be good for morale – there is the so called 'buy-out' effect."

"Relative to other asset classes, PE investment shows growth in both investment in businesses and growth of employment."

Impact of retention time and exits:

"The prospect of increased sector investment by PE in

Europe, combined with the lack of recent exits by current investors is likely to increase retention times."

"Business retention times may increase, but this is most likely in the mid-large cap sector where deals are more often funded by high yield bond issues which are based on longer term debt repayment schedules."

"In the US, PE retains businesses longer, because the PE market itself is more mature. Until fairly recently in Europe, there were opportunities to buy, juggle assets around, pay down debt and resell the business – in short there were opportunities for 'buying cheap'. Now it is necessary to grow the enterprise value, and I anticipate the average investment period in Europe will extend."

"Chemicals sector need for capital investment means that retention times will sometimes be extended to ensure a return on investment is realised."

"Longer retention times for chemical companies existing within PE portfolios are inevitable at the current point in the economic cycle, and the limited scope for high multiple exits."

"Company retention times will increase, partly because PE is not always buying good businesses and this limits exit opportunities."

Other issues:

"For capital markets, there will be issues because of money raising demand for the next round of exits."

Data sources and other information

Data sources used in this report

British Venture Capital Association (www.bvca.com)
European Venture Capital Association (www.evca.com)
Young & Partners LLC, New York (www.youngandpartners.com)
KPMG (www.kpmg.co.uk)
Gresham LLP (www.gresham.vc)
UK Centre for Management Buy-Out Research (www.cmbor.org)
European Chemical Industry Council (www.cefic.be)
Verbund der Chemischen Industrie (www.vci.de)
American Chemistry Council (www.americanchemistry.com)
AltAssets: the alternative assets network (www.altassets.net)
chembytes e-zine (www.chemsoc.org)
Thompson Venture Economics (www.ventureeconomics.com)
Cinven Index (www.cinven.com)
Arthur D Little Chemicals Executive Newsletter (www.adlittle.de)
Chemical Industries Association (www.cia.org.uk)

Other useful sources of information

Advent International plc (www.adventinternational.com)
Argos Soditic (www.argos-soditic.com)
The Blackstone Group (www.blackstone.com)
Candover Partners Limited (www.candover.com)
Charterhouse Development Capital (www.charterhouse.co.uk)
Close Brother Private Equity Limited (www.cbpel.com)
CVC Capital Partners (www.cvceurope.com)
Duke Street Capital (www.dukestreetcapital.com)
Dunedin Capital Partners (www.dunedin.com)
Hg Capital (www.hgcapital.net)
Kohlberg Kravis Roberts & Co Limited (www.kkr.com)
Legal & General Ventures Limited (www.lgim.co.uk)
Phoenix Equity Partners (www.phoenix-equity.com)
Quadriga Capital Eigenkapital Beratung GmbH (www.quadriga-capital.de)

Chemical Industries Association

The CIA is the chemical industry's leading trade association and employers' organisation representing member company interests both nationally and internationally. Some 200 companies are members and these operate from over 600 sites throughout the UK.

The CIA is:

- A strong and influential organisation driven by its members and respected by stakeholders
- Continually dealing with diverse pressures faced by the chemical industry on behalf of its members
- Constantly lobbying policy makers, regulatory bodies and national and international groups on behalf of the chemical industry to influence legislation
- At hand to offer its members expert advice on issues affecting the chemical industry including: EU chemicals policy, best practice, profitability, health and safety, economic, social and environmental sustainability and public image and perception
- At the forefront of event and activity organisation enabling member company representatives to come together with their counterparts from government organisations, non-government organisations, competitors, potential customers and service providers.

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Cogency

Cogency provides independent commercial risk advice and issues analysis for private equity and other financial investors active in the chemical industry. Services also include deal origination, and pre due diligence on acquisition targets, based on our extensive experience in European chemical markets and access to a global network of contacts.

Our clients include private equity houses, corporate finance intermediaries, debt providers and chemical entities seeking to create value and establish strategic leadership in chemicals.

Gresham

Gresham is one of the few regionally based UK private equity houses specialising in investing in mid-market companies. Transactions are typically valued at between £5m and £75m. The group focuses on management buy-outs, buy and build opportunities and transactions requiring expansion and replacement capital. Gresham's offices in London, Birmingham and Manchester give direct access to the main centres of UK buy-out activity. This regional focus provides strong local knowledge and a network of contacts essential to sourcing new deals and effectively working with management teams across the UK.

A focused portfolio management team works alongside investee companies in dealing with key commercial and financial aspects of the business to enhance the value of an investment and to focus on profitable exits. Gresham has a strong proprietary origination function which accounts for more than 50% of its lead investments. Gresham has a successful investment track record with a gross realised investment return of 34 per cent and a cash return of 2.4 times on 102 investments made since 1980.

Gresham undertook its own buy-out from Zurich Financial Services in February 2003 to create an independent business owned by the management team. In December 2003, Gresham announced an interim closing of its Gresham 3 fund at £153m from 11 investors, well on the way to its target of £200m.

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KPMG

KPMG's Private Equity Group brings together our most experienced private equity practitioners from our global network to devote their full attention to meeting the needs of the private equity community. The Private Equity Group gives support throughout the PE lifecycle combining in-depth knowledge and understanding of the market. We offer a broad range of skills, comprising some of KPMG's best and most experienced private equity advisers from audit, commercial due diligence, corporate finance, risk advisory services, tax and transaction services. This means our professionals can assist PE houses that work globally, regionally or nationally.

KPMG has a leading global position in the chemical industry achieved through our extensive experience and client base, the employment of industry people and our sharing of industry understanding.

KPMG is the global network of professional services firms whose aim is to turn understanding of information, industries, and business trends into value. With nearly 100,000 people worldwide, KPMG member firms provide audit and risk advisory, tax and legal, and financial advisory services from more than 750 cities in 150 countries.

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