

Industrial Products
Industrial Manufacturing

Producing Value*

Global Industrial Manufacturing mergers
and acquisitions analysis 2005-2007



*connectedthinking

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Welcome

Welcome to **Producing value*: Global Industrial Manufacturing mergers and acquisitions analysis 2005-2007**. Our report shows that deal-making in the industry has been growing strongly, both in terms of deal numbers and values. Many conglomerates are looking at strategic divestitures to simplify their business portfolios. Achieving market leadership also remains a key driver of deal activity.

We believe that deal-making in the industry will remain strong in both the near- and longer-term future, given that many sectors remain extremely fragmented. They therefore offer excellent potential for securing cost synergies, particularly among small and middle-market targets.

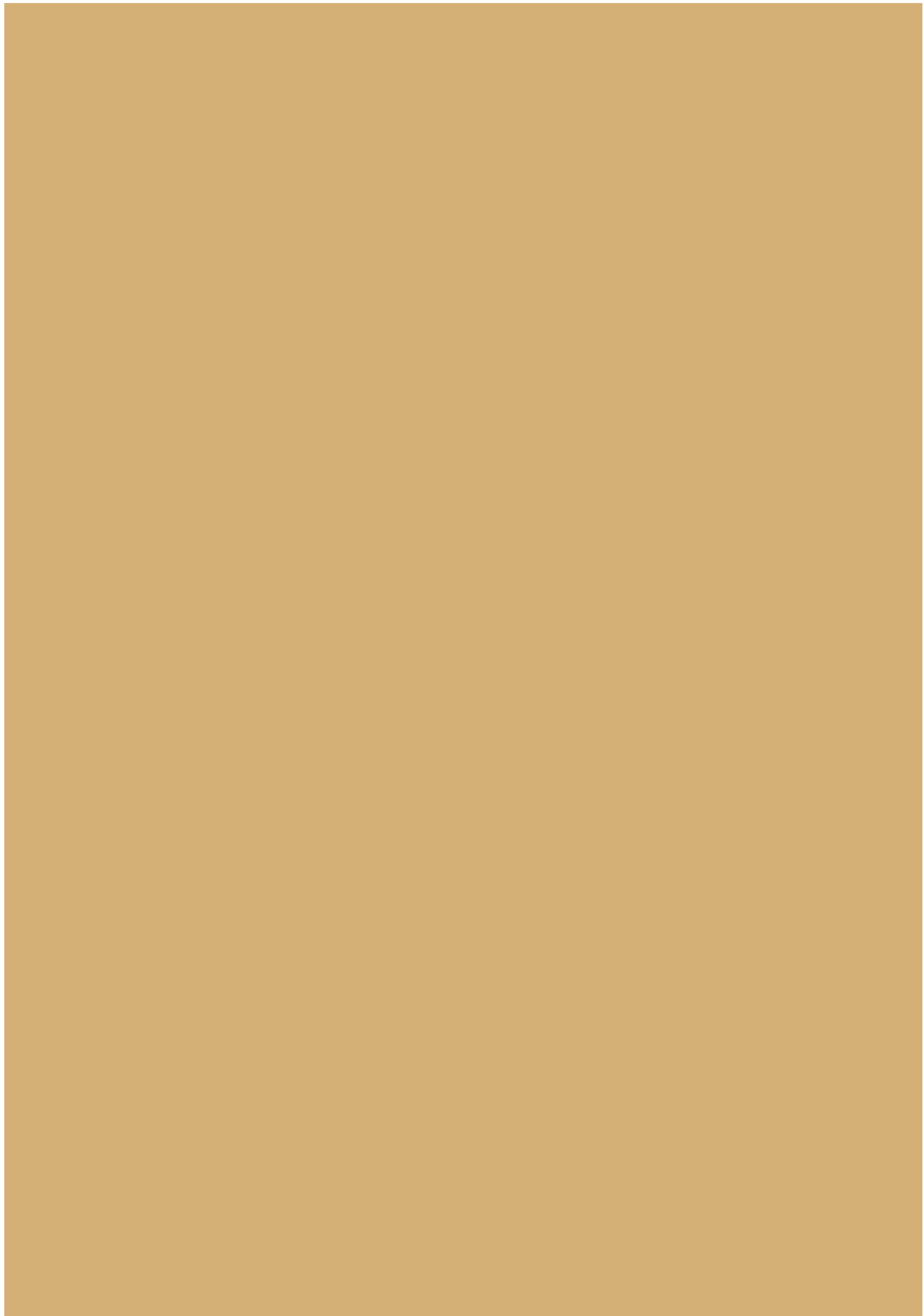
Our report examines the motivations driving the top 10 transactions, analyses the spread of deals throughout the world, highlights key sector trends and takes a look at the participation of private equity players. We also provide a PwC perspective on key factors for CEOs considering M&A activities and future prospects for the sector.

We hope you enjoy our report. If you have any queries about our findings, please contact us. We will be providing ongoing coverage of M&A activities in the industrial manufacturing sector in the **Assembling value*** quarterly review series, which will be available for download at www.pwc.com/manufacturing.

A handwritten signature in black ink, appearing to read 'Graeme', with a stylized flourish extending downwards from the end of the name.

Graeme Billings,

Global Industrial Manufacturing Leader



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Report highlights

Conglomerates are taking a strategic look at their portfolios

Many industrial manufacturing companies are highly diversified. Savvy management teams are taking a close look at the underlying logic of their business mix, and using deals to obtain strategic advantages. In some cases this means stripping out subsidiaries, or even entire divisions, where the business case no longer supports the company's overall goals, as Tyco did with its electronics and healthcare divisions. But it may also mean purchasing a company that can help to deliver access to a new market niche, region or technology, or to turn a small player in a segment into a global leader. Some companies – like Ingersoll-Rand – are taking both routes.

Western Europe leads the way in deal numbers, but North America drives deal values

Western Europe accounted for nearly 40 per cent of the deals that took place. Germany took pole position, with 385 deals collectively worth more than those that occurred in France and the UK, combined. But three very large US transactions in 2007 saw North America shoot to the top in terms of the total value that was traded.

Industrial manufacturing remains attractive for private equity funds

Financial investors accounted for more than one-quarter of the total value that changed hands, including at least 10 billion-dollar deals. The level of private equity investment was especially high in Germany, which has a large base of established medium-sized companies with a good reputation for quality and technological innovation. Manufacturers also remain attractive targets for private equity investment, given the opportunities to cut costs and the still fragmented nature of many industry sectors.

Manufacturers are looking to achieve leading position in markets, technology, and cost-effectiveness

Bolting on a subsidiary with a strong presence in a new market or first-rate research & development capabilities in emerging technologies has proved a popular strategy. Most deals are driven by a number of motivations, but nearly all also aim to achieve cost synergies. Such savings typically come from streamlining a new subsidiary's sales processes or integrating its administrative processes into an existing shared services centre; rationalising the supplier base; and securing economies of scale in procurement, manufacturing and distribution.

A sound business strategy and detailed evaluation of a target's operations and finances are crucial to realise the full value of a deal

The first step in acquiring a new company is to understand your existing businesses; how do they fit together and what are their key strengths and position in the value chain? Next comes a rigorous due diligence process, including extensive scrutiny of a target's general operations, manufacturing capabilities, capital equipment, and IT systems. Three areas – environmental liabilities, energy price increases and IT integration – most consistently lead to cost overruns. But many of these problems can be avoided with careful scrutiny before the deal is done.

Deal-making strong in areas that support hot industries

Many of the sectors experiencing strong deal activity support 'hot' industries like electricity and gas, oil exploration, mining and construction. Other sectors showing robust activity include heating, ventilation and air conditioning (HVAC) and industrial automation.



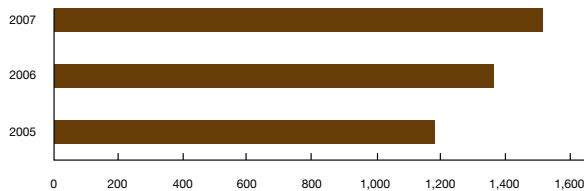
Introduction

The industrial manufacturing sector is vast. It comprises some of the world's biggest and best-known corporations, as well as a substantial number of small and middle-market players. Indeed, there are about 3,000 industrial engineering and machinery companies with revenues of 20-500 million euros in Europe alone.

The diversity of the sector also makes it difficult to define. Industrial manufacturing companies typically perform a wide range of activities, and many of them span more than one area of business. For the purposes of this report, we have therefore focused on companies producing machinery and equipment, as well as makers of electrical equipment, fabricated metal products and electronics (excluding those for consumer use and computers and peripherals)¹.

Our research shows that the sector is going through a period of considerable change and that many of the smaller players are consolidating. Between 2005 and 2007, there were over 4,100 completed M&As, including 1,400 deals with values of less than US\$100 million and nearly 2,500 deals with undisclosed values, most of which were probably quite small-scale transactions². The rate of M&A activity is also increasing, with well over 1,500 transactions in 2007 – up from just under 1,200 in 2005 (see Figure 1).

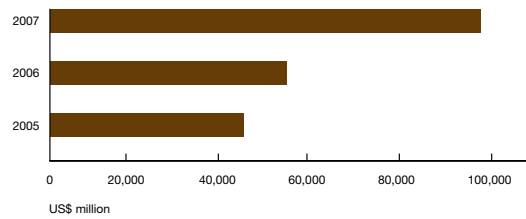
Figure 1: Deal numbers in the industrial manufacturing sector, 2005-2007



Source: Thomson Financial data and PricewaterhouseCoopers analysis

The aggregate worth of the deals whose values were disclosed has risen even more sharply year-on-year. In 2007, a record \$97.1 billion changed hands – more than double the \$45.7 billion that was traded in 2005 (see Figure 2). Several transactions worth \$5 billion or more accounted for much of this dramatic increase, and brought the total for all three years to a hefty \$198.8 billion.

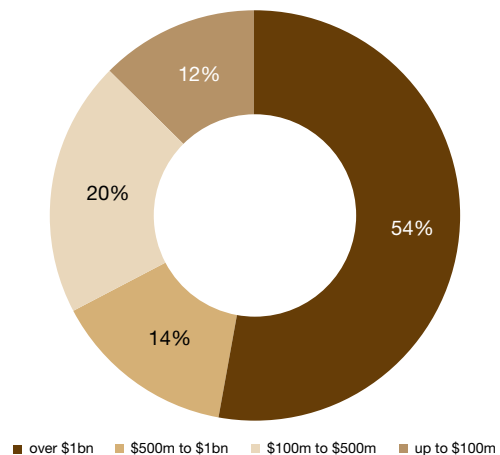
Figure 2: Deal values in the industrial manufacturing sector, 2005-2007



Source: Thomson Financial data and PricewaterhouseCoopers analysis

In fact, “mega-deals” worth over \$1 billion represent more than half the sum that was traded in the industrial manufacturing sector between 2005 and 2007 (see Figure 3)³. There were 39 such transactions, with a collective value of \$106.1 billion. Forty-one deals with values of \$500-999 million and 176 deals with values of \$100-499 million jointly accounted for another \$28.4 billion and \$39.6 billion, respectively, while small deals accounted for the remaining \$24.8 billion.

Figure 3: The total value of all disclosed deals by size, 2005-2007



Source: Thomson Financial data and PricewaterhouseCoopers analysis

1 We have examined all completed deals listed under the relevant industry codes (NAIC 332-335) using Thomson Financial. We relied on the judgement of our industry professionals to identify those which properly belong within the industrial manufacturing sector. We have generally excluded transactions which can more accurately be assigned to other sectors such as Metals, Chemicals or Consumer Products.

2 All subsequent references are to US dollars.

3 These figures are indicative, since they do not include any transactions for which values were not disclosed.



Dealmakers

The aggregate value of the top 10 deals in the sector was \$57.9 billion, 29 per cent of the total amount that was transacted in the three years to the end of 2007. The US proved a particularly popular target, with seven deals collectively worth more than \$45 billion – including the \$19 billion demerger of Tyco Electronics and Covidien (formerly Tyco Healthcare), which was by far the biggest transaction (see Figure 4).

Figure 4: The top 10 deals in the industrial manufacturing sector, 2005-2007

Date effective	Target name	Target nation	Acquirer name	Acquirer nation	Value of transaction (US\$m)	Acquirer class
29.06.2007	Tyco (Tyco Electronics and Covidien)	US	Shareholders	US	19,255	Corp
14.02.2007	American Power Conversion	US	Schneider Electric	France	6,085	Corp
07.08.2007	Allison Transmission	US	Investor Group (Onex Corporation & The Carlyle Group)	US	5,575	PE
28.12.2006	KION Group	Germany	KION Group special purpose vehicle (KKR & GS Capital)	US	5,087	PE
30.11.2007	Ingersoll-Rand (Bobcat, utility equipment and attachments)	US	Doosan Infracore	South Korea	4,900	Corp
05.07.2006	Is scar	Israel	Berkshire Hathaway	US	4,000	PE
01.06.2005	Kone (Kone Elevators)	Finland	Shareholders	Finland	3,521	Corp
09.12.2005	York International	US	Johnson Controls	US	3,288	Corp
08.12.2006	JLG Industries	US	Oshkosh Truck	US	3,252	Corp
21.11.2007	Tektronix	US	Danaher	US	2,956	Corp

Source: Thomson Financial data and PricewaterhouseCoopers analysis

Two factors played a key role in stimulating much of this activity: the desire to simplify over-complex portfolios and the drive for market leadership.

Simplifying the portfolio mix

Many of the world's largest industrial manufacturing companies have expanded by acquiring companies in different areas of business, both inside and outside the sector. But over the past few years some of these firms have begun to reassess their business models and refocus on their core activities, in a bid to reduce their organisational complexity. More than half of the top 10 deals that took place between 2005 and 2007 involved some form of corporate restructuring.

Tyco International's decision to spin off its healthcare and electronics divisions, in order to concentrate on developing its fire and security and engineered products operations, is a classic case. Chief executive Ed Breen has publicly criticised his predecessor, Dennis Kozlowski – under whom, he says, “the company did over 600 and didn't integrate them”⁴ – and pledged to dispose of non-core acquisitions. He has already announced plans to sell Tyco's Earth Tech infrastructure business in 2008.

Ingersoll-Rand has also been reorganising itself and reducing its exposure to the troubled US construction market. Over the past seven years, it has disposed of its capital-intensive heavy machinery operations to focus on three core activities: climate control technologies, industrial technologies and

security technologies. This process culminated in the \$4.9 billion sale of its Bobcat, utility equipment and attachments divisions to Doosan Infracore, a subsidiary of the South Korean Doosan Group, and the \$1.3 billion sale of its road development business to Volvo, in 2007.

Ingersoll-Rand has recently completed some 65 bolt-on acquisitions, including the \$623 million purchase of CISA, an Italian manufacturer of locks, security products and architectural hardware, which has helped to boost its presence in the European security products market. In December 2007, Ingersoll-Rand also agreed to buy Trane, a global leader in indoor climate control systems, for \$10.1 billion. The deal is expected to close in May 2008 and has already been approved by the European Commission. Lastly, Ingersoll-Rand has embarked on an ambitious \$4 billion share buyback programme, dampening speculation that it could be the target of a leveraged buyout.

Meanwhile, US carmaker General Motors has disposed of Allison Transmission, its commercial and military business, in an effort both to get back to basics and to raise money to meet increased pensions and healthcare costs. German industrial giant Linde has sold its forklift truck division, KION Group, to private equity players Kohlberg Kravis Roberts and Goldman Sachs. The move frees it to focus on integrating BOC (which it bought in one of the biggest deals in the chemicals sector in 2006) and consolidating its lead in the industrial gases market. And Finnish conglomerate Kone has completed a major restructuring programme. In June 2005, Kone hived off its container and cargo-handling business as a separately listed company called Cargotec.

4 Brian Hindo, “Solving Tyco's Identity Crisis”, *BusinessWeek* (7 February 2008), accessed 7 May 2008, http://www.businessweek.com/magazine/content/08_07/b4071062403578.htm?campaign_id=rss_topStories

Striving to become the market leader

While the need to become leaner motivated many of the biggest deals in the industrial manufacturing sector, the desire to expand and establish a dominant position in the marketplace proved almost equally important. When, for example, French giant Schneider Electric purchased American Power Conversion (APC), a US maker of power and cooling systems, it paid a 30 per cent premium on APC's stock price to seal the deal, raising concerns among analysts that it had spent too much. But the management was confident that amalgamating APC with its own US-based subsidiary, MGE UPS Systems, would create a world leader in the critical power and cooling systems segment.

Johnson Controls bought York International, a global supplier of heating, ventilation and air conditioning (HVAC) systems and refrigeration equipment and services, for similar reasons. The transaction simultaneously doubled its building efficiency division and gave it access to the residential market, where it previously had no presence. Berkshire Hathaway's purchase of an 80 per cent stake in Iscar likewise positioned the Israeli toolmaker to expand its presence in North America, while military and commercial vehicle maker Oshkosh Truck's acquisition of JLG Industries, which manufactures aerial work platforms and telehandlers, furthered its plans for becoming a global speciality vehicle manufacturer. And, with the purchase of Tektronix, Danaher leapfrogged over its competitors to become one of the world's largest electronic-testing equipment makers.





Deal spread

Western Europe accounted for the biggest share of the deal-making that took place in the industrial manufacturing sector between 2005 and 2007, with 1,634 transactions – 39 per cent of the global total (see Figure 5). North America and Asia Pacific accounted for 1,367 and 938 deals, respectively, but there were only 154 deals in Central and Eastern Europe and 45 deals in Central and South America.

Figure 5: M&A activity by continent, 2005-2007

Continent		2005	2006	2007	Total	% Change 2005-2006	% Change 2006-2007
North America	Number of deals	368	457	542	1,367	24.2	18.6
	Value of deals (US\$ m)	21,223	22,065	65,420	108,708	4.0	196.5
Western Europe	Number of deals	478	567	589	1,634	18.6	3.9
	Value of deals (US\$ m)	19,724	21,872	20,903	62,500	10.9	-4.4
Asia Pacific	Number of deals	300	302	336	938	0.7	11.3
	Value of deals (US\$ m)	4,499	7,565	10,062	22,126	68.2	33.0
Central and Eastern Europe	Number of deals	37	50	67	154	35.0	34.0
	Value of deals (US\$ m)	137	565	493	1,195	312.4	-12.7
Central and South America	Number of deals	10	15	20	45	50.0	33.3
	Value of deals (US\$ m)	78	29	175	282	-62.8	503.4
Other	Number of deals		1		1	n/a	n/a
	Value of deals (US\$ m)		4,000		4,000	n/a	n/a
				Grand total number of deals	4,139		
				Grand total value of deals	\$198,810		

Source: Thomson Financial data and PricewaterhouseCoopers analysis

Note: The values of cross-border deals have been assigned the countries in which the target companies are based

The story is rather different when it comes to deal values. North America led the way – with nearly \$109 billion changing hands, thanks to a threefold surge in the total amount that was traded in 2007. In Western Europe, by contrast, the aggregate value of the deals that were completed was just \$62.5 billion, with annual totals consistently hovering around the \$20-22 billion mark.

Asia Pacific and Central and Eastern Europe also experienced considerable growth, with deal values in the former more than doubling, and those in the latter more than tripling, between 2005 and 2007. But M&A activity in Central and South America remained very modest, with only \$282 million worth of transactions taking place in the three-year period.

North America

Both the volume and the value of the deals that occurred in North America soared in 2007, as a result of three huge transactions. The \$19 billion demerger of Tyco's electronics and healthcare operations, together with the sale of Allison Transmission and APC, jointly added nearly \$31 billion to the tally in the US.

Deal values in Canada also jumped from \$500 million in 2005 to over \$3 billion in 2007, on the back of three significant acquisitions. In August 2007, Danish engineering group FLSmidth bought the process division of industrial and filtration equipment manufacturer Groupe Laperriere &

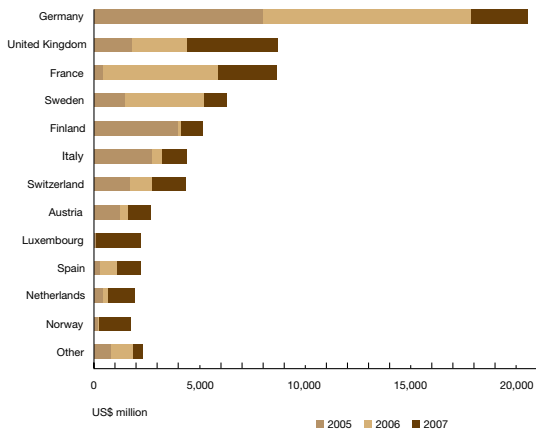
Verreault for \$875 million. In September 2007, hazardous devices manufacturer Allen-Vanguard bought bomb disposal equipment provider Med-Eng Systems for \$606 million. And in December 2007, private equity firm Onex purchased Husky Injection Molding Systems for \$987 million.

Western Europe

The high point in Western Europe, by contrast, was 2006 – with deal volumes rising 19 per cent and deal values rising 11 per cent year-on-year. But though the level of M&A activity continued to increase in 2007, the total value that was traded fell to just \$20.9 billion, only marginally more than the \$19.7 billion that was traded in 2005. This dip is attributable to the fact that there were only two super-size deals in 2007, compared with six in 2005 and five in 2006.

Germany dominated the deal-making scene, with 385 transactions collectively worth about \$18.5 billion, more than those in France and the UK (at \$8.1 billion and \$8 billion, respectively) combined (see Figure 6). The nearly \$5.1 billion acquisition of KION in 2006 accounted for over a quarter of the total sum that changed hands. This strong performance reflects Germany's large manufacturing base. While German companies have high labour costs, they also benefit from a good reputation for quality and innovation, and many are seen as desirable acquisition targets.

Figure 6: Deal values in Western Europe by country, 2005-2007



Sources: Thomson Financial data and PricewaterhouseCoopers analysis
 Note: The values of cross-border deals have been assigned to the countries in which the target companies are based.

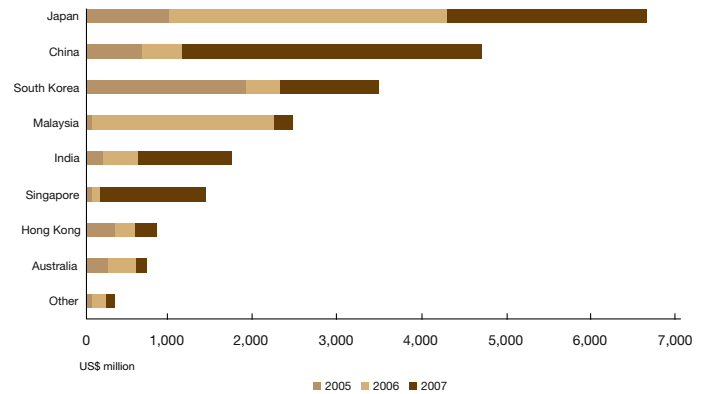
Even so, the UK accounted for 351 deals, and their aggregate value more than doubled, from \$1.7 billion in 2005 to \$3.9 billion in 2007. Most of these transactions were middle-market deals in the \$100-500 million range, but there were several larger deals, including the \$950 million sale of BOC Edwards, a manufacturer of equipment for the industrial gases sector. Similarly, France accounted for 215 deals, although the market peaked in 2006, with 88 transactions totalling over \$5 billion. Two mega-deals helped to boost the figures: Bouygues' \$2.5 billion purchase of Alstom; and LBO France's \$1.3 billion secondary buyout of Cegelec (formerly a division of Alstom).

Finland and Sweden generated another \$4.8 billion and \$2.7 billion, respectively, with Finland's Kone making the top 10 list. Several smaller Scandinavian deals are also worth mentioning. Sweden's Atlas Copco sold its electric tool business to Techtronic Industries of Hong Kong for \$626.6 million in 2005 and acquired Dynapac from its private equity owners for \$893 million in 2007. US major United Technologies was likewise active on both sides of the fence; it sold Fincoil to Alfa Laval for \$624 million and purchased Marioff, a manufacturer and wholesaler of water mist fire protection systems, for \$340 million.

Asia Pacific

Japan, China, South Korea and Malaysia jointly attracted the lion's share of the deal-making that occurred in Asia Pacific between 2005 and 2007 (see Figure 7). Buyers from Western Europe and North America accounted for less than 11 per cent of the deals for which values were disclosed. But looking at the deals for which values were undisclosed provides a slightly different picture; a quarter of the 153 transactions that took place in China featured Western European and North American purchasers. And the list of companies investing in the region includes global players like Alstom, Atlas Copco, Caterpillar, Deere & Co, Eaton, Harsco, GE, Metso, Ingersoll-Rand, Thyssen-Krupp and Terex.

Figure 7: Deal values in Asia Pacific by country, 2005-2007



Sources: Thomson Financial data and PricewaterhouseCoopers analysis
 Note: The values of cross-border deals have been assigned to the countries in which the target companies are based.

Japan led the way, with 260 deals collectively worth about \$6.6 billion, nearly 30 per cent of the total \$22.1 billion that was traded in the region. It enjoyed a particularly strong showing in 2006, when a single transaction – the \$1.4 billion merger of machine-tool manufacturers Koyo Seiko and Toyoda Machine Works – boosted the aggregate value of the deals that took place to \$3.3 billion.

Conversely, most of the transactions completed in China were small, with one major exception. State-owned Dongfang Electrical Machinery (DEM) acquired Dongfang Turbine and 68.05 per cent of Dongfang Boiler Group from its parent, Dongfang Electric Corporation (DEC), in a \$2.8 billion, part-share deal in 2007. DEM has since changed its name to DEC and, in March 2008, announced plans to issue another \$68 million of shares via a public offering. It is already one of the world's leading producers of power equipment and is actively targeting India as a key market for future growth, as the country expands its power-generation capacity.

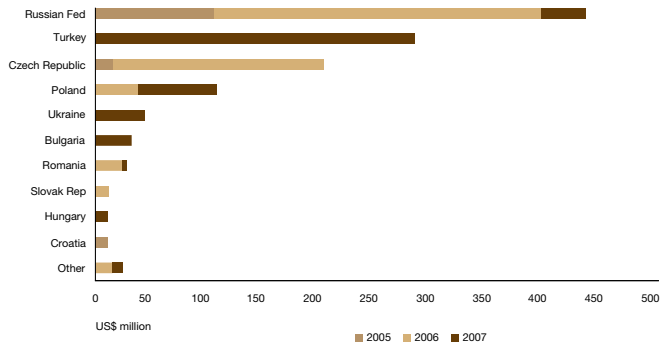
Doosan, one of South Korea's oldest and largest conglomerates, has also been expanding aggressively. In 2005, it acquired 51 per cent of Daewoo Heavy Industries & Machinery from various state-controlled entities for \$1.8 billion. Doosan Infracore (as this new subsidiary was renamed) subsequently bought Ingersoll-Rand's Bobcat, utility equipment and attachments operations for \$4.9 billion in the biggest-ever foreign acquisition by a South Korean company. But Doosan has even more ambitious plans; it has announced that it wants to become one of the world's top three players in the construction equipment market by 2012 – up from number seven today.

Another major transaction helped to boost deal values in Malaysia to over \$2.4 billion. In 2006, Japan's Daikin Industries bought OYL Industries, a Malaysian HVAC manufacturer, for \$2.1 billion. The acquisition has given Daikin better access to the North American market, where OYL already had a strong presence, and strengthened its product range in the applied business segment. However, India, Singapore, Hong Kong and Australia saw relatively little M&A activity.

Central and Eastern Europe

Three countries – the Russian Federation, Czech Republic and Poland – accounted for more than half of the 154 transactions that took place in Central and Eastern Europe between 2005 and 2007. Together with Turkey, they also generated \$1 billion of the \$1.2 billion that was exchanged (see Figure 8).

Figure 8: Deal values in Central and Eastern Europe by country, 2005-2007



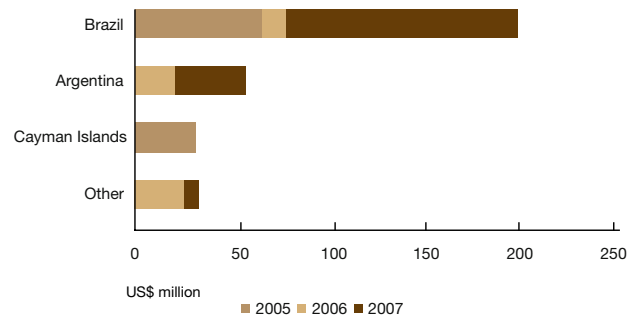
Sources: Thomson Financial data and PricewaterhouseCoopers analysis
 Note: The values of cross-border deals have been assigned to the countries in which the target companies are based.

Most of the deals that occurred were acquisitions by companies based in other parts of the world. Sixty-one Western European and North American companies invested in the region, in order to capitalise on the opportunities for low-cost manufacturing or tap into new markets. However, the overall level of foreign direct investment was probably higher than this number suggests, since many companies prefer to move into Central and Eastern Europe by building new facilities rather than acquiring existing plant.

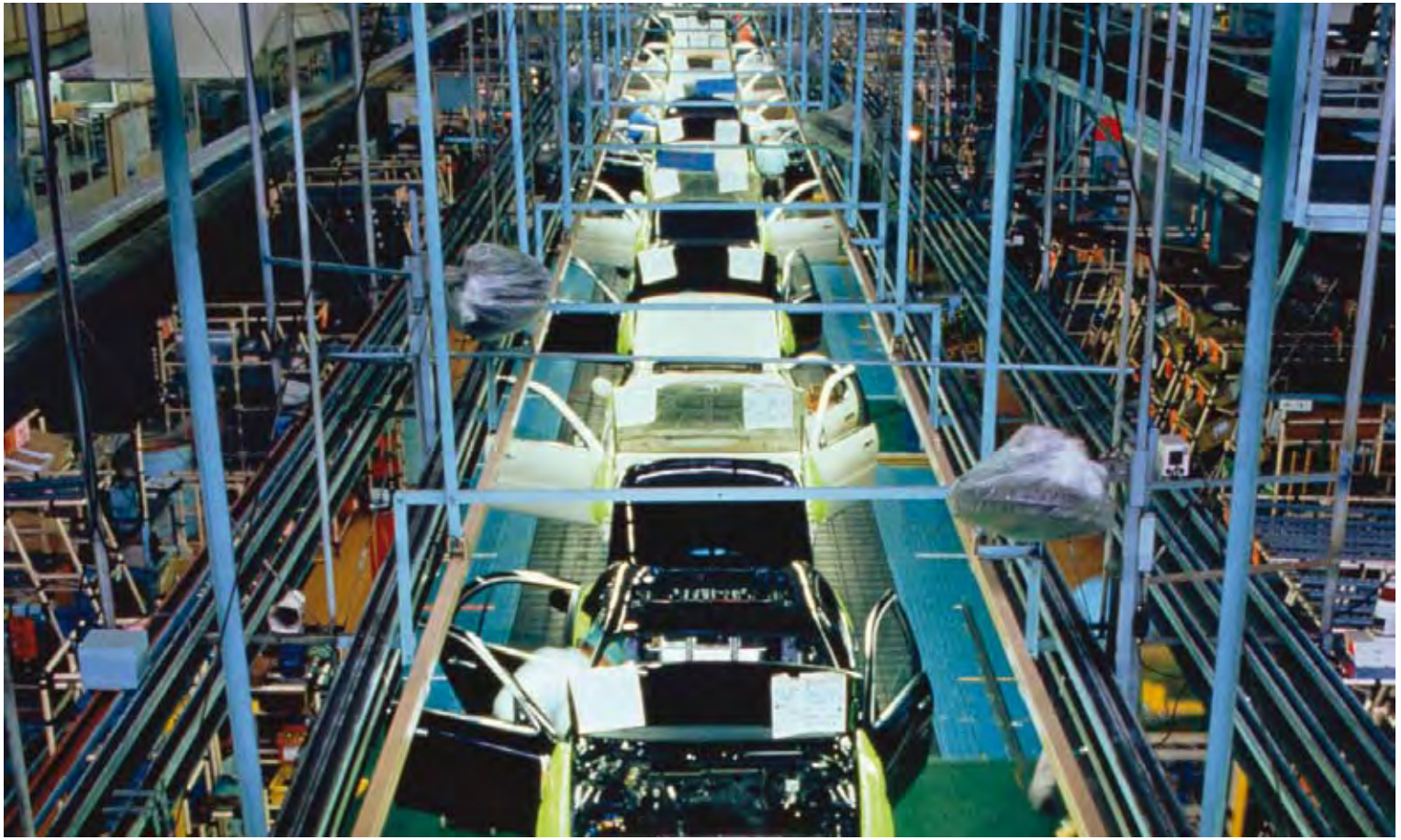
Central and South America

Deal-making in Central and South America was quite light, with only 45 transactions collectively worth \$282 million between 2005 and 2007 (see Figure 9). Brazil accounted for 27 deals totalling \$195 million, while Argentina accounted for another three totalling \$50 million. Only three deals topped \$40 million: UK-based Charter's acquisition of the remainder of ESAB SA Industria e Comercio for \$47 million; Brazilian Lupatech's purchase of Gasoil Servicos for \$45.1 million; and Mahle-Metal Leve's acquisition of Edival for \$41.2 million. Lupatech, the region's biggest deal maker, also concluded several other smaller deals, and was itself the recipient of a private equity investment.

Figure 9: Deal values in Central and South America by country, 2005-2007



Sources: Thomson Financial data and PricewaterhouseCoopers analysis
 Note: The values of cross-border deals have been assigned to the countries in which the target companies are based.



Sector-specific highlights

Industrial manufacturing companies operate in a wide range of areas serving a host of other manufacturing and service industries, so it is difficult to classify them by sub-sector. Nevertheless, we have picked out the most important M&A trends in companies supporting the ‘hottest’ industries.

Electricity and gas

Power Deals*, PwC's recent report on M&A activity in the electricity and gas markets, confirms that the utilities sector is surging. In 2007, the total value of the deals that took place in the electricity and gas industry soared to \$372 billion, 25 per cent more than in 2006, which was itself a record year⁵. Revenues are rising, and so is demand for infrastructure in both developed and developing countries.

Not surprisingly, then, manufacturers of equipment for the production and distribution of energy have been particularly active. Schneider Electric was involved in one of the biggest deals that occurred between 2005 and 2007. The US-based Eaton completed at least nine deals in 2006 and 2007 (including several for which values were not disclosed), and has another two transactions in the pipeline. Similarly, China's DEC has undertaken a major restructuring of its assets, as well as building a strong presence in India. And Swiss/Swedish engineering giant ABB is clearly looking for new opportunities. Interim CEO Michel Demaré has indicated that the company has \$10-12 billion in its coffers for acquisitions⁶.

The private equity industry has also targeted the utilities sector over the past three years. LBO France purchased 90 per cent of the shares in French electrical engineering group Gegelec for \$1.3 billion, in a secondary buyout from CDC Equity Capital and Charterhouse Capital Partners. And a consortium of US investors led by Riverstone Holdings bought Dresser, a manufacturer of energy-related equipment, from First Reserve for \$2.4 billion.

Oil and gas exploration

High oil prices are also fuelling plenty of M&A activity in the oil and gas drilling equipment sector. In 2005, US manufacturers National Oilwell and Varco International merged in a \$2.6 billion stock swap. Two years later, National Oilwell Varco (as the combined entity is known) acquired NQL Energy Services for \$307 million. Meanwhile, GE Oil & Gas bought Vetco Gray, a manufacturer of oil and gas well equipment and industrial products, from a group of private equity investors for \$1.9 billion.

Heating, ventilation and air conditioning

The rapidly growing market for HVAC equipment has produced a number of big deals, too. Johnson Controls' \$3.3 billion takeover of York International and Daikin Industries' \$2.1 billion acquisition of OYL Industries head the list. Alfa Laval also bought Finnish HVAC manufacturer Fincoil for \$624 million, and Vaillant Saunier Duval Iberica (a subsidiary of Vaillant) purchased a majority stake in Turk Demir Dokum, a Turkish manufacturer of heating and cooling systems, for \$284 million.

Mining and construction

Meanwhile, interest in the mining and construction sub-sector saw drilling and mining equipment manufacturer Boart Longyear change hands twice. In 2005, private equity investors Advent International and Bain Capital backed a \$545 million management buyout. A year later, they sold 60 per cent of their stake in the company to a group led by Macquarie Bank for more than \$1 billion in cash and assumed debt of \$502 million. Bucyrus International and Hamburg Trust joined forces to purchase mining equipment manufacturer Deutsche Bergbau Technik for \$730 million, while construction machinery companies Neuson Kramer Baumaschinen and Wacker Construction Equipment merged in an \$828 million stock swap.

Industrial automation

The industrial automation sector (which makes robotics, sensors, factory control systems and parts that work in other kinds of industrial machinery) is already much more consolidated than some of the other sectors within industrial manufacturing. Even so, a number of strong global players have been making bolt-on acquisitions, one such example being Ingersoll-Rand. Several private equity firms have also invested in the sector. In 2006, for example, Apollo Management acquired RBS Global, a maker of motion technology products, for \$1.8 billion.

5 PricewaterhouseCoopers, "Power Deals 2007 Annual Review: Mergers and acquisitions activity within the global electricity and gas market", available for download at www.pwc.com/energy

6 Thomson Financial News, "ABB interim CEO says company can afford acquisition of up to 12 bln usd" *Forbes* (17 February 2008), accessed 7 May 2008, <http://www.forbes.com/afxnewslimited/feeds/afx/2008/02/17/afx4664481.html>



The split between strategic and financial buyers

Strategic buyers accounted for nearly three-quarters of the total sum that changed hands in the industrial manufacturing sector between 2005 and 2007. However, financial buyers (including banks, asset management firms, management buy-ins, management buyouts and private equity houses) were an important secondary source of financing. They accounted for 735 disclosed deals collectively worth \$47.8 billion.

Figure 10: The top 10 private equity investments in the industrial manufacturing sector, 2005-2007

Date effective	Target name	Target nation	Type of transaction	Acquirer name	Acquirer nation	Value of transaction (US\$ m)
07.08.2007	Allison Transmission	US	Buyout	The Carlyle Group & Onex Corporation	US	5,575
28.12.2006	KION Group	Germany	Buyout	KION Group (special purpose vehicle set up by Kohlberg Kravis Roberts & Goldman Sachs Capital Partners)	US	5,087
05.07.2007	Iscar	Israel	Buyout	Berkshire Hathaway	US	4,000
04.05.2007	Dresser	US	Secondary buyout	Riverstone Holdings & Lehman Brothers Investment Partners	US	2,390
14.03.2006	MTU Motoren & Turbinen	Germany	Buyout	EQT Partners	Sweden	1,893
21.07.2006	Rexnord	US	Secondary buyout	Apollo Management	US	1,825
31.10.2007	American Standard (Bath & Kitchen)	US	Buyout	Bain Capital Partners	US	1,755
28.07.2005	Pirelli Energy & Cables	Italy	Buyout	Goldman Sachs Capital Partners	US	1,614
31.03.2006	Cegelec	France	Secondary buyout	LBO France	France	1,331
13.09.2005	Moeller Holding	Germany	Buyout	Doughty Hanson	UK	1,324

Sources: Thomson Financial data and PricewaterhouseCoopers analysis

The number of transactions involving financial investors rose steadily year-on-year, but the credit crisis that started in mid-2007 has clearly taken its toll. In 2007, financial buyers were responsible for only 18.3 per cent of the total value that was traded – down from 35.9 per cent in 2006, when five of the top 10 private equity investments took place (see Figure 10).

A number of private equity firms targeted companies supporting key growth industries, as we have already indicated. But three of the biggest deals involved companies serving the equipment and trucking market. Allison Transmission is a leading manufacturer of automatic transmissions for heavy-duty trucks, while MTU makes large diesel engines for trucks, trains and ships, and Rexnord produces mechanical power transmissions, as well as aerospace components.

It is also worth noting that seven of the top 10 deals involved companies based in the US or Germany. The US has long been the world's most active private equity market, but Germany is a relative newcomer to the scene, although it has been catching up rapidly over the past few years. Indeed, private equity accounted for more than half of the \$18.5 billion that was transacted in Germany between 2005 and 2007.

This interest looks likely to continue. In a 2008 survey of European private equity funds recently conducted by PricewaterhouseCoopers, 62 per cent of the respondents said that they planned to invest in Germany between 2008 and 2013, even though 36 per cent thought the country's overall environment for private equity was poor or very poor⁷.

Many German manufacturers enjoy a reputation for making products that are technologically superb, which is very attractive to private equity investors. They, in turn, can enhance companies that are already strong by funding further growth. In 2005, for example, Doughty Hanson purchased power components manufacturer Moeller Holding for \$1.3 billion. It subsequently embarked on a major programme to upgrade Moeller's production facilities and accelerate its expansion into Central and Eastern Europe. In April 2008, Doughty Hanson sold the company to Eaton for \$2.2 billion.

Interest in the industrial manufacturing sector is not confined to Germany, though. Many manufacturers are cash-generative and have established sales channels in more than one region, thus helping to cushion the effect of cyclical downturns in specific countries. The large number of small and middle-market companies in the industrial manufacturing sector also presents excellent opportunities for making bolt-on acquisitions to secure economies of scale, while restructuring may provide other ways of enhancing value.

Furthermore, new regulations and legislation on energy efficiency – such as tougher requirements for energy efficiency in areas like heating and ventilation – could prove an impetus for additional deal-making in a number of sectors. Improving technology and enhancing energy efficiency in the mill or factory can help reduce the carbon footprint of many manufacturing industries, so makers of machinery and equipment and power distribution systems stand to benefit from the impact of increasing regulation of carbon emissions.

7 PricewaterhouseCoopers, "Private Equity Trend Report 2008: Germany – still the golden opportunity for international investors?" (2008).



Drivers of consolidation

So what lies behind the drive to consolidate? We have already mentioned the reshuffling of corporate portfolios and drive for market leadership. But most industrial manufacturing companies have one or more of three other motives, too: the search for synergies; access to new revenue streams or markets; and access to new technologies, particularly those that can enhance sustainable development.

Achieving cost synergies

Announcements of large deals are almost invariably accompanied by statements about the synergies they will provide. When Schneider Electric announced that it planned to purchase APC, for example, it said that it anticipated realising synergies of about \$220 million. Similarly, Ingersoll-Rand estimated that buying Trane would deliver cost and revenue synergies exceeding \$300 million by 2010.

Such savings typically come from streamlining a new subsidiary's sales processes or integrating its administrative processes into an existing shared services centre; rationalising the supplier base; and securing economies of scale in procurement, manufacturing and distribution. But though mega-mergers that promise to cut costs by hundreds of millions of dollars may attract most of the media coverage, smaller deals are also very important – and the synergies they generate may make an even more dramatic difference in operating profitability.

Accessing new revenue streams and markets

A second major driver of consolidation is the desire to increase revenues by acquiring complementary product portfolios or breaking into new markets. US manufacturing powerhouse Eaton exemplifies both these motives. When Eaton announced that it would buy UPS-MGE's small systems business in June 2007, it specifically stated that the deal would help it fill product gaps in its uninterruptible power systems single-phase portfolio. Eaton is also expanding its global footprint with the acquisition of Moeller and Phoenixtec Power, which will boost its presence in mainland Europe and Asia Pacific, respectively.

Other industrial manufacturing companies eager to enter emerging economies like India and China are purchasing companies in developed nations that have already established a presence in these markets. One of the reasons why Danaher acquired testing-equipment manufacturer Tektronix was because the two companies share a “commitment to expanding our global reach, particularly in India and China”⁸.

Accessing new technologies

Lastly, many industrial manufacturing companies consolidate as a means of obtaining new technologies. The most competitive companies are highly innovative, and technology plays a key role in developing new products and manufacturing processes. This emphasis is particularly pronounced in the automation sector; robotics manufacturers have transformed the automotive assembly line and numerous industries now use sophisticated in-line sensors to monitor process flows.

The sustainable development agenda has also stimulated interest in emerging technologies for harnessing wind and solar power. Norwegian conglomerate Orkla has invested more than \$1 billion in Renewable Energy Corporation, a manufacturer of solar grade systems. Similarly, Iberdrola has invested \$567 million in Gamesa, a major player in the wind-energy market, while Indian alternative energy specialist Suzlon Energy has been actively expanding its base in wind turbines. Its Dutch subsidiary acquired the Belgian Eve Holding for \$567 million in 2006. Its German subsidiary subsequently bought a 34 per cent stake in REpower Systems for \$553 million in 2007, after a bidding war with French nuclear giant Areva.

8 “Danaher Corporation to acquire Tektronix, Inc. – Conference Call – Final”, *Voxant FD (Fair Disclosure) Wire* (15 October 2007).



PwCs perspective

The industrial manufacturing sector remains highly fragmented, and many companies are under huge pressure to use acquisitions to drive growth. But how can you ensure that the deals on which you embark will really achieve your objectives?

Know your place in the value chain. The first step is to ensure that you have a thorough understanding of where you – and your potential acquisition targets – sit within the value chain. What differentiates your company from its competitors? Is it a strong brand, robust new product pipeline, superior quality or something else? Target only those companies that can help you to build on your strengths. Over the long term this will enable your company to prosper, despite any competition from new players based in low-cost markets.

Put your target's operations under the microscope. Most management teams are aware of the importance of performing robust due diligence on a target's financial details. But some do not realise that it is equally crucial to assess your target's manufacturing capabilities, both to measure the standards to which it operates and to identify any opportunities for increasing productivity.

Operational due diligence will give you a clear picture of the target company's work centres, materials flows, scrap generation, inventory levels and stock turns, and enable you to evaluate its transportation, distribution and warehousing arrangements. It will also help you identify what you can do to improve productivity and profitability, and how much it will cost to implement these improvements.

Bidding wars have become common in some regions, increasing the pressure to make a bid before the business case for an acquisition has been extensively stress-tested. But skipping this step can be a costly mistake. Alternatively, it may prevent an acquirer from identifying upsides which could support a winning bid.

Look for the hidden costs. A deal that superficially seems attractive may no longer make sense if costs rise or the economic outlook changes. In our 11th Annual Global CEO Survey⁹, 66 per cent of respondents in the industrial manufacturing sector reported that they were concerned about realising the full value of the deals they completed, compared with 42 per cent of respondents in all industries, and 59 per cent saw unexpected costs as a potential obstacle, compared with 43 per cent of their peers in all industries.

While a certain amount of risk is inherent in the deal-making process, some types of unexpected costs crop up regularly. In our experience, three areas – environmental liabilities, energy price increases and IT integration costs – most consistently lead to cost overruns. But many of these problems can be avoided with careful scrutiny before the deal is done.

Cleaning up industrial sites can be very expensive, for example. As environmental legislation evolves, costs related to the reduction of carbon emissions may also become pertinent. Understanding the scope of such actual and potential liabilities requires specialised expertise.

Similarly, many manufacturing processes are energy- and raw-material intensive. Rising energy and raw materials costs can therefore have a major impact on a company's profitability – and provide a nasty surprise for a purchaser that has failed to anticipate such changes. Scenario planning that takes into

account various cost points for major inputs is one of the best ways of mitigating this risk.

Many companies also underestimate the costs associated with integrating different IT systems. Some companies fail to recognise the complexity of the task, and miscalculate the cost of new hardware, licences and data recovery, if something goes wrong. Others do not have security protocols and IT solutions that are sufficiently standardised to ensure the smooth integration of acquisitions. So it is important to determine the full costs of the IT integration process before completing a deal.

Focus on the first 100 days. Any company that has just acquired another one must ensure that it extracts the value of the deal – and the first 100 days are vital. This is the time at which, as well as retaining your focus on the existing business, you must take control, establish a clear plan of action with specific objectives, stabilise the business you have bought and stop value from 'leaking'. Unless all the parts of the business work together, the integration process may come to a grinding halt.

What is likely to happen next?

Deal-making in the industrial manufacturing sector fell in the first quarter of 2008, as our new quarterly publication shows¹⁰. Nevertheless, we believe that it will pick up, as corporate buyers look both to grow and to reduce their cost bases. In a number of sectors substantial synergies can be gained through strategic acquisitions, and corporate buyers are in a better position than financial buyers to realise such benefits. Companies with sufficient reserves to fund M&As and the ability to integrate acquisitions successfully should see excellent opportunities.

Although financial buyers were involved in fewer deals in the first quarter of 2008, some private equity firms also have substantial funds awaiting deployment. But even if private equity investment remains subdued, the industrial manufacturing sector's share of the available cash is likely to increase, since manufacturing companies are less exposed to falling consumer confidence than companies in many other sectors.

However, we anticipate that average deal values will be somewhat lower. Many small and mid-sized industrial manufacturing companies are performing well, and we expect to see more consolidation in the \$200-500 million range. We also think that there will be more deals in emerging markets like Eastern Europe, India and China – deals involving Western players keen to expand their footprint and capitalise on the opportunities for low-cost manufacturing, and deals involving companies from emerging countries, as they become global players. Manufacturers based in India and China have already completed a number of acquisitions, Indian wind-turbine manufacturer Suzlon Energy being one such instance. We believe that this trend will continue, as companies in emerging regions seek access to cutting-edge technology, skilled engineers and expertise in research and development.

9 Please see our Industrial Manufacturing industry supplement to PricewaterhouseCoopers' Compete and Collaborate: 11th Annual CEO Survey, for more industry specific results of the survey, based on interviews with 115 industrial manufacturing chief executives. The full publication and industry supplement is available for download at www.pwc.com/ceosurvey.

10 PricewaterhouseCoopers 'Assembling Value: Industrial Manufacturing mergers and acquisitions analysis, first quarter 2008', available for downloads at www.pwc.com/manufacturing.

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