Mission control

2009 Annual and fourth-quarter review

Merger and acquisition activity in the global aerospace and defence industry
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Methodology

Mission control is an analysis of mergers and acquisitions in the global aerospace and defence industry. Information is sourced from Thomson Financial and includes deals for which targets and acquirers have primary SIC codes that fall into one of the following SIC industry groups: 1) ordnance and accessories, except vehicles and guided missiles; 2) aircraft and parts; 3) national security; 4) guided missiles, space vehicles, and parts; 5) search, detection, navigation, guidance, aeronautical and nautical systems and instruments and equipment (SDNGN & NS, I&E); and 6) space research and technology. This analysis includes all individual mergers and acquisitions for disclosed or undisclosed values, leveraged buyouts, privatisations, minority-stake purchases, and acquisitions of remaining interest announced between January 1, 2000, and December 31, 2009, with a deal status of completed, intended, partially completed, pending, pending regulatory approval, unconditional (i.e., initial conditions set forth by the acquirer have been met but deal has not been completed), or withdrawn. The term deals, when referenced herein, is used interchangeably with transactions. Regional categories used in this report approximate United Nations (UN) Regional Groups as determined by the UN Statistics Division, with the exception of the North America region (includes North America and Latin and Caribbean UN groups), the Asia and Oceania region (includes Asia and Oceania UN groups), and Europe (divided into United Kingdom, plus eurozone and Europe ex-UK and eurozone regions). The eurozone includes Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovenia, and Spain. Oceania includes Australia, New Zealand, Melanesia, Micronesia, and Polynesia. Overseas territories were included in the region of the parent country, and China, when referenced separately, includes Hong Kong.
The fast descent of deal values in aerospace and defence (A&D) spurred by recession and the banking crisis of 2008 continued into 2009 with the first quarter of the year seeing a near-stalling of deal value. Since that time, deal values have revived but small deals continue to dominate the sector’s activity. However, deal activity, as measured by the total number of deals, has stayed buoyant at near record levels as companies limit their acquisition budgets but continue to take advantage of opportunities to make small but strategic purchases.

Mission control 2009 reviews deal activity in the A&D industry for the year ended December 31, 2009. This year, for the first time, we have integrated our quarterly ‘Mission control’ analysis with our annual ‘A&D Deals’ review of sector activity. The ‘Mission control’ series provides a regular quarterly window on A&D deal activity and this annual edition combines fourth quarter data with a review of 2009. We also take the opportunity to evaluate the outlook for the year ahead as we move into 2010. The report is one of a number of deals publications from PricewaterhouseCoopers (PwC), covering a range of sectors including A&D. Together the family of deals reports provide a comprehensive analysis of merger and acquisition (M&A) activity across industries worldwide.

We examine both the rationale behind the overall trends and key individual deals. We look at the year under review, the context of the preceding year and look ahead to the future direction of deal-making in the sector. We also highlight, in a special report, the role that innovation will play for A&D companies in an economic upturn. In the ‘Spotlight’ and case study sections at the back of the report, we look at how PwC can help companies address the challenges of the changing marketplace, drawing on our global experience as an adviser to the global aerospace & defence industry.

Looking ahead, we consider the outlook for M&A activity as the second decade of the new millennium gets into its stride. We point to four dominant themes that will underpin M&A activity as the decade unfolds – increasing consolidation as companies respond to cost pressures; further re-evaluation of supply chains by the big manufacturers, in both the civil and military segments, as they seek to gain better control of their large programme pipelines; continuing growth in the security, surveillance and homeland defence sector; and greater investment in and competition from fast-growing markets, most notably China. We believe these trends will provide the context for an upturn in deal value, but the timing of such an upturn will be dependent on continuing improvement in the economic outlook and improvements in the capital markets. In the meantime, we may see a further period when smaller deals continue to dominate.
Special report: Innovation and economic recovery

When the world entered the worst recession since the Great Depression, it was as if the global economy had lifted a veil on risk and exposures, forcing companies to adopt a ‘back to the basics’ approach to business. As the economy recovers, companies hope to shrug off their ‘hunker down’ mentality and find ways to compete in an altered business landscape. The question is: which aerospace and defence companies will be first to get back in the game, and how will they do it?

Innovation and how well A&D companies optimise acquisitions to enhance capabilities in specialised areas such as intelligence surveillance, cyber security, and logistics support, as well as adjacent markets such as energy and healthcare security1 will be key to much of the answer. Winners will also include those A&D companies that capitalise on globalisation and operational excellence, including sustained cost reduction, programme management and supply chain management.

James McNerney, chief executive officer at Boeing, has been quoted as saying “there is a lot of innovation in this world that in the eyes of the innovator is game changing but does not fundamentally change the competitiveness of the customer. Innovation has to start with customers and what they’re doing.”2

Christopher Wasden, a PricewaterhouseCoopers strategy and innovation specialist, agrees, saying that unless technological breakthroughs have economic value, they are, from a business perspective, “simply novel and ultimately useless. Simply put, that which is creative and new becomes innovative only when it adds value — that is, when people are willing to pay for it.”3 To harness innovation and make it work, Wasden explains, requires an understanding of what drives and sustains it. Innovators need something to cause them to react — something Wasden calls ‘tensions.’

Ray Johnson, Lockheed Martin’s chief technology officer, was careful to differentiate between innovation and invention when talking about the company’s approach to research and technology. “Invention is the creation of ideas; innovation is the application of ideas to products and services,” he said.4

The many faces of innovation

Many industries have been transformed because of innovations involving advances in technology — automation, virtualisation, digital transformation, microelectronics, and so on. The A&D industry, a hotbed of innovation, is responsible for the invention of the aeroplane, computers, the internet, satellites and the landing of man on the moon, among others. A&D companies continue to innovate in areas such as fly-by-wire aircraft, composites, autonomous vehicles, aircraft and engine designs and preparation for human space flight beyond the moon, as well as design and production techniques such as digitisation and automation.

According to PwC’s recently released Manufacturing Barometer survey, 65% of respondents intend to increase operational spending over the next 12 months. The top areas cited for an increase in spending are new product or service introductions (37%), research and development (37%), geographic expansion (27%), business acquisition (23%), facilities expansion (22%), and information technology (22%). The quarterly report explores the current and future state of the industrial manufacturing economy based on interviews with senior executives from large, multinational manufacturing companies.

Some of the impetus — or ‘tension’ — behind the A&D industry’s interest in product development revolves around ‘smart equipment.’ In particular, the relationships among equipment, company, customer, and supplier are becoming more and more digitised. A&D equipment suppliers are already obtaining real-time data on how their equipment operates while in flight.

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3 View, PwC, Autumn 2009.
A&D companies are also responding to climate change by building fuel-efficient aeroplanes with reduced carbon dioxide emissions. And as the international market for aerospace manufacturing changes and the impact of nascent competitors in countries such as China, India and Russia evolves, it will be the most innovative companies that play the largest role in the future competitiveness of US and European aircraft.

Innovation and the nuts and bolts of day-to-day business

In addition to seeking opportunities for new product development, A&D companies are using innovation to change the way they run their businesses. Large A&D companies, in particular, are looking for ways to reduce transactional costs across the trading partner spectrum by leveraging e-channels and technology. Dubbed the ‘no-touch order’ concept, the idea is to receive orders electronically through a customer portal, then use an enterprise resource planning (ERP) system to process the orders. Additionally, A&D companies are exploring best practices for new computing models such as Infrastructure as a Service, Software as a Service, and specific elements of cloud computing to improve performance and reduce costs.

A&D companies face the following business strategy issues:

• Revenue growth
• Commodity risk management
• Cost containment
• Inventory optimisation
• Global supply chain management
• Strategic pricing

Companies may want to consider the following innovative solutions to address business strategy issues:

• Expansion of business intelligence software
• Growth in manufacturing intelligence
• Business model integration
• Use of wireless technologies

All industrial products companies, including A&D companies, are interested in ways to save operational costs by automating routine processes. Rather than move routine systems offshore, companies are starting to eliminate the processes through automation. Examples include automation of back-office processes such as procurement, invoicing, and payroll through the implementation of ERP systems.

Innovation, mergers, and acquisitions

Innovation plays a significant role in the acceleration of the mergers and acquisitions process. Companies with a high level of technology infrastructure are better able to integrate customer, product, and business data into an acquiring or acquired company. A company’s technological innovations also render it potentially more attractive as a target. If acquired by a global company, the target company gains an opportunity to market its innovations to a broader customer base and possibly to a wider geographical area.

M&A also plays a significant role in the acceleration of innovation. Because innovation is difficult, expensive, and requires a specific skill set, companies often find it easier, cheaper, faster, and more profitable to buy innovation through the M&A process. Many executives told the Reuters Aerospace and Defence Summit held in Washington in December 2009 that they each might spend up to US$1 billion on acquisitions during 2010.5

5 Reuters, DEALTALK-Reuters Summit: Defense companies eye deals in 2010, Dec. 17, 2009
Navigating the right path to innovation

What steps should A&D companies take to develop an innovation strategy? For some organisations, acquiring competitors is a way to open up new markets, acquire new technology, accelerate international growth or improve distribution networks. And as the economy continues to improve, companies that act quickly on acquisition opportunities will secure the most attractive deals in terms of valuation with the most potential to stimulate growth.

With the world emerging from the global recession, those A&D companies that embrace and execute on the decades-old concepts of digital transformation and IT innovation will be the ones that are able to change their game and succeed. The concepts are the same as they were 10 years ago, but because of the economic difficulties and an evolving regulatory environment, the touch points for where those concepts can be applied have changed.

Stanford economist Paul Romer famously said, “A crisis is a terrible thing to waste.” For an A&D industry hit hard by the global recession, innovation will be critical to reaping profits and driving growth through advances in commercial and general aviation, defence systems, space exploration, and satellite communication.
A year of contrasts as sector health is balanced by caution

While 2009 started with much apprehension left over from 2008, it quickly rebounded in what, from a market perspective, was a very solid year for A&D companies. On average, stock values were up roughly 30% for the year. This came despite widespread programme delays, continued tight credit markets, deleveraging, an economy that remained challenged, and a shift in the defence strategy away from previous large-scale “heavy” programmes to more intelligence-based and intelligence-support programmes. Sector health was reflected in a continuing high volume of deals with transaction numbers only marginally down from their 2007 and 2008 highs. In contrast though, deal value was weighted heavily towards small deals as companies focused on balance sheet health and confined deal activity to manageable acquisitions to bolster core strategic directions.

Small is the name of the game as deal values dive

While deal activity stayed high, deal values plummeted. The average value of larger deals (US$50 million or more) fell 27% to US$379 million in 2009 from US$519 million in 2008. The total value of these larger deals dropped 62% from US$20.8 billion in 2008 to just US$7.9 billion in 2009. Indeed total A&D deal value in 2009 fell 54% year-on-year to US$10 billion, its lowest level for the decade, and a 76% fall from the US$41.6 billion high of 2007. The overall reduction in M&A investment reflects continuing concern about programme cost delays and overruns, lower orders for large military platforms, and reduced passenger and freight transportation. At the same time, we continued to see a flow of deals reflecting the growth in the security and surveillance sector.

Geographical footprint shifts away from Europe

European buyers, who had been very active international deal-makers in previous years, were relatively quiet in 2009. Similarly, there were few deals for European targets, either from within Europe or from outside buyers. Instead, much of the spotlight was firmly on North America. Deals with US targets and/or acquirers accounted for 84.4% of the total value of deals above US$50 million, an increase over the 72.6% achieved in 2008. In the fourth quarter of 2009 all three deals greater than US$50 million involved US acquirers and US targets. The US dominance continues the trend away from the earlier part of the decade when there was a much more balanced profile between Europe and North America. Deal focus also moved east with the percentage of deal value for targets above US$50 million in Asia and Oceania rising from 6% in 2008 to 15.7% in 2009.

Deal values begin to perk up

Deal values were healthier at the end of 2009 than at the start. The three largest deals came in the second half of the year, two of them being US$1 billion plus transactions with the biggest coming at the end of the year. The second, third, and fourth quarters each achieved an average transaction value that, while low, was greater than the previous quarter. If credit markets continue to ease alongside rising stock markets, strategic acquirers will have greater financial flexibility to consider larger targets in 2010. Much will depend on the direction of key economic indicators in the first half of the year.
Deal totals

The overall pace in deal activity in the aerospace and defence sector continued near record highs with only a slight 4% decrease in the total number of deals in 2009 compared to the previous year. Since the trough of 2002, deal activity has experienced a compounded average growth rate (CAGR) of 7.2% per annum. Total deal value, since its trough in 2001, experienced a CAGR of 20% per annum through its peak in 2007. Since that time, however, the total value of deals has declined significantly. Indeed, 2009 had the lowest total value of the decade - just US$10 billion, representing a 54% year-on-year fall and a decline of 76% from 2007.

Sequentially, the near-term picture does not look as bleak. The second, third, and fourth quarters each achieved an average transaction value greater than the previous quarter. While average deal value remains well below what would be considered industry norms, the fourth quarter average deal value is well above the lows experienced during the first quarter. Also, billion-dollar deals were all but nonexistent during the first and second quarters. However, in the second half of the year, two US$1 billion plus deals were transacted, the largest of these coming in the fourth quarter. So, while small deals remain the name of the game, there does look to be some pickup in companies willing to entertain larger transactions.

NOTE: 2000 includes the withdrawn offer of $45 billion from GE for Honeywell
### Historical deal value and volume (2000–2009)

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
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<tbody>
<tr>
<td>Total number of transactions</td>
<td>278</td>
<td>235</td>
<td>180</td>
<td>207</td>
<td>225</td>
<td>238</td>
<td>229</td>
<td>304</td>
<td>305</td>
<td>293</td>
</tr>
<tr>
<td>Total disclosed value of transactions</td>
<td>84.33</td>
<td>13.99</td>
<td>14.20</td>
<td>13.74</td>
<td>22.36</td>
<td>19.68</td>
<td>22.45</td>
<td>41.57</td>
<td>21.77</td>
<td>10.00</td>
</tr>
</tbody>
</table>

Note: 2000 includes the withdrawn offer of $45 billion from GE for Honeywell

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Q</td>
<td>2Q</td>
<td>3Q</td>
<td>4Q</td>
</tr>
<tr>
<td>Transaction volume</td>
<td>69</td>
<td>72</td>
<td>69</td>
</tr>
<tr>
<td>Disclosed transaction value (US$ billion)</td>
<td>11.08</td>
<td>9.02</td>
<td>5.62</td>
</tr>
<tr>
<td>Avg. transaction value (US$ million)</td>
<td>461.7</td>
<td>280.1</td>
<td>336.2</td>
</tr>
</tbody>
</table>
Larger deal trends

Although positive economic signals are more plentiful, companies remain hesitant to engage in large deals. Tight credit continues to be a problem, and companies that have strengthened their balance sheets are in no rush to allocate significant sums of cash toward large transactions. Activity for deals greater than US$50 million continued a year-on-year decline. As of December 31, the number of such deals for the year was 21. This compares with 40 deals in 2008, a 47.5% decline. After showing sequential improvement in the second and third quarters, the third quarter momentum was not sustained in the fourth quarter when the number of deals greater than US$50 million fell back from eight to three.

Similar to the trend in the number of deals, the total value of transactions greater than US$50 million also showed a year-on-year decline. In 2009, the total deal value of such deals was US$7.9 billion, compared with US$20.8 billion in 2008, a decline of 62%. Sequential quarter-over-quarter deal value also experienced a significant decline after the large increase in deal value in the third quarter. The fourth-quarter total deal value for transactions greater than US$50 million was US$2.2 billion, compared with just less than US$3.2 billion in the third quarter, a decline of approximately 32%. The underlying extent of activity on deals over US$50 million demonstrates that companies remain focused on capital preservation while actively utilising the M&A market as a strategic means to shore up gaps in existing businesses or to enter new markets.
Last quarter signs of revival

Just as the incidence of larger transactions above US$50 million declined, so did the average value of such deals. Their average deal value for 2009 was US$379 million versus US$519 million for 2008, representing a 27% fall. However, the arrival of two US$1 billion plus deals towards the end of the year pushed up the value of deals greater than US$50 million in the last quarter - to US$727 million in the last quarter of 2009 compared with US$510 million in the fourth quarter of 2008, a 42.5% increase.

Looking at the overall deal activity in the sector, small deals remain the name of the game. Most activity has been concentrated in smaller, middle-market deals and deals with undisclosed values. Nonetheless, in upcoming quarters, the proportion of deal activity attributable to larger deals might gradually improve as credit markets ease and rising stock markets provide strategic acquirers with the financing necessary to consider larger targets.
Multiples provide food for thought

Valuations for transactions worth US$50 million or more, represented by median deal value to EBITDA multiples, showed a surprising increase in 2009 relative to 2008 - 13.1 times versus 12.7, respectively. However, median value to EBITDA for deals below US$50 million paints a very different picture - decreasing significantly year-on-year from 12.4 times to 6.4 times. This may be a result of the inability of smaller companies to shore up their financials, and thus not being able to command the same premium as larger, more financially stable companies. With smaller deal valuations at a significant discount to larger deals, we believe smaller deals will continue to dominate merger and acquisition activity within the aerospace and defence sector over the near to medium term. We would note that if economic growth is unable to sustain its current momentum and reverts back into a recession, the slight uptick experienced in median value to EBITDA experienced by deals worth US$50 million or more could reverse and trend lower.
Deal makers

The 2009 top 10 deals table highlights the year-on-year downward shift in the value of the very top deals. The two largest 2009 deals, General Atlantic’s US$1.65 billion move for TASC and Boeing’s US$1 billion takeover of the Vought production facility, compared to the US$5.6 billion and US$2.2 billion values delivered by the largest 2008 deals, the DRS Technologies and Jet Aviation acquisitions. However, the spread of top 10 deal values – from US$1.65 billion down to US$300 million - did not reach as low as the US$130 million value of the 10th largest deal in 2008, perhaps indicative that deal values may not continue on a downward path.

Indeed, the three largest 2009 deals all came in the second half of the year. The largest deal – Northrop Grumman’s sale of its advisory services division, TASC, to an investor group led by General Atlantic, LLC (GA) and affiliates of Kohlberg Kravis Roberts - came in November. It was prompted by new organisational conflict of interest rules to end situations where defence companies both advise and sell hardware to governments. It was also notable for the return of a leveraged private equity buy-out to the A&D deal landscape and the use of a special purpose vehicle by the buyers.

Boeing’s US$1 billion purchase of the Vought production facility in South Carolina gives it more control over a critical part of the supply chain for the 787 Dreamliner. The facility performs fabrication and assembly of structures and systems installation of 787 fuselage sections which had been, in part, the cause of delays to the 787 programme. The deal, announced in July, was followed in December by the purchase, for an undisclosed amount, of a remaining stake bringing all of the production on the site into Boeing’s direct ownership. Originally, Italian aerospace company Alenia and Vought Aircraft Industries had formed Global Aeronautica as a 50/50 joint venture to provide fuselage assembly for the Dreamliner. In 2008, Boeing purchased Vought’s interest in Global Aeronautica, making the company a 50/50 joint venture between Alenia and Boeing before bringing it all under direct ownership in 2009.

In addition to the two largest deals, five of the remaining top 10 were also all US affairs. The two largest of these - Precision Castpart’s US$850 million acquisition of Carlton Forge Works and General Dynamic’s US$643 million purchase of Axsys Technologies – were both strategic growth moves. The former was the fulfilment of a long interest by Precision in adding Carlton’s seamless rolled ring manufacturing to its operations. Seamless rolled rings are primarily utilised in aircraft engine and gas turbine applications and extend Precision Castpart’s market presence in aerospace castings. The Axsys purchase highlighted the growing importance of surveillance and homeland security to defence companies. The deal gives General Dynamics, a company whose core business has lain in combat vehicles, naval ships and business jets, ownership of Axsys’ high-performance electro-optical and infrared (EO/IR) sensors and systems and multi-axis stabilised cameras.

We comment on the other two deals in the top 10 that had values above US$500 million in the ‘Deal Places’ section.
<table>
<thead>
<tr>
<th>Rank</th>
<th>Target</th>
<th>Target Description</th>
<th>Bidder</th>
<th>Target Nation</th>
<th>Bidder Nation</th>
<th>Value ($bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TASC Inc</td>
<td>Provider of “front-end” systems engineering and technical assistance (SETA) services to the U.S federal government.</td>
<td>General Atlantic LLC, KKR</td>
<td>United States</td>
<td>United States</td>
<td>1.650</td>
</tr>
<tr>
<td>2</td>
<td>Vought Aircraft Industries Inc (North Charleston, SC Facility)</td>
<td>The Vought facility, located in North Charleston, performs fabrication and assembly of structures and systems installation of 787 aft fuselage sections, which are made primarily of composite materials.</td>
<td>Boeing Co</td>
<td>United States</td>
<td>United States</td>
<td>1.002</td>
</tr>
<tr>
<td>3</td>
<td>Carlton Forge Works</td>
<td>Manufacturer of seamless rolled rings for critical aerospace applications, offers nickel, titanium, and steel rolled rings across the widest range of product sizes in the industry.</td>
<td>Precision Castparts Corp</td>
<td>United States</td>
<td>United States</td>
<td>0.850</td>
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<tr>
<td>4</td>
<td>Axsys Technologies Inc</td>
<td>Designs and manufactures high-performance electro-optical and infrared (EO/IR) sensors and systems and multi-axis stabilised cameras.</td>
<td>General Dynamics Corp</td>
<td>United States</td>
<td>United States</td>
<td>0.643</td>
</tr>
<tr>
<td>5</td>
<td>General Electric Co. (Homeland Protection) (81% stake)</td>
<td>Provides equipment and services to protect airports, ports, borders, and critical infrastructures. It is a leader in tomography-based technology for detection of hazardous or illicit substances in checked baggage.</td>
<td>SAFRAN S.A.</td>
<td>United States</td>
<td>France</td>
<td>0.580</td>
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<tr>
<td>6</td>
<td>BVT Surface Fleet Ltd (45% )</td>
<td>Leading provider of surface warships and through-life support, an industrial partner for the UK Ministry of Defence and a leader in the global export market for warships and naval surface support.</td>
<td>BAE Systems PLC</td>
<td>United Kingdom</td>
<td>United Kingdom</td>
<td>0.565</td>
</tr>
<tr>
<td>7</td>
<td>Atlantic Inertial Systems Inc (AIS)</td>
<td>Produces inertial sensors, inertial measurement units (IMUs), integrated IMU/ GPS systems, stability systems, and terrain avoidance systems for missiles, military aircraft and land systems.</td>
<td>Goodrich Corp</td>
<td>United States</td>
<td>United States</td>
<td>0.375</td>
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<tr>
<td>8</td>
<td>HR Textron Inc</td>
<td>Manufacturer and wholesaler of motion control systems for commercial and military aircraft, helicopters, missiles, spacecraft, marinecraft and ground vehicles.</td>
<td>Woodward Governor Co</td>
<td>United States</td>
<td>United States</td>
<td>0.365</td>
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<tr>
<td>9</td>
<td>BBN Technologies Inc</td>
<td>Leader in research and development, and provider of critical solutions for national defence and security missions.</td>
<td>Raytheon Co</td>
<td>United States</td>
<td>United States</td>
<td>0.350</td>
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<tr>
<td>10</td>
<td>Airfoil Technologies International – Singapore Pte Ltd (Teleflex Inc) (51% )</td>
<td>Leader in the repair of compressor airfoils with industry-leading turnaround time and excellent quality.</td>
<td>General Electric Co</td>
<td>Singapore</td>
<td>United States</td>
<td>0.300</td>
</tr>
</tbody>
</table>
### Summary of large deals

**Large deals in 2008 (deals with a disclosed value of at least $1 billion)**

<table>
<thead>
<tr>
<th>Month announced</th>
<th>Target name</th>
<th>Target nation</th>
<th>Acquirer name</th>
<th>Acquirer nation</th>
<th>Status</th>
<th>Value of transaction in US$ bn</th>
<th>Category</th>
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<tbody>
<tr>
<td>May</td>
<td>DRS Technologies Inc</td>
<td>United States</td>
<td>Finmeccanica SpA</td>
<td>Italy</td>
<td>Completed</td>
<td>5.14</td>
<td>SDNGA &amp; NS, I&amp;E</td>
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<tr>
<td>Aug</td>
<td>Jet Aviation International SA</td>
<td>Switzerland</td>
<td>General Dynamics Corp</td>
<td>United States</td>
<td>Completed</td>
<td>2.25</td>
<td>Aircraft &amp; Parts</td>
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<tr>
<td>Oct</td>
<td>Thales SA</td>
<td>France</td>
<td>Dassault Aviation SA</td>
<td>France</td>
<td>Completed</td>
<td>1.98</td>
<td>Missiles, SVs, &amp; Parts</td>
</tr>
<tr>
<td>Jun</td>
<td>Honeywell International Inc - Consumable Solutions Business</td>
<td>United States</td>
<td>BE Aerospace Inc</td>
<td>United States</td>
<td>Completed</td>
<td>1.06</td>
<td>Aircraft &amp; Parts</td>
</tr>
<tr>
<td>Jan</td>
<td>Malaysia Marine &amp; Heavy Engineering Sdn Bhd</td>
<td>Malaysia</td>
<td>Ramunia Holdings Bhd</td>
<td>Malaysia</td>
<td>Withdrawn</td>
<td>1.06</td>
<td>Ship Building &amp; Repairing</td>
</tr>
</tbody>
</table>

**Large deals in 2009 (deals with a disclosed value of at least $1 billion)**

<table>
<thead>
<tr>
<th>Month announced</th>
<th>Target name</th>
<th>Target nation</th>
<th>Acquirer name</th>
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<th>Status</th>
<th>Value of transaction in US$ bn</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov</td>
<td>TASC Inc</td>
<td>United States</td>
<td>General Atlantic/KKR</td>
<td>United States</td>
<td>Completed</td>
<td>1.65</td>
<td>Computer Facility Management</td>
</tr>
<tr>
<td>Jul</td>
<td>Vought Aircraft Industries Inc - Facility, North Charleston, SC</td>
<td>United States</td>
<td>Boeing Co</td>
<td>United States</td>
<td>Completed</td>
<td>1.00</td>
<td>Aircraft &amp; Parts</td>
</tr>
</tbody>
</table>

**Large deals in fourth-quarter 2009 (deals with a disclosed value of at least $1 billion)**

<table>
<thead>
<tr>
<th>Month announced</th>
<th>Target name</th>
<th>Target nation</th>
<th>Acquirer name</th>
<th>Acquirer nation</th>
<th>Status</th>
<th>Value of transaction in US$ bn</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov</td>
<td>TASC Inc</td>
<td>United States</td>
<td>General Atlantic/KKR</td>
<td>United States</td>
<td>Completed</td>
<td>1.65</td>
<td>Computer Facility Management</td>
</tr>
</tbody>
</table>
Financial buyers remain cautious

The TASC deal demonstrates that buyers continue to seek more creative deal structures as a means to complete deals. However, the proportion of deals announced by financial investors continues to remain low relative to strategic investors. Financial investors accounted for approximately 14.3% of deals with values greater than US$50 million in 2009, in line with that experienced in 2008. Of the 21 deals greater than US$50 million in 2009, only three involved financial investors. With the capital markets still in a ‘repair and heal’ mode, financial investors continue to focus a large portion of their efforts on providing improvement, support, and guidance to existing portfolio companies rather than seeking new acquisitions.

### Deal activity by investor group

Measured by number of announced deals worth $50 million or more

<table>
<thead>
<tr>
<th>Year</th>
<th>Strategic investors</th>
<th>Financial investors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>35</td>
<td>5</td>
</tr>
<tr>
<td>2009</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>4Q09</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

### Top private equity A&D deals 2009

<table>
<thead>
<tr>
<th>Rank</th>
<th>Target</th>
<th>Target Description</th>
<th>Bidder</th>
<th>Target Nation</th>
<th>Bidder Nation</th>
<th>Value (Sbn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TASC Inc</td>
<td>Provider of “front-end” systems engineering and technical assistance (SETA) services to the US federal government.</td>
<td>General Atlantic LLC, KKR</td>
<td>United States</td>
<td>United States</td>
<td>1.650</td>
</tr>
<tr>
<td>2</td>
<td>Vought Aircraft Industries Inc (North Charleston, SC Facility) (Carlyle Group)</td>
<td>The Vought facility, located in North Charleston, performs fabrication and assembly of structures and systems installation of 787 aft fuselage sections, which are made primarily of composite materials.</td>
<td>Boeing Co</td>
<td>United States</td>
<td>United States</td>
<td>1.002</td>
</tr>
<tr>
<td>3</td>
<td>Atlantic Inertial Systems Inc (AIS) (J.F. Lehman &amp; Company)</td>
<td>Produces inertial sensors, inertial measurement units (IMUs), integrated IMU/GPS systems, stability systems, and terrain avoidance systems for missiles, military aircraft and land systems.</td>
<td>Goodrich Corp</td>
<td>United States</td>
<td>United States</td>
<td>.375</td>
</tr>
<tr>
<td>4</td>
<td>Hampson Aerospace Machining Inc</td>
<td>Performance-critical components for the commercial aerospace, military and defence and power generation markets,</td>
<td>Darwin Private Equity LLP</td>
<td>UK</td>
<td>UK</td>
<td>.039</td>
</tr>
<tr>
<td>5</td>
<td>DR Technologies</td>
<td>Develops and manufactures advanced composite structural products.</td>
<td>Nogales Investors Management LLC</td>
<td>United States</td>
<td>United States</td>
<td>.020</td>
</tr>
</tbody>
</table>
US companies continued to dominate the vast majority of overall deal value in 2009. Looking at activity above US$50 million, deals with US targets and/or acquirers accounted for 84.4% of deal value, an increase over the 72.6% achieved in 2008. In the fourth quarter of 2009 all three deals greater than US$50 million involved US acquirers and US targets. The US dominance continues the trend away from years such as 2004 and 2006 when there was a much more balanced profile between Europe and North America. However, by 2008, the UK and eurozone targets represented only 27.5% of the deals worth US$50 million or more and fell further to just 9.5% in 2009.

In the same year-on-year period from 2008 to 2009, the percentage of North American targets with deal value above US$50 million increased from 50% to 66.7%. The Asia and Oceania region’s participation in the number of deals by target increased from 15% to 19%, while the Europe ex-UK and euzone participation in deals valued at US$50 million or more decreased from 7.5% to 4.8%. Similarly, very little deal target value was to be found in Europe in 2009. The largest deal was the US$565 million buy-out by BAE Systems in the UK of the 45% stake held by partner VT Group in a joint venture naval shipbuilding business. The deal enabled VT to exit from the shipbuilding business in order to focus on support services. Despite the presence of this deal in the top 10 A&D deals of 2009, the share of European (UK & Eurozone and Europe ex-UK & Eurozone, combined) target value in deals above US$50 million fell from 33% in 2008 to 10.1% in 2009.

Targets in North America and Asia and Oceania represented 90% of total deal value for deals greater than US$50 million. The percentage of deal value for targets in Asia and Oceania rose from 6% in 2008 to 15.7% in 2009. The largest of these was General Electric’s US$300 million purchase of the remaining 51% interest, which it did not already own, in Singapore’s Airfoil Technologies International, a turbine repair services provider. As we noted in our previous edition, the Asia and Oceania region might become a more active source of both acquirers and targets due to the region’s relatively high growth prospects, as key countries such as China and India continue to see gross domestic product growth outpace other regions.
On the buy side, North American purchasers were dominant, accounting for 57.1% of the number of deals and 74.7% of the value of deals for transactions of US$50 million or more in 2009. The majority of deals involving US targets also involved US acquirers in 2009. Of the 14 deals greater than US$50 million in 2009 involving US targets, 11 (78.6%) involved US acquirers. This sharply contrasts to 2008, when 52.6% of US targets involved US acquirers.
Local-market vs. cross-border deals (all nations)
Measured by number of deals worth $50 million or more

International deal flow

The concentration of deal activity within North America is highlighted in our acquisition money flows map which looks at deals worth US$50 million or more that were completed or announced in 2009. Just US$0.9 billion of such deals took place within Europe in 2009, down from US$4.4 billion in 2008. In North America, the trend moved in the opposite direction with the total value of these deals within the region up, from US$3.8 billion in 2008 to US$5.6 billion in 2009.

In a subdued deal year, cross border M&A declined as a proportion of overall deal activity and value. Cross-border deals represented just over 15% of deal value and just six out of the 21 deals worth US$50 million or more compared to 15 out of 40 in 2008. Intercontinental deal flows were relatively thin with the bulk of deal value being conducted within North America. Transatlantic deal flows were down sharply on the previous year’s levels with no North American bids in Europe and only US$0.7 billion of European bids for North American targets. This contrasts greatly with the 2007 peak year of M&A activity when a combined total of US$12.6 billion of deal flow moved between Europe and North America, split more or less equally between European and North American buyers.

Most of the 2009 US$0.7 billion transatlantic flow was accounted for by Safran’s US$580 million purchase of an 81% stake in GE Homeland Protection, General Electric’s airport security business. The deal is another example of aerospace and defence companies extending their footprint into the fast growing security sector and follows Safran’s 2008 purchase of Motorola’s biometric business unit and SDU-Identification, a Dutch manufacturer of secure passports and ID documents. Safran expects its security arm to be contributing 20% of total revenue in the medium term. Although transatlantic, the deal is also a reflection of companies confining their deal activity to relatively known and ‘close to home’ targets as Safran and GE have worked together for 35 years and manufacture commercial aircraft engines through their CFM International joint venture.
Acquisition money flows, 2009

**NOTE:** The values include completed or announced deals over $50 million. Withdrawn deals have been excluded. Europe includes both “UK & Eurozone” and “Europe excluding UK & Eurozone.”
Navigating the right path to innovation

A&D deal values reached a record low for the decade in 2009 having reached a record high just two years earlier in 2007. As we look ahead into the start of a new decade, ‘small and strategic’ is likely to remain the name of the game in the short term but major restructuring forces are likely to be felt increasingly strongly in the long term with consequent implications for deal strategies and values.

On the defence front, for example, the irregular warfare and security requirements that come from the need to respond to non-state threats, including homeland threats, has become as important as the need to defend against state threats. The focus on infrastructure defence, including IT systems, cyber networks, energy installations and transport, will intensify. At the same time as new threats emerge, government procurers and their defence suppliers will face increasing cost pressures that will require them to re-examine supply chains and the way they can explore cross-national synergies. The same pressures are already being felt in the civil aviation supply chain as both Boeing and Airbus reconsider the best way of delivering large programmes. The Vought deal is indicative of a growing desire by the major producers to exert supply chain discipline and control. Programmes at both Airbus and Boeing continue to be hit by delays which have led to question marks over the strategy of outsourcing and joint ventures favoured for much of the previous decade.

In the longer term, the role of China in the civil aerospace market will become more strongly felt. As the first decade of the new millennium drew to a close, Airbus delivered its first Chinese-made aircraft. Airbus has a full production facility in China as it aims to meet fast-growing Chinese demand for commercial aircraft. Boeing makes components in China. However, as we move through the second decade of the new millennium, it won’t just be the opportunities for Chinese production that the big two aircraft-makers will be alert to, but also the implications of Chinese aircraft design and competition from an emerging Chinese aerospace industry. The Commercial Aircraft Corporation of China’s 168-seat, single-aisle C919 passenger jet, for example, is due to enter service in 2016, powered by engines developed by the CFM joint venture between Safran of France and General Electric of the US.

These longer-term trends point to four dominant themes that will underpin M&A activity as the decade unfolds – increasing consolidation as companies respond to cost pressures; further re-evaluation of supply chains by the big manufacturers in both the civil and military segments as they seek to gain better control of their large programme pipelines; continuing growth in the security, surveillance and homeland defence sector; and greater investment in and competition from fast-growing markets, most notably China.
These themes will provide the context for an upturn in deal values but the timing and pace of such an upturn remains uncertain. In the short term, we continue to see small deals monopolising the majority of M&A transactions. With cash-rich balance sheets and improved fundamentals, businesses are likely to continue to utilise the M&A market as a means to fill gaps in existing portfolios, expand and maintain market share and address the shift in defence priorities. The start of 2010 comes off the back of A&D deal activity, as measured by the number of deals, being at or near record levels, though dominated by smaller deals.

We would note, however, that history shows that some of the highest deal activity follows a recession. With the amount of deleveraging that has taken place over the past year and the overall increased health of company balance sheets, the sector is well positioned to support large deals. However, we may still see some false dawns on the timing of an upturn in M&A values. In 2009, for example, the third quarter seemed to herald some new vigour only to be followed by a fourth quarter which, although it contained the largest deal of the year, only had three deals greater than US$50 million. Before we see a sustained return of large deals, capital markets will need to return to a more ‘normal’ functioning state. Sustained improvement and renewed confidence in the capital markets, and thus the potential for exit opportunities, will also be vital to attract financial investors back to the sector. With increased access to credit along with an improving economy, an increase of larger deal activity will eventually materialise.
Moving your company forward with the economy

As the world rapidly changes and becomes more complex, industrial products companies are seizing opportunities to re-examine their businesses. They are looking for ways to squeeze more performance from technology and processes and advance their strategic goals. These are companies actively engaged in change — adjusting to a global marketplace, new reporting standards, evolving regulations, expansion, contraction, and foreign operations.

A year ago, the global recession was deepening and credit markets were almost frozen. Struggling companies looked to carve out and sell portions of their operations to generate needed capital or exit non-core business units. This environment presented extraordinary opportunities for companies with strong balance sheets and available capital to expand market share and increase profitability.

For the A&D industry, the economic downturn has significantly impacted the large deal market. But the small to mid-sized deal market continues to have relatively strong activity as both trade and private equity companies look for bolt-on acquisitions to strengthen their existing positions. The large deal activity seen recently has been driven by a few well-positioned companies focused on step-change acquisitions. Additional deal activity is expected to be driven by distressed companies requiring capital to restructure or continue to operate during the bankruptcy process.

Change is the answer to a new beginning, but where to begin?

Capturing the benefits of change requires insight into its potential to impact the enterprise as a whole. This means strategy, structure, people, processes, and technology. To move from strategy to execution, companies need to translate strategy into practical actions while avoiding major disruptions to ongoing operations.

PwC’s advisory professionals understand the fundamentals of creating, capturing, and measuring value. We know how to address people, processes, strategy, structure, and technology in an integrated fashion, and we can help you execute your plans — across functions and the organisation.

From enterprise-wide process improvement to sustainable cost reduction; from transactions that capture and create value to rapid crisis response; from strategic IT solutions that align with business needs to cost-effective talent management and sourcing, the mission of our Advisory practice is to help business leaders anticipate, create, and manage change.

How PricewaterhouseCoopers can help with M&A

Whether the business objective is to diversify products or services, enter new markets, or achieve revenue or cost synergies, many difficult choices are associated with making the right M&A decision.

The strategy professionals in PwC’s Transaction Services practice help clients to align and clarify senior management teams’ strategic priorities for organic and inorganic growth. We offer advisory services in commercial due diligence, M&A strategy, and growth strategy and innovation.

Once management’s priorities are determined, PwC can assist by identifying potentially attractive industry and product sectors and working with top management to refine screening criteria and produce a short list of best-fit acquisition targets that match priorities.

Clients gain the information they need to strengthen their deal pipelines, become more credible and proactive bidders, and potentially avoid bad deals. Clients also benefit from the convenience of a single adviser and point of contact who has commercial and financial proficiency, as well as deep experience ranging from strategy to deal due diligence to post deal integration.
### Specialty case study: Making smart acquisition decisions

**Client:**
A large aerospace company

<table>
<thead>
<tr>
<th>Client issue</th>
<th>The company, a major player in the aerospace sector, was reviewing its long-term strategic options and needed both market intelligence and M&amp;A due diligence on specific subsectors of the aerospace and defence industry.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach</td>
<td>PwC was appointed to assist in developing a growth strategy that would enable the company to maintain its current industry position and build new leadership positions in attractive niches. A transaction services team worked with the company's management to understand its criteria for growth and to refine the list of subsectors for potential M&amp;A activity. This included conducting a detailed analysis of the attractiveness of a number of industry subsectors.</td>
</tr>
<tr>
<td></td>
<td>In its analysis, the PwC team reviewed the underlying competitiveness, industry structure, and product and customer profitability in a number of selected markets. This was followed by detailed due diligence on a short list of companies that fit the required growth, profitability, and investment profile.</td>
</tr>
<tr>
<td>The impact</td>
<td>The company was able to formulate and implement a clear strategy for development in both its existing and adjacent markets. PwC also assisted with the development of a new investment strategy for the company's divisions and determined the most suitable M&amp;A targets. The organisation has since completed a number of acquisitions and we continue to support both their strategic discussions and their immediate commercial and financial due diligence requirements.</td>
</tr>
</tbody>
</table>
Deep aerospace and defence experience

PwC’s Aerospace and Defence practice is a global network of 1,200 partners and client service professionals who provide industry-focused assurance, tax, and advisory services to leading aerospace and defence companies around the world. This aerospace and defence experience is enhanced by that of our Public Services practice, which includes an additional 600 partners and 9,000 professionals focused on assisting federal, state, and local governments; international agencies; and healthcare entities. We help A&D companies address a full spectrum of industry-specific challenges across areas such as assurance, tax, operational improvement, supply chain management, programme management effectiveness, IT effectiveness and security, compliance, export controls, and government contracting. PwC’s A&D client service professionals are committed—both individually and as a team—to the relentless pursuit of excellence, building insights, and advancing leadership on a wide range of the most critical challenges and issues confronting A&D organisations. PwC is a sponsor of leading industry conferences and frequently authors articles for, or is quoted in, leading industry publications.

We are proud of our relationships with Aviation Week and Flight International, as well our participation in industry conferences and associations, such as the Aerospace Industries Association (AIA) and American Conference Institute (ACI). Our involvement in these organisations reflects our commitment to addressing industry needs and furthering industry dialogue with A&D industry leaders.

Quality deal professionals

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

Local coverage, global connection

In addition to having more than 1,200 professionals who serve the A&D industry, our team is part of an extensive Industrial Products group that consists of 31,000 professionals, including approximately 15,800 providing assurance services, 9,000 providing tax services, and 6,200 providing advisory services. This expands our global footprint and enables us to concentrate efforts in bringing clients a greater depth of talent, resources, and know-how in the most effective and timely way.
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Mission control

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