

Mission control

Fourth-quarter 2011 global aerospace and defense industry mergers and acquisitions analysis

Special report:
Can aircraft manufacturers prevent rate ramp-up problems?





Scott C. Thompson

Welcome to *Mission Control*, our analysis of merger and acquisition activity in the aerospace and defense sector. *Mission Control* is a quarterly publication. In our fourth quarter edition, we provide a comprehensive examination of deal activity for the full year. In our last annual update, we shared an upbeat forecast for likely deal activity in 2011. Indeed, the year turned out to be a record one with deal totals hitting new highs.

In this report we again look ahead as well as examine trends in recent deal activity on both a quarterly and an annual basis. We analyze the relative level of deals for commercial aerospace OEMs and suppliers, MRO, defense, space and other companies, including how the valuation for these targets has changed over time. We've taken the opportunity to put the 2011 records in perspective with some comparisons with previous historic large deal activity, particularly the top deals announced during 2007, which was the previous peak year for annual deal value. We also evaluate trends in financial investment and regional deal flows. In two special reports, we look at the challenge of supply rate readiness in the commercial aerospace sector and the importance of getting strategies and tactics right around divestitures.

The most significant trend affecting the aerospace and defense industry is the contrast in civil and military outlooks. The former is benefiting from fleet expansion in Asia, as well as fuel cost pressure that is supporting replacement demand in western nations. This growth potential is very attractive for potential acquirers. Although we may not see more deals on the scale of United Technologies' \$16 billion 2011 announcement, there will likely be more moves by defense contractors to establish themselves further in the civil market as well as more consolidation between aerospace suppliers. In addition, several emerging markets continue to develop their own domestic aerospace industries, which are acting as another spur for aerospace transactions.

In contrast, many of the countries that are the largest global defense spenders have to contend with government cutbacks in response to fiscal burdens. Military programs are being downsized and new weapons procurement is being scaled back. This challenge is prompting defense contractors to further globalize, take on more contract risk, and adjust their business portfolios as competition increases for a shrinking pool of defense expenditure. Export reforms are under discussion in the United States that could offset some of the current market weakness. But improved shareholder value is likely to require portfolio reshaping to target pockets of defense spending growth, such as unmanned systems. Consolidation among the top sector constituents seems unlikely, although a lively amount of deals between small and mid-size defense contractors can be expected. Budget cuts could force even larger defense deals, though this is a more remote possibility.

We expect that cross-border deals, which increased in 2011, will play an even more significant role going forward. Chinese companies, which until now have mainly focused on domestic consolidation, have made several recent overseas aerospace acquisitions that could provide a precedent for future outbound deal flow. European acquirers also continue to demonstrate strong interest in the US defense market. This enthusiasm is likely to increase, given relative levels of defense spending, even after accounting for base budget reductions in the United States. In addition, the potential benefits of European defense cooperation seem to offer a rationale for further consolidation within Europe at some point. While we may not see the record for the largest deal in sector history broken for some time, the weight of evidence suggests that 2012 will be another robust year.



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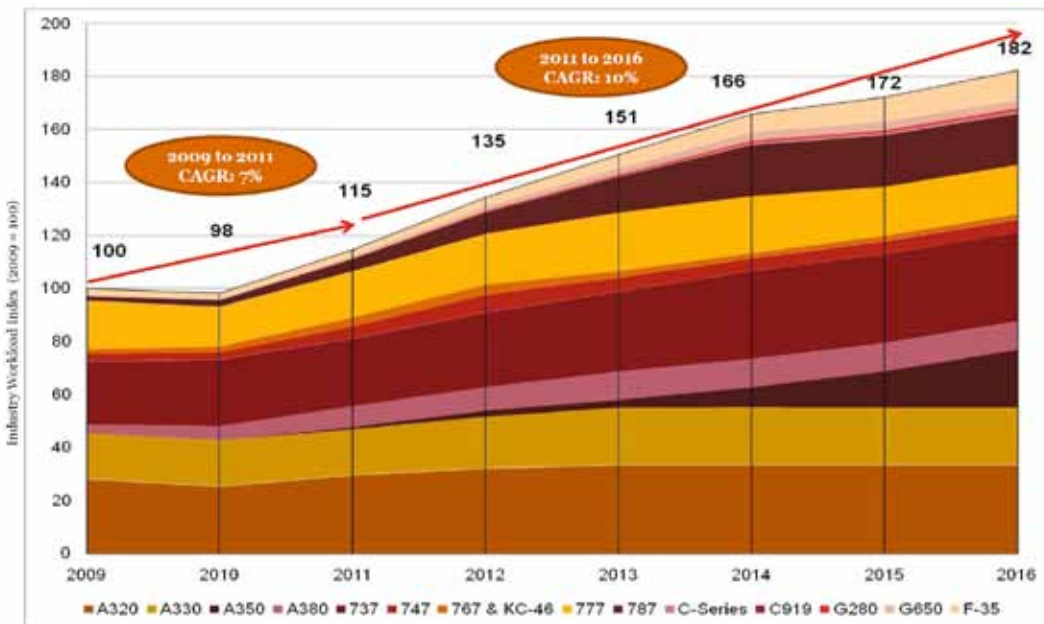
Special report:

Can aircraft manufacturers prevent rate ramp-up problems?

High production rate ramp-up will be needed across much of the aerospace and defense sector. Both leading civil aerospace manufacturers — Boeing and Airbus — have announced a series of record deals for their new generation of commercial aircraft. Military programs such as the Joint Strike Fighter and Tanker are also ramping up in the next five to 10 years. But big rate increases also mean pressure on the supply chain, leaving programs vulnerable to supply chain delay or failure. Aerospace companies and their leading tier one suppliers are very conscious of the potential problems, particularly in light of the major delays that have affected recent programs. The question is: What is the appropriate way to prevent future problems?

The question is even more pertinent at a time when world events and natural disasters have caused upheaval to supply chains in many industries. Although manufacturers can't prevent the occurrence of these outside events, they can insulate themselves from their effects through identification of supply chain risks related to supplier locations, transportation risk, and overdependence on single sources. Also, at a time when banking and market uncertainties remain high, the importance of checks on financial as well as operational and capacity vulnerabilities can't be underestimated. Then there is the need to identify "self-inflicted risks," such as a preferred reliance on a single supplier for certain components because managers perhaps feel comfortable with its product or team. This might come at the cost of overlooking vulnerabilities.

Current forecasts suggest significant capacity constraints over the next build cycle – with military growth platforms causing additional stress



PwC's analysis of announced program rates shows the extent of additional capacity needed in the period to 2016.

Financial market conditions are adding to capacity and ramp-up concerns.

Pinpointing ramp-up risk

Managing risk in the supply chain is all the more important in commercial aerospace, where the industry operating model has pushed much of the design and manufacturing work to suppliers, often in the form of risk-sharing partnerships. We analyzed the potential capacity risks in the aerospace supply chain by identifying which suppliers' operations will be most strained by projected rate ramp-ups on key 2011-2016 growth programs. We then mapped that against which suppliers may be worst-positioned financially to invest in additional capacity. Our study covered 12 key growth programs from five commercial and defense OEMs.¹ We calculated required capacity growth and financial readiness scores for 93 suppliers across nine different component and system segments. The results showed that a fifth (21%) of suppliers aren't financially ready to support the high ramp-up that is required.

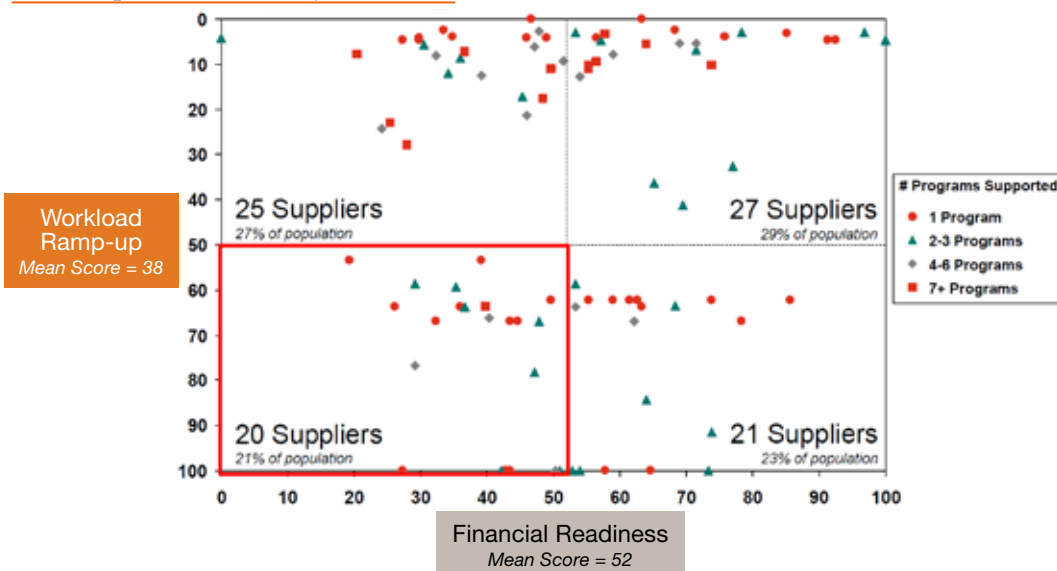
Companies in the aerospace sector are alert to the need to proactively identify, prevent, and manage supply chain risk. But our experience with many A&D industry players suggests that current approaches to supply chain risk

management are either too complex or too simple. We have seen companies trying to assign an absolute probability percentage to each supply chain risk or apply an undifferentiated and resource-intensive approach of performing a detailed due diligence on each of their suppliers. At the other end of the spectrum, companies sometimes rely on internal or supplier surveys to obtain a qualitative view of supply chain risks.

Both the in-depth and the more "light touch" approaches have limitations. Questionnaires can be insufficiently forensic. They also run the danger of bias as they rely on the views of suppliers themselves. Often responses are based on opinions, not facts, and they tend to be informed by experience. More in-depth approaches, though, can be resource-intensive and cover only a certain number of suppliers at any one time. They might, for example, start with the largest suppliers but the biggest risks may be multiple layers down in the supply chain. Both the in-depth and the simpler approaches have the potential of turning "risk management" into "issue management," addressing only current supplier issues rather than identifying future dangers.

44% of suppliers will see high workload ramp-up, while 52% are financially prepared to invest in added capacity

Total Population in Study (93 suppliers)



A fifth of suppliers are at risk of not being able to deliver the ramp-up that is required.

Our analysis of suppliers shows 21% facing high ramp-up but with low financial readiness.

¹ 737, 777, 787, A320, A330, A350, A380, G280, G650, C-Series, C919, F-35.

Addressing multi-dimensional risks

PwC has developed a more practical but rigorous approach to assess risk and develop effective mitigation strategies. Our approach starts with a model that can be used to continually monitor and assess risk in the A&D supply chain. It is based on facts, not opinions, and combines readily available public data and information with data that is internal to the client company. Examples of publicly available data include supplier location, certain financial information, and the likely collective production volume of the supplier across different platforms. This is supplemented with internal data such as the supplier's on-time and quality performance. To determine capacity risk we take into account demands on suppliers from all programs, both commercial and military, including those from competitors.

We combine these elements to form a comprehensive and multi-dimensional set of measurable risk and impact attributes. Each attribute is measurable to enable relative ranking of composite risk and impact. The attributes can be

weighted to reflect their shifting importance to the organization or changes in the external or industry environment. Each company in the supply chain is included and the result is a grid-based map of relative risk, enabling the client company to identify where the biggest potential risks lie. It is not overly burdensome or complex and, once established, can be continually updated to provide companies with a more "live overview" of potential supply chain risk as well as the effects of ongoing efforts to reduce supply chain risk.

Each dot on the grid represents a purchased component (or service). Each tells a particular story. For example, it might be a "single sourced part used on 70% of finished products delivered by an unstable supplier." If that is combined with the fact that qualifying another supplier might take six to 12 months, it presents a very practical focus and a compelling case for action to any C-level executive.

Companies need a more effective more 'live overview' of where the biggest risks lie.

Becoming rate ramp-up ready

Using the model to identify potential risks, we then move on to what we call a “rapid supplier assessment.” Here, there are obvious parallels between what a private equity company needs in weighing up acquisition targets and the requirements of aircraft OEMs at the top of complex supply chains. Both should consider pinpointing where risks lie and what it will take to address them. The aim is to have a highly pragmatic approach, seeking to verify risk and the changes that can be put in place to avoid it. These changes might take the form of alterations in the client company’s supply chain management to reduce reliance on the particular supplier, reforms to be carried out by the supplier, or a combination of both. In exceptional cases, it might even take the form of a decision to acquire the supplier and take direct vertical control of that element of the supply chain. In September 2011, for example, EADS took a majority stake in German company PFW Aerospace, which faced a liquidity crisis. In other cases, consolidation within the supply chain might be needed to address capacity constraints and other ramp-up concerns.

Whether or not there is a need for M&A, PwC is experienced in advising companies and delivering the required supplier transformation program. A “supplier transformation plan” would be developed at company level describing objectives and yearly targets, capability improvements, and performance targets. It would typically include an investment plan integrated into the company business plan with a series of detailed actions. A “workstream plan” would identify each improvement action per workstream plus critical milestones, objectives, and key performance indicators.

One of the challenges facing supplier companies is how they adapt to participate effectively within the overall value chain ramp-up. In our experience, many tier one suppliers still should consider upgrading their core capabilities to improve the reliability of their end-to-end performance in the value chain. This includes the maturity to manage their interface with their customers and the joint interface with other tier ones particularly the integrated performance of their core capabilities. There remains a tendency to “firefight” or “muscle through” to meet the ramp-up challenge. This can come at the expense of ways to really structure, monitor, and dynamically collaborate as part of an extended supply chain.

Conclusion

In summary, the need to rapidly expand production in a number of aerospace platforms is putting strains on the supply chain. Our analysis indicates that a significant proportion of suppliers are at risk of not being able to deliver the ramp-up that is required. Companies need a practical method to identify rate readiness risks in the aerospace and defense supply chain. PwC has developed a way for aerospace and defense companies to quickly understand, pinpoint, and prevent risk across the whole supply chain. In most cases, supplier transformation to address risks can take place without any M&A. But, in some cases, either consolidation within the supply chain or vertical integration of the supplier with the aircraft manufacturer should not be ruled out.

Consolidation within the supply chain or vertical integration cannot be ruled out.

Perspectives: Overview of deal activity

Aerospace M&A pushes deal totals to record levels

2011 was a record year for aerospace and defense transactions. The 341 deals and \$43.7 billion of deal value announced during 2011 beat the previous highs: 332 deals in 2010 and the \$42.0 billion of value in 2007. The \$16 billion United Technologies acquisition of Goodrich Corporation was the primary value driver. Volume drivers were more broad-based, with higher numbers for small deals (less than \$50 million) and mega deals (above \$1 billion) alike. Although mega deals were not as common in 2011 as they were in 2007, these transactions have continued their recovery from the recent low of only two such announcements in 2009 up to six in 2011. This led to an increase in average deal sizes, even when removing the impact of the Goodrich deal. The Goodrich transaction boosted US total deal value above historic norms despite a drop in the number of US deals. There was also a big increase in deals for aerospace targets in 2011, measured on both a volume and value basis. This, when considered alongside the higher sales multiples awarded to aerospace compared with defense targets, reflects the more favorable outlook for this part of the sector.

Defense divestitures and private equity exits boost large deal volume

Divestiture of slower-growth defense businesses and private equity exits dominate the list of largest deals. Two headline divestitures, the Northrop Grumman shipbuilding spin-off and the break-up of ITT, ranked among the top five deals this year. In addition, four of the top 10 deals were sales by private equity companies to strategic investors. On the buy side, only one private equity purchase made the list: the Providence Equity Partners acquisition of SRA International. The 2011 largest deal targets were much more varied than in 2007, when the focus was mainly on aerospace targets. Also, more big deals predominated in the earlier record year; eight of the 10 largest deals in 2007 were for values at or above \$1.8 billion compared with just four such deals in 2011. Private equity exits played a role in each year. Activist investors had a part to play in some of the large 2011 divestitures but financial investor involvement was most evident in the smaller deals.

Europe and the United States drive global activity as Asia takes a step back

European acquirers played a much more significant role in the 2011 aerospace and defense deal market compared with 2010. The pace of market consolidation hastened within Europe and outbound deals also increased. The focus was firmly trans-Atlantic; all European outbound deals above the \$50 million threshold in 2011 were for North American targets, boosting the number of cross-border deals for US targets. There was also important activity for non-US companies that have significant US revenues, as a means of increasing exposure to the largest defense market in the world. One rationale for these types of deals is that, in some cases, they may be easier to close. Transactions involving Asian acquirers declined year on year.

Deal volumes likely to grow in 2012

With OEM backlogs contributing to higher overall sector growth prospects, aerospace M&A is likely to continue to lead the A&D deal market in 2012. The outlook for defense is somewhat less certain. Defense M&A will likely remain oriented toward large spin-offs of lower growth units and smaller acquisitions in growth areas, such as cyber security. However, the further defense budgets fall, the more likely there could be calls for larger-scale consolidation, which could outweigh antitrust concerns, in order to maintain a strong defense industrial base. Strategic investors have significant cash positions and appear well-positioned to drive a high volume of deals in 2012, both large and small. Deal volume, if not deal value, could be set to break another new record in 2012.

Deal totals

Aerospace and defense M&A deal value and volume reached new highs in 2011. The 341 deals announced during 2011 edged ahead of the previous high of 332 reached in 2010. Total deal value nearly doubled year on year, with 2011's \$43.7 billion surpassing the previous peak of \$42.0 billion recorded in 2007. The relative level of sector M&A activity was also high when considering deals with a disclosed value of at least \$50 million.

Larger deals are becoming more common after a relative lull in recent years. But, as we forecasted in last year's edition of *Mission Control*, smaller deals are responsible for most of the deal volume. Deal value totals were significantly impacted by United Technologies' \$16 billion acquisition of Goodrich. This will be the largest deal in sector history when it closes. Mega deals, defined as transactions with a disclosed value of at least \$1 billion, are making a comeback. There were six of these announcements in 2011, up from four in 2010 and only two in 2009. Despite this, smaller deals (less than \$50 million) have also increased their relative contribution to M&A activity. The market remains somewhat bifurcated, with smaller deal activity pushing deal numbers higher and more large "headline" deals making it a record year for deal value.

While US entities were involved in the vast majority of all deals, whether measured by value or number of deals, market bifurcation also affected trends in US versus non-US deals. The number of US deals as a share of the worldwide deal total declined in 2011 to a level slightly below its five- and 10-year averages. But the high number of larger US deals ensured that the US share of total deal value increased in 2011 and easily exceeds historical norms. This reflects the larger number of big companies based in the United States. For example, a recent benchmarking of the largest global defense companies from Defense News indicates that 15 of the top 20 defense contractors were based in the United States. US deals dominated the 2011 top 10 A&D deals table; all but one of the six mega deals (\$1 billion or more) involved both a US acquirer and a US target.

These trends are likely to extend into 2012. The A&D sector continues to globalize as non-US players increase their competitiveness, benefiting from a growth in air travel and defense budgets in regions such as Asia, Latin America, and the Middle East. Many countries, such as China, India, and Brazil, are seeking to take advantage of this demand shift by fostering their own domestic industries. Of these markets, China seems well positioned to advance its national aerospace industry given the relative level of domestic demand as well as technological help from western suppliers. As these sector mega trends play out, deal volumes likely will continue their gradual shift toward non-US parties while the bigger deal values will remain dominated by US transactions.

Annual aerospace and defense deal activity

Measured by number and value of deals (2002-2011)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Number of deals	173	204	230	243	239	304	309	293	332	341
Total deal value (\$ bil)	12.9	14.7	24.1	13.6	22.4	42.0	22.1	11.8	21.9	43.7

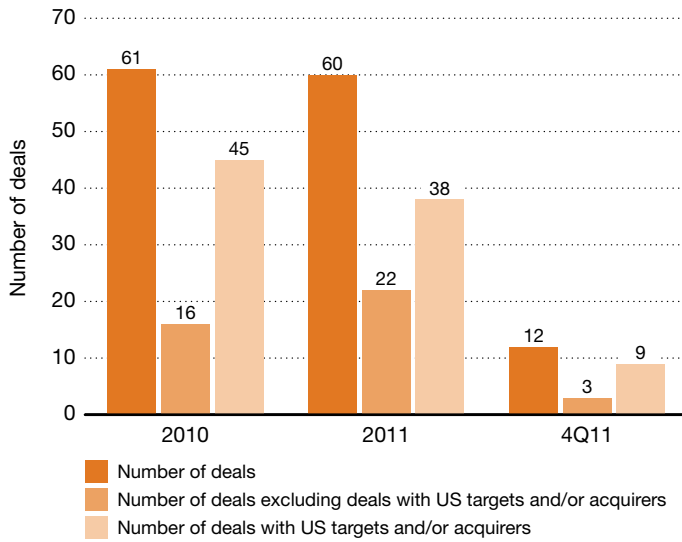
Quarterly A&D deal activity

Measured by number and value of deals worth \$50 million or more (1Q09-4Q11)

	2009				2010				2011			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Number of deals	4	11	11	10	10	13	16	22	22	15	11	12
Total deal value (\$ bil)	0.9	3.0	3.8	3.1	5.7	5.2	4.9	5.5	12.6	6.2	20.3	3.6
Average deal value (\$ bil)	0.2	0.3	0.3	0.3	0.6	0.4	0.3	0.2	0.6	0.4	1.8	0.3

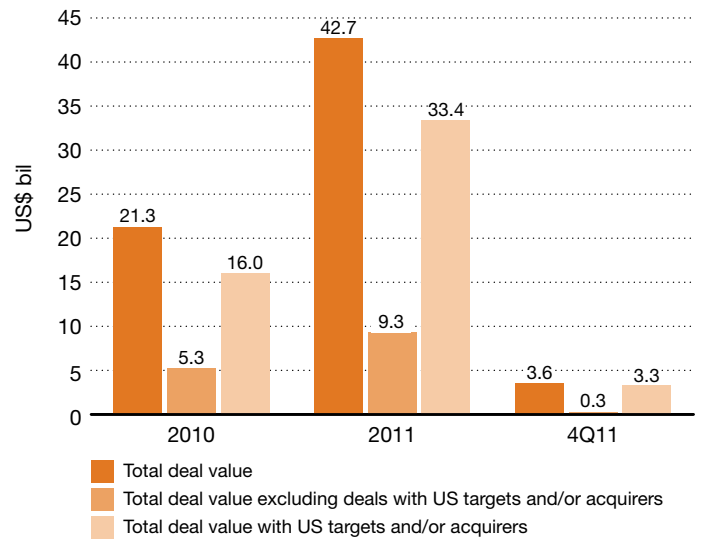
Deal activity by number of deals

Measured by number of deals worth \$50 million or more (2010, 2011, 4Q11)



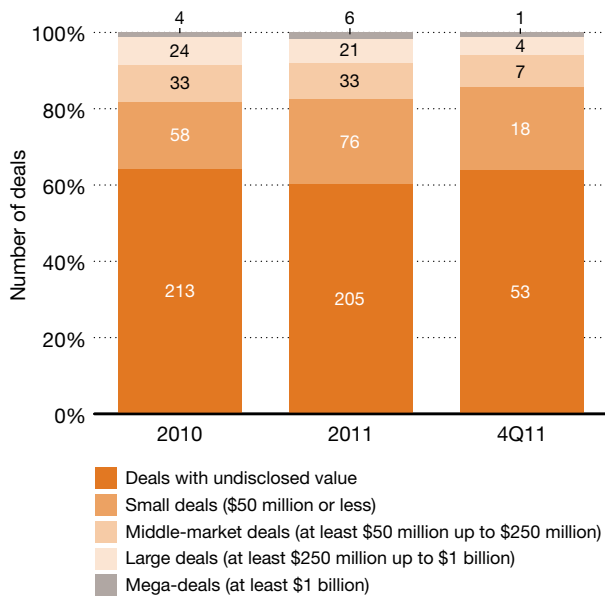
Deal activity by total deal value

Measured by value of deals worth \$50 million or more (2010, 2011, 4Q11)



Deal activity by number and range of deal value

Measured by number of deals (2010, 2011, 4Q11)



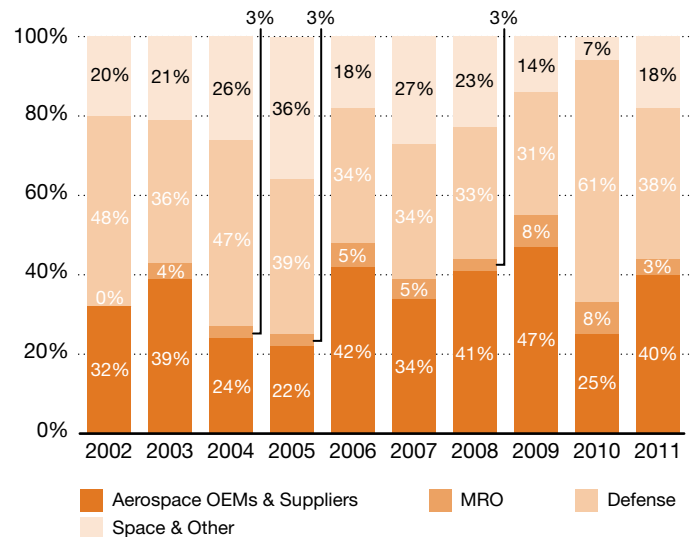
Deal categories and valuation

The contrasting fortunes of the aerospace and defense sectors was reflected in year on year deal trends. While aerospace deal numbers were up, the number of defense deals was down. Aerospace targets accounted for most deal value announced in 2011. The aerospace share was close to a historical high, heavily influenced by the Goodrich acquisition. Divestitures accounted for two of the three largest defense deals, with spin-offs of divisions perceived to have relatively lower growth potential and carrying relatively low multiples.

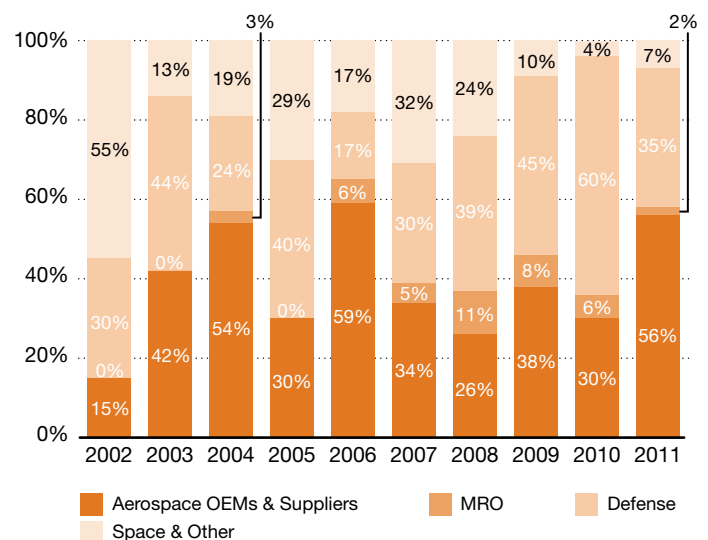
Median valuation, as measured by value/sales, declined across the whole of the A&D sector in 2011. But, again reflecting their different market environments, the median of aerospace (including maintenance, repair, and overhaul (MRO)) deals has begun to command a premium multiple relative to defense acquisitions over the last two years. This is hardly surprising given the dramatic rise in aircraft orders and backlogs. At the end of 2011 the aggregate large commercial aircraft backlog equaled more than eight years of deliveries at recent levels of production. In comparison, defense budgets are being scaled back by many of the largest-spending countries, and export restrictions can limit the benefits that can be gained from growth in emerging market defense budgets. MRO deals remain a small part of the overall aerospace and defense M&A market, although this is skewed somewhat by the fragmented nature of MRO. With small and/or private companies, many transaction values and even some transactions themselves may go unreported.

With much greater certainty around the future level of demand in the aerospace sector, aerospace deals are likely to make the largest contribution to activity in 2012. Aerospace deal flow may be boosted by companies that are predominantly defense-oriented seeking more exposure to the commercial aerospace business. Consolidation among large aerospace suppliers will be an important reason for deal-making with companies seeking to gain greater scale and bargaining power versus other parts of the sector value chain, including OEMs and aftermarket suppliers. Moves to strengthen supply chain positions are also likely. Companies may seek to earn better margins by moving higher in the supply chain through an acquisition-based strategy while others may opt to use M&A to gain better control down the supply chain.

Deals by aerospace and defense target category
Measured by number of deals worth \$50 million or more*



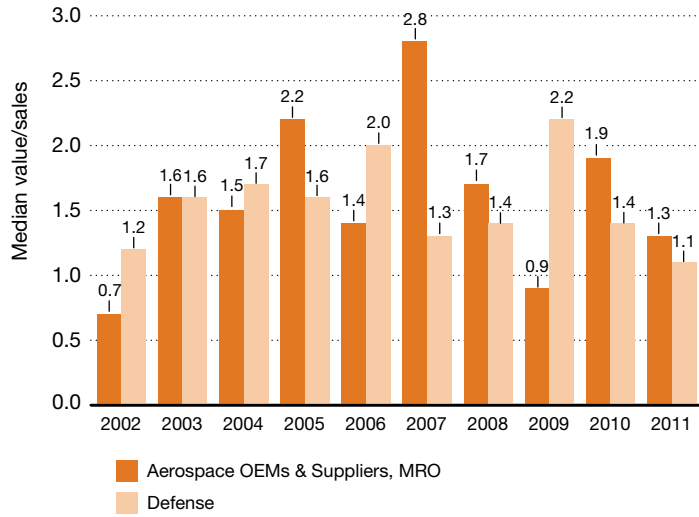
Deals by aerospace and defense target category
Measured by value of deals worth \$50 million or more*



*percentages may not sum to 100% due to rounding

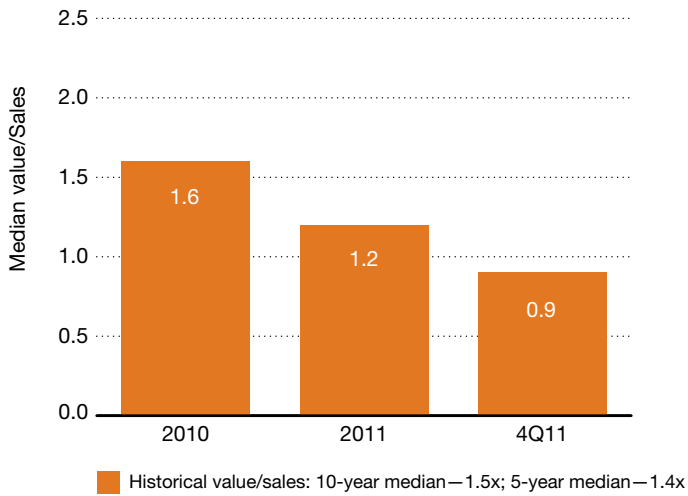
Deal valuation by median value/sales

Measured by value/sales for deals worth \$50 million or more (2010, 2011, 4Q11)



Deal valuation by median value/sales

Measured by value/sales for deals worth \$50 million or more (2010, 2011, 4Q11)



Top 10 A&D deals

The \$10 billion-plus deal has returned in the shape of United Technologies' \$16 billion purchase of Goodrich. The acquisition allows United Technologies to diversify more into the commercial aerospace sector through products such as nacelle systems and landing gear. In addition, Goodrich has exposure to several defense categories with a favorable outlook, including intelligence, surveillance, and reconnaissance (ISR). The next-largest announcement was the Engine Holding GmbH joint venture between Daimler and Rolls-Royce Group for Tognum AG, the second-largest global manufacturer of high-speed engines for marine, energy, and defense industries. This deal is expected to help the acquirers increase their exposure to lighter engines, including those in Tognum's marine unit. Engine Holding has received all regulatory approval required for the merger.

The third- and fourth-largest announcements were the ITT Exelis and Huntington Ingalls spin-offs. There has been a broader market trend, beyond the aerospace and defense sector, toward breaking up conglomerates and creating more focused business portfolios. Pessimism around future defense budgets has reinforced this trend in the defense sector and was as a primary driver of both of these transactions. In addition, both spun-off entities have begun to restructure their business. In the case of Northrop Grumman, a weak outlook for ship building created the impetus for its Huntington Ingalls divestiture. Huntington Ingalls has since proceeded with a restructuring which includes employee reductions and the intention to shut down the Avondale shipyard by 2013. For ITT, the Xylem water-equipment business was believed to have a better outlook than the defense unit, ITT Exelis, or the legacy ITT industrial components business. This led to the spin-off of both ITT Exelis and Xylem.

Also among the largest deals of 2011 were the Providence Equity Partners acquisition of SRA International and the General Dynamics acquisition of Vangent Holding. These were the fifth- and eighth-largest deals of 2011, respectively. These two deals are similar in that they both targeted services companies. The SRA deal increased Providence's exposure to the government services market, as the private equity firm also owns Altegrity, a provider of services such as security screening, security training, and risk consulting. The Vangent deal allows General Dynamics to expand its exposure to information technology services for the government since the target provides healthcare technology and business systems.

The sixth-largest deal this year was Pratt & Whitney's acquisition of Rolls-Royce's 32.5% stake in International Aero Engines (IAE), a joint venture between Pratt & Whitney, Rolls-Royce, Japanese Aero Engines, and MTU Aero Engines. IAE manufactures engines for the A320. This acquisition gives Pratt & Whitney a majority position in IAE. The deal also allows Rolls-Royce to focus its investment on designing engines for the aircraft that will eventually succeed the upcoming narrow-body re-engine programs. To this end, Pratt & Whitney also announced a new joint venture with Rolls-Royce to develop engines for future narrow-body aircraft.

The final three of the top 10 2011 deals are noteworthy because they all involved private equity exits to strategic acquirers. The seventh-largest deal was the Astrium acquisition of Vizada, a satellite communication services provider, from Apax Partners. Astrium is a subsidiary of EADS and this deal allows Astrium to increase its exposure to services sold to the US government. The ninth-largest deal was the Precision Castparts acquisition of Primus International, a manufacturer and wholesaler of metallic and composite aircraft components, from Oak Hill Capital Partners. Primus has exposure to several growth platforms, including the 787 and A350. The final deal was the Esterline Technologies purchase of Souriau Holding from Sagard Private Equity Partners. Souriau manufactures high-integrity connectors for a variety of end markets, including aerospace and defense. In addition, the Vangent acquisition was also a private equity sale from Veritas Capital.

Divestitures, such as Northrop Grumman's spin-off of Huntington Ingalls and ITT's break-up which formed ITT Exelis, show a motivation to shed low-growth defense businesses. This is much different than 2007, the previous record year for announced deal value, when aerospace transactions dominated the largest deals. The private equity investment exits from large aerospace and defense portfolio companies, such as the Vizada, Primus International, Souriau, and Vangent deals, have much more in common with 2007. Then, sales by private equity investors Aurora Capital Group and The Carlyle Group contributed to some of the largest deals of the year. Of these two themes in 2011, divestiture seems more likely to persist as a motivator of large deals. Spending cuts clearly indicate a negative demand environment and the intensity of these cuts seem more likely to increase than decrease. In addition, spending priorities may change as western economies come closer to a "new normal" level of defense expenditure. This public financing climate could provide additional impetus for large defense transactions in 2012.

Top ten A&D deals in 2011

Rank	Target name	Target category	Acquirer name	Target nation	Acquirer nation	Value of transaction in US\$ bil.
1	Goodrich Corp	Aerospace OEMs & Suppliers	United Technologies Corp	United States	United States	16.18
2	Tognum AG	Defense	Engine Holding GmbH	Germany	Germany/UK	4.72
3	ITT Exelis	Defense	Shareholders	United States	United States	2.10
4	Huntington Ingalls Industries Inc	Defense	Shareholders	United States	United States	2.01
5	SRA International Inc	Defense	Providence Equity Partners LLC	United States	United States	1.79
6	IAE International Aero Engines AG	Aerospace OEMs & Suppliers	United Technologies	United States	United States	1.50
7	Vizada SAS	Space & Other	Astrium SAS	France	France	0.96
8	Vangent Holding Corp	Defense	General Dynamics Corp	United States	United States	0.96
9	Primus International Inc	Aerospace OEMs & Suppliers	Precision Castparts Corp	United States	United States	0.90
10	Souriau Holding SAS	Aerospace OEMs & Suppliers	Esterline Technologies Corp	France	United States	0.70

Top ten A&D deals in 2007

Rank	Target name	Target category	Acquirer name	Target nation	Acquirer nation	Value of transaction in US\$ bil.
1	Smiths Aerospace Ltd	Aerospace OEMs & Suppliers	General Electric Co(GE)	United Kingdom	United States	4.81
2	Armor Holdings Inc	Defense	BAE Systems Inc	United States	United States	4.33
3	Tele Atlas NV	Space & Other	TomTom NV	Netherlands	Netherlands	3.96
4	Tele Atlas NV	Space & Other	Garmin Ltd	Netherlands	Netherlands	3.21
5	Auckland International Airport Ltd	Aerospace OEMs & Suppliers	Dubai Aerospace Enterprise	New Zealand	United States	2.24
6	Sequa Corp	Aerospace OEMs & Suppliers	The Carlyle Group LLC	United States	United States	2.01
7	K&F Industries Holdings Inc	Aerospace OEMs & Suppliers	Meggitt PLC	United States	United Kingdom	1.80
8	Standard Aero Holdings Inc	Aerospace OEMs & Suppliers	Dubai Aerospace Enterprise	Canada	Utd Arab Em	1.80
9	EDO Corp	Defense	ITT Corp	United States	United States	1.68
10	European Aeronautic Defence & Space Co(EADS)	Aerospace OEMs & Suppliers	GK Vnesheconombank ²	Netherlands	Russian Fed	1.45

² Vnesheconombank acquired a 5% block of shares in EADS

Private equity activity

The relative level of financial investor acquisitions increased in 2011 to slightly above the long-term historical averages. Most of the buying activity was away from the largest deals. Out of the top 10 biggest deals, only the Providence Equity Partners acquisition of SRA International featured a financial investor on the buy side. In contrast, as discussed in the previous section, four out of the top 10 were private equity exits.

The visibility of buy-side private equity is sometimes obscured by undisclosed valuations. In contrast, private equity exits, often through IPOs or sales to strategic buyers, are more likely to have disclosed values and be included in M&A totals. Accordingly, there can be something of a sample bias when examining private equity involvement in the largest M&A deals. Also, it is important to consider that, even though financial investors were not major buyers in the largest aerospace and defense deals this year, some of these companies were very involved in shaping the broader market through shareholder challenges to management of defense contractors.

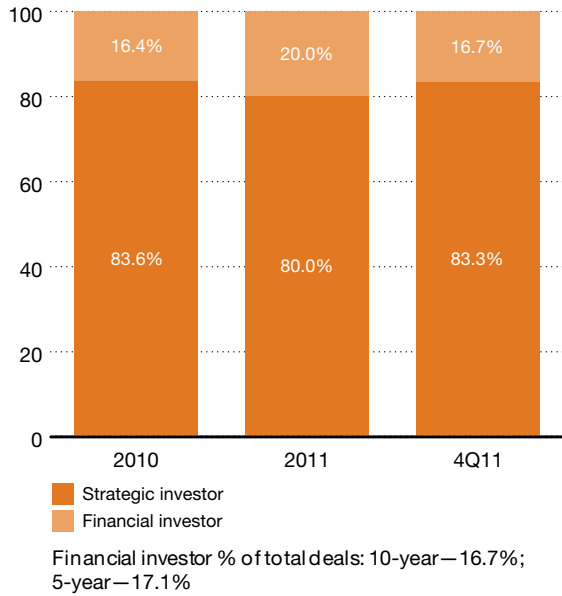
It seems likely that strategic investors will lead the way again in 2012. Large aerospace and defense competitors continue to carry ample liquidity while working down financial leverage. In addition, reports indicate that private equity fundraising weakened significantly in the second half of 2011. While last year was not a banner year for private equity in the sector, it is still possible that these entities could take advantage of some future divestitures, to the extent that selling these units is preferable from a tax perspective relative to spinning them off.

Top five private equity A&D deals in 2011

Rank	Target name	Target category	Acquirer name	Target nation	Acquirer nation	Value of transaction in US\$ bil.
1	SRA International Inc	Defense	Providence Equity Partners LLC	United States	United States	1.79
2	Sensor-Nite NV	Aerospace OEMs & Suppliers	Bain Capital LLC	Belgium	Netherlands	0.32
3	Pattonair International Ltd	Space & Other	Exponent Private Equity LLP	United Kingdom	United Kingdom	0.24
4	Global Defense Technology & Systems Inc	Aerospace OEMs & Suppliers	Ares Management LLC	United States	United States	0.22
5	Anixter International Inc-Aerospace Hardware Division	Space & Other	Greenbriar Equity Group LLC	United States	United States	0.19

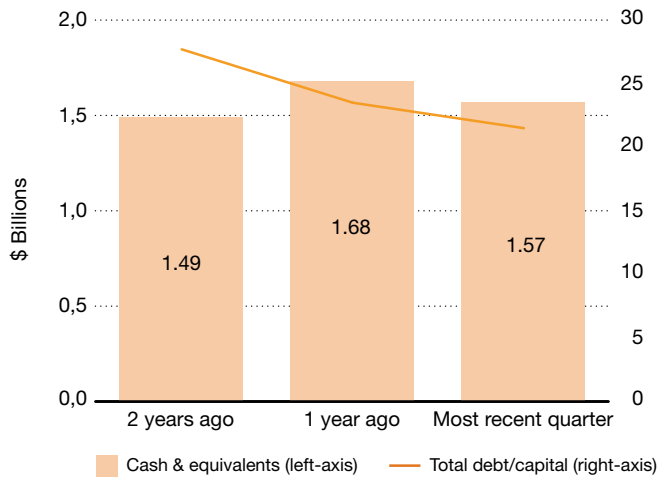
Deal activity by investor group

Measured by number of deals worth \$50 million or more
(2010, 2011, 4Q11)



Sector liquidity and leverage

Measured by average of top 50 global public competitors
(Y-2, Y-1, MRQ)



Source: Company reports

Perspective on top-10 historical aerospace and defense deals

Top ten historical completed A&D deals						
Rank	Value of transaction in US\$ bil	Date announced	Target name	Target nation	Acquirer name	Acquirer nation
1	13.36	Dec 1996	McDonnell Douglas Corp	United States	Boeing Co	United States
2	12.86	Jan 1999	Marconi Electronic Systems (General Electric Co PLC)	United Kingdom	British Aerospace PLC	United Kingdom
3	9.50	Jan 1997	Hughes Aircraft Co	United States	Raytheon Co	United States
4	8.76	Jan 1996	Loral Corp	United States	Lockheed Martin Corp	United States
5	7.06	Oct 2004	Snecma SA	France	Sagem Communication AG	France
6	6.75	Oct 1999	Aerospatiale Matra	France	DaimlerChrysler Aerospace AG	Germany
7	6.68	Feb 2002	TRW Inc	United States	Northrop Grumman Corp	United States
8	5.42	May 1999	Gulfstream Aerospace Corp	United States	General Dynamics Corp	United States
9	5.20	Aug 1994	Lockheed Corp	United States	Martin Marietta Corp	United States
10	5.16	Dec 2000	Litton Industries Inc	United States	Northrop Grumman Corp	United States

When United Technologies' \$16 billion announcement for Goodrich closes, it will be the largest acquisition in the history of the sector. The 10 largest completed aerospace and defense deals from earlier years are shown in the chart above. The list covers only deals that actually completed. Among those that were proposed but had to be withdrawn are the Lockheed Martin/Northrop Grumman merger and the potentially giant GE/Honeywell deal, both of which fell on regulatory grounds in 1998 and 2001, respectively.

Most of the completed deals in our table came during a period of significant post-Cold War defense consolidation in the United States and Europe. The General Dynamics acquisition of Gulfstream Aerospace Corporation is an exception to this. It is more akin to the United Technologies/Goodrich deal in the sense that it stemmed from favorable commercial aviation prospects, in this case specifically in the business jet category.

Current day horizontal consolidation among defense primes remains unlikely unless defense industrial policies change significantly. A change could be driven by greater-than-expected defense spending cuts but the relatively consolidated state of prime contractors and an interest in maintaining employment make this unlikely. So, although there is a business interest in the potential of large defense deals, the policy climate suggests there will not be a repeat of the \$5 billion-plus transactions that we saw a decade or more ago, at least not in the immediate future. The large deal flow is likely to continue to come from commercial aerospace, although many of the largest commercial players may decide to stay focused on achieving their relatively strong organic growth potential.

Geographic regions

European dealmakers increased their activity in 2011. The growth in European deals has been driven by an increase in local market deals as well as outbound transactions. All of these European outbound announcements during 2011 targeted North American companies. This seems to be driven by interest in the United States from a size, if not a growth, perspective. Such acquisitions also help companies match US dollar-based production with global sales in this currency, thus creating a natural hedge. The increase in European outbound deals also formed part of an overall rise in cross-border deals and foreign acquisitions of US targets.

Another element in cross-border activity is the acquisition by foreign competitors of non-US companies that have significant US revenue competitors. The EADS transactions for Vizada and Vector are examples of large non-US acquisitions that give the buyer increased exposure to the US market. This can be one way to mitigate some of the acquisition hurdles in the United States. Such hurdles include the need for reviews by the Committee on Foreign Investment in the United States, which some observers say are taking longer. In addition, cyber security concerns are raising standards for investment in the United States in the case of deals related to communication and technical services. Such concerns could lead to more restrictions on how the targets are allowed to operate.³

Interest in US targets could remain high despite domestic fiscal pressures. The US is very likely to maintain the largest defense budget in the world for some time and continue to act as a draw for cross-border consolidation. But transnational deals are likely to make a lot of sense in Europe as well due to defense cooperation agreements. The agreements support increased collaboration among large contractors as well as joint procurement in order to help retain defense industrial capabilities in spite of austerity measures. For example, defense pacts between France and the United Kingdom in recent years include agreements for industrial cooperation in the areas of unmanned vehicles, with BAE Systems and Dassault Aviation collaborating on research for a medium altitude long endurance unmanned aerial system.

Asia and Oceania acquirers and targets contributed less to overall totals in 2011 than in the previous year, despite several countries in Asia continuing their efforts to develop aerospace and defense competitors. For example, China is working on a new regional jet, a narrow-body aircraft, and a military jet (the ARJ21, C919, and J-20, respectively). However, there were fewer deals involving Aviation Industry Corporation of China (AVIC) in 2011 compared with 2010. While China was not as active from a volume standpoint, AVIC did play a role in some important foreign transactions to augment its technology. This led to the closure of two high-profile acquisitions of US general aviation targets — Cirrus Industries and Continental Motors — during 2011. This could represent a shift in focus from consolidation of the local Chinese aviation sector to executing on new programs and supplementing capabilities with additional select foreign deals that can pass regulatory muster.

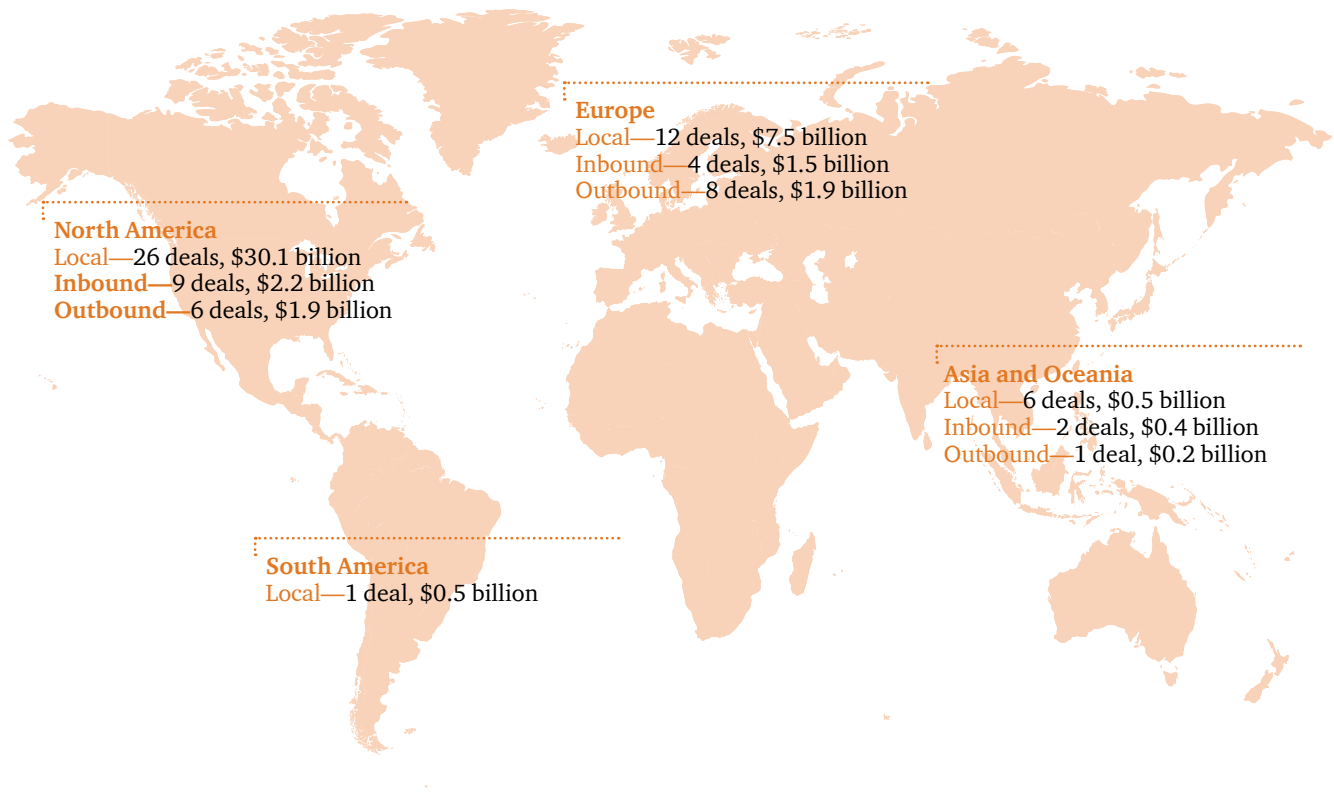
Indian firms were not highly active in the global deal market during 2011. But the country seems poised to contribute more to the M&A totals as policies are attempting to make the domestic industry more self-reliant. For example, reports indicate that India is planning to adjust its offset policy to require more technology transfers. In addition, the maximum level of allowable foreign investment in the defense sector may be raised to 49%. India already has a number of joint defense projects with countries such as Russia, Israel, and the United States. The latest changes could lead to more M&A, including additional joint ventures with Western defense companies and local consolidation, in order to improve competitiveness.

Deal flow involving Asia is likely to pick up in 2012. China may drive much of this activity by announcing larger deals targeting overseas aviation assets, subject to optimism about such deals getting approved. India may also contribute more on the defense side of the sector, both local-market and cross-border deals, given the country's liberalization efforts and growing economic power.

³ For more information on this topic, see PwC's "Cyber Security M&A: Decoding deals in the global Cyber Security industry"

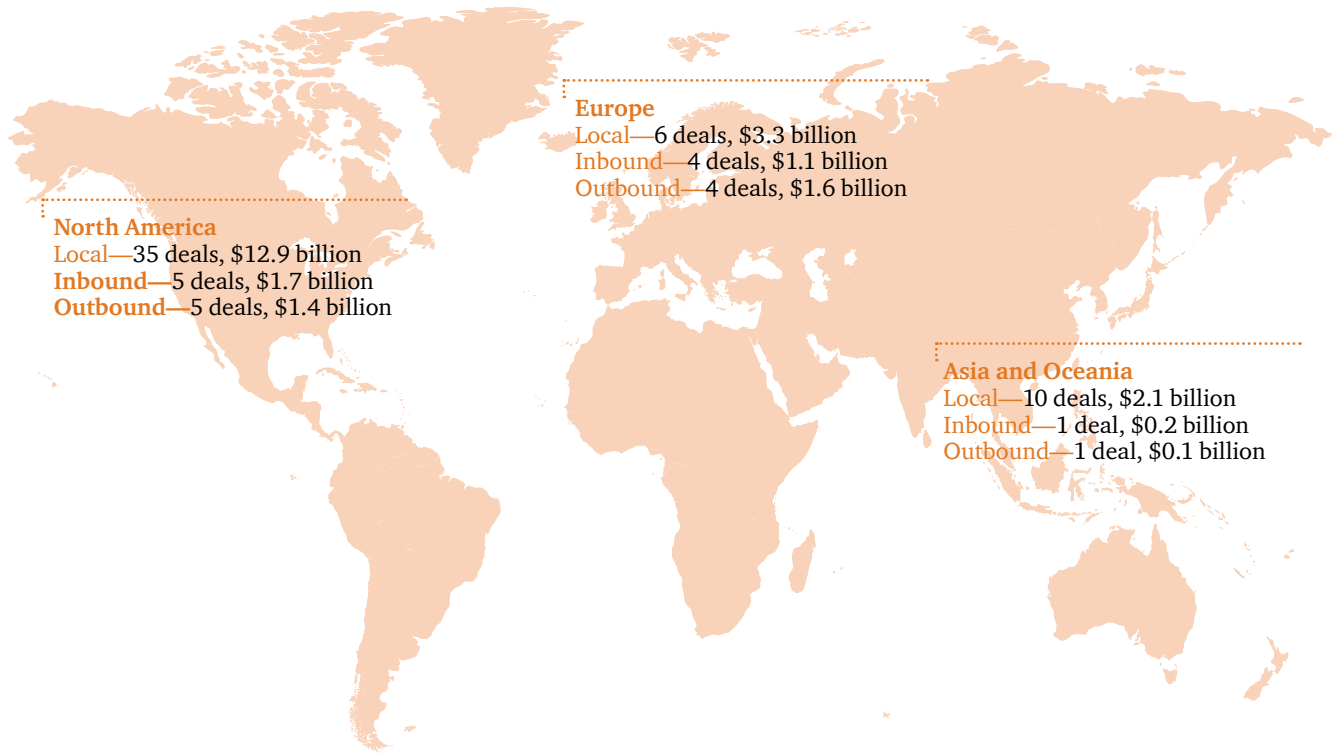
Global Aerospace and Defense deals in 2011

Measured by number and value of deals worth \$50 million or more



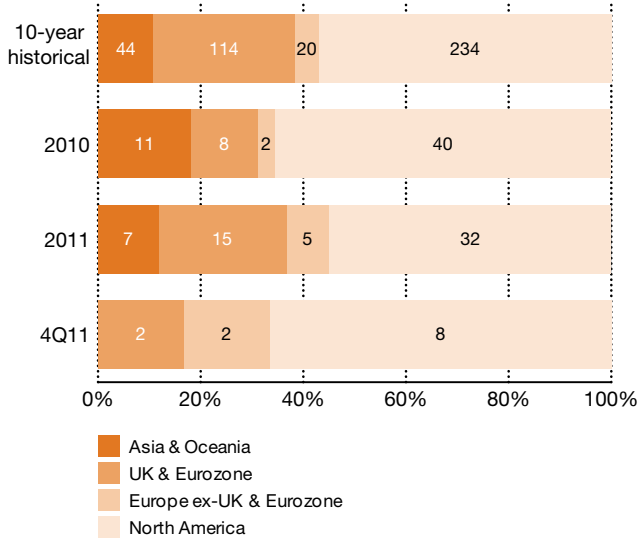
Global Aerospace and Defense deals in 2010

Measured by number and value of deals worth \$50 million or more



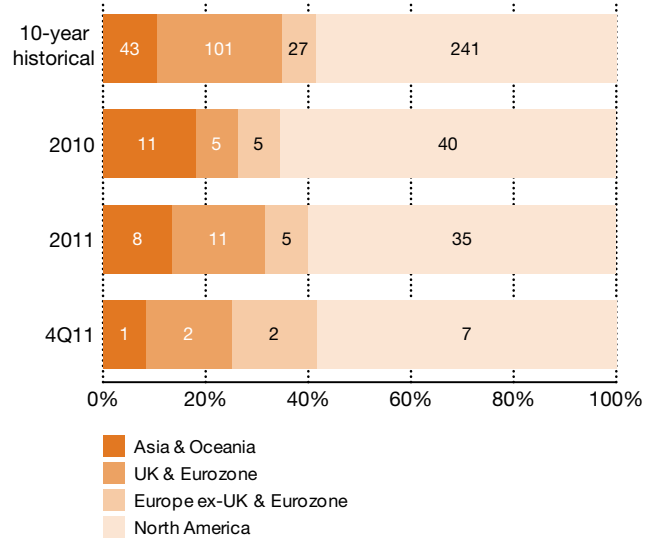
Regional distribution of all deals by acquirer region**

Measured by number of deals worth \$50 million or more (2010, 2011, 4Q11)



Regional distribution of all deals by target region**

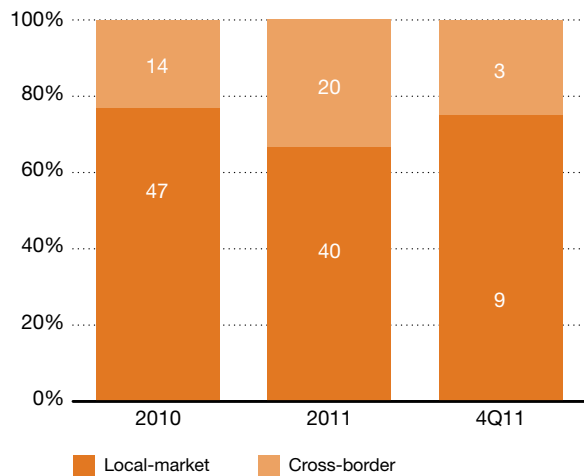
Measured by number of deals worth \$50 million or more (2010, 2011, 4Q11)



**Chart does not include one deal in South America during 2011 and ten-year historical period

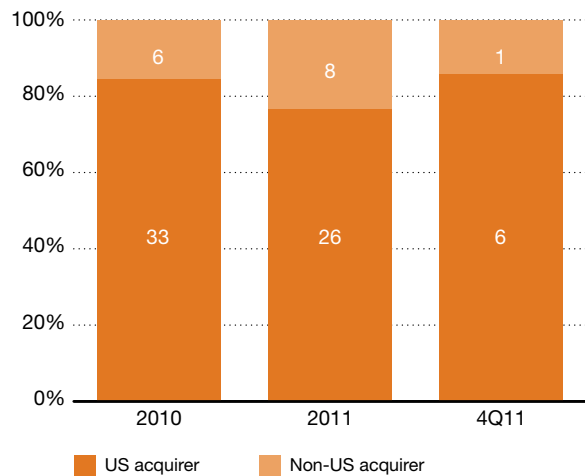
Local-market versus cross-border deals, all nations

Measured by number of deals worth \$50 million or more (2010, 2011, 4Q11)

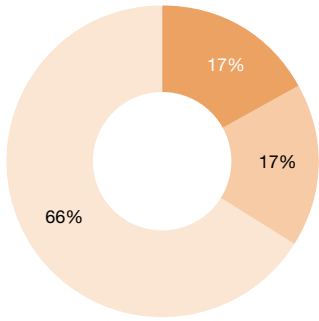


US versus non-US acquirers of US targets

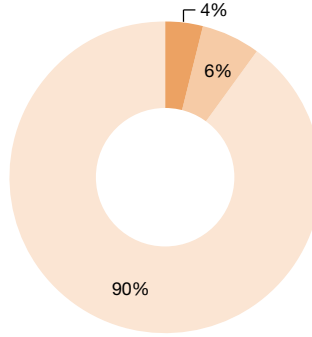
Measured by number of deals worth \$50 million or more (2010, 2011, 4Q11)



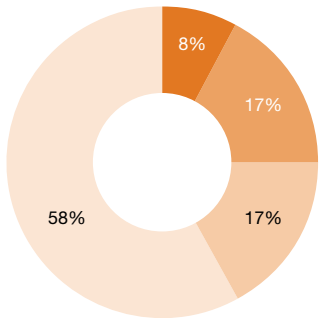
Regional distribution of deals by acquirer region
 Measured by number of deals worth \$50 million or more (4Q11)



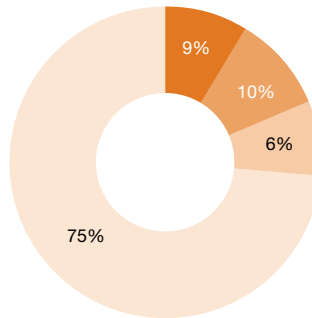
Regional distribution of deals by acquirer region
 Measured by number of deals worth \$50 million or more (4Q11)



Regional distribution of deals by target region
 Measured by number of deals worth \$50 million or more (4Q11)



Regional distribution of deals by target region
 Measured by value of deals worth \$50 million or more (4Q11)



Asia & Oceania
 UK & Eurozone
 Europe ex-UK & Eurozone
 North America
 South America
 Africa/Undisclosed

Looking ahead

Aerospace and defense M&A posted a record year in 2011, buoyed by the largest announcement in sector history. As 2012 begins, the respective outlooks for the commercial aerospace and defense segments could not be more divergent. Commercial aerospace, which is more closely associated with global GDP, is likely to outperform defense, subject to continued global economic expansion. Fiscal pressures in the United States and budget cuts in other large defense markets are limiting organic growth potential for the defense industry and look likely to widen the disparity between aviation and military-related demand. This disparity will set the context for A&D deal activity in 2012.

On the commercial aerospace side of the sector, demand for new aircraft has led to a sharp rise in orders. To meet this demand, OEMs are planning to ramp up production to unprecedented levels. While this creates tremendous growth opportunities, it also means that supply chain risks will be among the most significant issues that large commercial OEMs and suppliers will face over the next few years. If these challenges are not successfully navigated, OEMs may have to intervene by acquiring key suppliers. This could provide an impetus for some large deals. In addition, aerospace suppliers to key growth platforms will be attractive targets for sector constituents looking to boost revenue, as well as other aerospace suppliers seeking to augment their exposure to these platforms.

The nature of deal flow in the defense industry remains somewhat uncertain. The defense industry has not yet fully restructured itself to grapple with fiscal realities because the full effects of budget cuts haven't played out yet. Under a base outlook where defense spending is reduced by levels similar to what is under current discussion — in the United

States this would be \$450 billion over 10 years plus at least some of the \$600 billion from the Super Committee trigger — the tenor of the defense M&A market is likely to be similar to 2011. Industrial policies would continue to discourage consolidation among the largest contractors and the divestiture of slower growth units, similar to Northrop Grumman's shipbuilding spin-off, would continue. Smaller deals to build capabilities in growth areas, similar to Raytheon's cyber security acquisitions in 2011, and additional diversification into commercial aerospace, though not on the scale of United Technologies' Goodrich acquisition, would also remain hallmarks of the market.

Defense spending cuts far beyond these levels would lead to a more dramatic shift in the M&A market. While not preferred from a competition standpoint, industrial policies may have to allow for some movement of more contractors toward the arsenal model of single domestic suppliers. This would be akin to how Lockheed Martin and Boeing became the sole provider of some launch services in 2006 due to reduced demand. Large, historic, and transformational cross-border deals could re-emerge based upon the realization that national champions could not survive a dramatically weaker spending environment. Finally, under this bearish scenario, there would likely be significant efforts to diversify further into commercial aerospace through acquisition. These announcements may not exceed the size of the United Technologies/Goodrich deal but the more that military budgets are cut, the bigger the potential for significant deal sizes.

One similarity in base outlooks for commercial aerospace and defense is that both aerospace OEMs and large defense contractors are carrying a lot of cash. With a record backlog and little sign of a potential order downturn, OEMs may feel they have less reason to be risk averse in working capital management. Both aerospace and defense companies will face investor pressures to put this cash to work; otherwise, they may have to return it to shareholders through dividends or share repurchase. This will likely incentivize strategic buyers to continue to drive sector M&A totals.

On a regional basis, European companies are likely to remain active as acquirers. Defense cooperation efforts in Europe could be a factor in deal flow, balanced against the interest in maintaining national champions and employment within nations. But budget pressures are likely to win out over these concerns. Asia may not provide the same level of volume as in past years as China's pace of local consolidation slows, but the trend of larger cross-border deals originating from this market is likely to continue.

The record level of A&D M&A activity in 2011 could go even higher in 2012. Commercial aerospace is benefiting from tailwinds that are likely to continue to attract investment. In addition, regardless of the extent of spending cuts, it is clear that competition among Western contractors for smaller defense budgets will only grow more intense. This means that it will become even more difficult to grow organically, which has generally positive implications for M&A totals. Business portfolio realignment, with more small deals for growth targets and divestitures of "non-strategic" (i.e., lower growth businesses), will continue. For example, L-3 Communications announced during mid-2011 that it will spin off part of its government services segment in 2012, and it is reported that other players are undergoing strategic reviews that could include divestitures. So, while the forces affecting the aerospace and defense sector vary, many investors and companies will look to M&A to address these challenges and compete more effectively in 2012 and beyond.

Special report:

Using divestitures and spin-offs to help position an organization for growth opportunities

Global merger and acquisition activity has risen significantly in recent years, increasing to \$2.54 trillion in 2011, a 7.6% jump over 2010.⁴ US M&A activity is expected to continue at the current pace through 2012, according to PwC analysts, and could accelerate if there is increased access to capital.⁵ M&A activity has shown a rise in the number and value of divestitures and spin-offs. US divestiture deal volume as a percentage of total M&A volume increased to 36% in 2011 from 35% in 2010, according to PwC.⁶

While divestiture activity has increased recently, these transactions often are taking longer to close than in previous years, with some companies being forced to go to market several times before successfully striking deals with buyers. Also slowing such deals:

- Tighter lending standards for a smaller pool of buyers
- Investors made skittish by volatile stock markets
- Sovereign debt crises in Europe and the United States
- An uncertain economic forecast
- Shrinking government spend

Third-party lenders and other constituents are requiring more diligence, and buyers have become more cautious. In the mid-size market, corporate buyers have been prepared to pay stronger multiples for the highest-quality IP businesses. Processes are also being structured to better benefit trade buyers, as vendors are able to provide them with more access to management and provide them with more time, although they expect to be paid for their synergies.

Buyers also are often more aggressive in seeking a price below the value sought by sellers. But many companies continue to view divestitures and spin-offs as effective strategies for shedding non-core businesses, rightsizing their organizations, and providing a platform for growth.

Spin-offs were on the rise in 2011 as an attractive way for companies to separate high-growth or low-growth components of the business from more traditional pieces of the organization. Such was the case with several high-profile transactions, including ITT's split into three publicly

traded companies, Motorola's spin-off of its mobile-phone division, McGraw-Hill's spin-off of its educational unit, L-3's announced spin-off of several government services businesses, and Sara Lee's spin-off of its international beverage business.

In the A&D sector, ongoing appetite from investors in the booming commercial aerospace sector contributed to deal activity during the year, along with growing stockpiles of cash on corporate balance sheets. Of greater impact, though, were actions taken by defense companies to continue to reshape their portfolios.

These strategies are being pursued with an eye on proposed federal budgetary cuts — at least \$450 billion over the next decade. Questions are still to be resolved regarding which programs will be most affected. Consequently, spin-offs and divestitures have been trending upward, although activity is expected to slow in 2012.

Driving spin-offs and divestitures

Spin-offs, often the appropriate way to dispose of a business while preserving shareholder value, are a sound strategy for businesses with significant appreciated value, as a sale can trigger a large taxable gain. A spin-off is a tax-free transaction that allows shareholders to maintain their appreciated value without triggering a gain. Thus, shareholders are allowed to preserve capital gains treatment and control the timing of the realization of the gain. Following the repeal of the General Utilities Doctrine, a tax-free Section 355 spin-off may be the only remaining means by which a corporation can extract appreciated assets without paying corporate-level tax.

Selling a long-standing unit of a company can be a difficult, and often controversial, decision for an organization, particularly if members of the management team have ties to the unit being divested. But by selling a business unit that is no longer on strategy because it may be poorly performing, in a contracting market, or simply no longer a priority, a company can raise capital to invest in its strategic priorities and allow that business unit to do the same, thereby enhancing overall shareholder value.

⁴“On Wall Street, Renewed Optimism for Deal-Making,” by Evelyn M. Rusli, *The New York Times*, Jan. 2, 2012

⁵“‘Hunt for Growth to drive 2012 US Mergers & Acquisitions,’ says PwC US,” PwC, 2012

⁶ibid

Key tax considerations

Tax consequences should be explored with divestitures in every country. These considerations vary and must be reviewed. The specific discussion of taxes in this report relates to the United States only.

There are numerous ways to structure a proposed divestiture, but proactively considering tax efficiencies in advance may help boost shareholder value. For example, if a divestiture is treated as a dividend to the shareholders, the result could be taxable income to the individual shareholder. Similarly, the sale of a business to a third party may result in capital gain to the seller. However, the US Internal Revenue Code provides several mechanisms that let taxpayers structure certain corporate divestitures as tax-free reorganizations and/or distributions. In particular, the use of spin-offs, split-offs, and split-ups may allow for the distribution of stock of one or more corporations to shareholders or other security holders without the recognition of gain or loss. The rules governing these types of transactions are highly technical and to qualify, a taxpayer must meet certain requirements. Some of these include:

- **Active Trade or Business**—Either the distributed corporation or the distributing corporation (or, in some cases, an affiliate) must have conducted this active trade or business for **five** years prior to the distribution. Furthermore, both the distributing and distributed corporations must be engaged in the active conduct of a trade or business immediately after the distribution. This also means that both businesses must be able to demonstrate that they are viable standalone businesses post-split.
- **Business Purpose**—The transaction is required to be carried out for one or more corporate business purposes. It should be noted that the principal business purpose cannot be to provide nonrecognition treatment of any gains or losses on the transaction. Depending on the facts and circumstances, acceptable business purposes may include providing an equity interest to certain employees, facilitating financing transactions (stock offering or debt borrowing), cost savings, resolving competition problems with customers or suppliers, or “fit and focus” (resolving management or other issues resulting from operating multiple businesses in one corporation/group of corporations).
- **Distribution of Control**—When the distribution is made, the distributing corporation must distribute “control” (usually defined as 80% of the voting power and shares) of the distributed corporation.
- **Device Test**—Similar to the business purpose analysis above, the transaction cannot be used principally as a “device” to distribute the earnings and profits of a corporation without garnering dividend treatment. The US tax authorities consider the facts and circumstances surrounding the transaction to determine whether this test is met, but a strong, non-tax corporate business purpose without a prearranged plan or intention by the distributees to sell to stock post-spin generally is a favorable factor in this analysis.

Many additional federal, state, and foreign regulatory and tax requirements apply and should be analyzed prior to undertaking a corporate spin-off. Nonetheless, any corporation planning to dispose of a business line ought to consider whether a tax-free alternative is available.

By taking such an approach, an organization can gain the financial resources to inject additional funding into its core business, thereby enabling it to refocus on essential aspects of the business that help define the organization and launch key projects that may have been delayed. These initiatives can allow the company to improve its overall performance. The infusion of cash can also help a company shed its debt.

Additionally, certain sellers are interested in acquiring capital as companies look to restructure their balance sheets by building up cash reserves or paying down debt. Selling a high-performing or high-value business unit at a desirable price can go a long way toward helping a company achieve that goal.

Navigating a challenging process

Corporate sellers often delay making divestiture decisions thanks to the financial and logistical challenges of timing, valuation, and potential pushback from management teams running targeted business units. Participants in a PwC roundtable on divestiture strategies and solutions noted that failing to adequately consider these factors can contribute to a portfolio review that is poorly planned, in turn driving unhealthy or conflicting incentives across an organization. That dynamic can lead to institutional resistance to identifying divestiture candidates and can ultimately hamper or derail divestiture efforts. Timing, price, and ease are priorities that must be balanced when evaluating candidates for divestiture. Once moving forward with a divestiture, leadership and investors should consider focusing on the future of the core business and on expediting the divestiture to limit executive and investor distractions.⁷

Companies in recent years have become aware of gaps in their approach to divestitures: Nearly half of the C-suite executives and corporate development directors responding to a PwC survey reported their acquisition process was better defined than their divestiture process.⁸

The road to closing, too, can be long and complex, with global economic uncertainty increasingly leading buyers to expect and demand more detailed data about a target company. More intensive and extensive due diligence is extending the divestiture process. Companies in recent years have become aware of gaps in their approach to divestitures: Nearly half of the C-suite executives and corporate development directors responding to a PwC survey on the drivers of divestiture activity reported their acquisition process was better defined than their divestiture process.⁹ More than half of respondents in the same survey said that recent divestitures had taken at least 20% longer to complete than in previous years.

For a corporate entity, divestitures typically are far less common than acquisitions. Consequently, there are great challenges when it comes to effectively managing the process and drawing on their team's experiences. Significant value in any acquisition can be captured from acquiring the appropriate target and achieving planned synergies and effective integration to meet the prescribed business case. Many of these activities can be viewed as core capabilities of a management team accustomed to serial acquisitions. However, they are not as relevant to a divestiture.

The list of targets that a company would seek to acquire at the appropriate time and price is refined over the years, with management paying close attention to each target, some of which may be competitors. Identifying a complete list of buyers can be more challenging to management teams — for example, when suitable buyers may not even be directly involved in the same industry but instead may be seeking to enter it.

Consequently, sellers are paying closer attention to how they manage the divestiture process, from start to finish. They frequently assemble a team dedicated to managing and executing the deal and the operational separation simultaneously.

To close deals and boost the value of their assets, sellers are striving to gain a better, more comprehensive understanding of the complexities of the divestiture market. They are gauging the full scope of buyer concerns and responding to the global economic crises that have changed the rules of the game, requiring a tweak in strategies.

⁷ "Divestiture strategies and solutions," PwC, 2009

⁸ "Divestitures in difficult times," PwC, 2009

⁹ "Divestitures in difficult times: A survey of US executives on the drivers divestiture activity and the challenges for 2010 and beyond," PwC, 2009

The overriding goal is to evaluate the business from a buyer's perspective and help position it for sale. Reducing or avoiding delays altogether can be essential to maintaining the desired value of the sale, as the longer a transaction takes, the more opportunity there is for value erosion.

Also critical is to prepare for separating the operations of the unit and the parent company as early as when deal preparations begin. Looking out for the unexpected, including dual-track transactions (sale or spin-off), can also be essential to ensuring successful deals.

Asking relevant questions up front

When planning a divestiture, an organization can enhance its chance of a successful transaction by asking and answering questions in specific areas:

- Who is the anticipated buyer? Public or private? Corporate? Domestic or foreign? Management? Financial buyers?
- How will the transaction team managing the divestiture be motivated or rewarded along with the executives who will be leaving the parent company to commence working for the acquirer?
- How complex is the anticipated divestiture, and the attendant separation of financial systems, people, and operations?
- What will a buyer request in regard to data and additional information?
- What are the risks, and has a plan been developed to minimize risks and surprises?
- What are the anticipated buyers' audit and financial reporting requirements?
- How will the process be managed, and what is the time line for the transaction?
- Who will manage the process, and does the company have adequate internal resources/knowledge?
- What ongoing transactions are to be expected with the divested operations, and how will those be handled?¹⁰

- What are the tax or other regulatory requirements that could result in potential additional costs or restrictions on how the divestiture is effectuated?

Many A&D companies are shifting their focus to cyber security, C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance), and other services-based activities. US military spending on C4ISR is expected to remain stable through 2016, and will account for 6.5 percent of the total Department of Defense (DOD) budget, according to market analysts Frost & Sullivan.¹¹ Applications involving counter-terrorism and counter-insurgency operations will grow substantially, while C4ISR spending during the same period will focus on intelligence and special operations repair, maintenance, training, information assurance, and operational services. In 2011, global spending on cyber security was approximately \$60 billion. PwC analysts expect spending to grow at a rate of nearly 10% annually over the next three to five years.¹²

In some cases, companies are exiting more traditional businesses, particularly those that may leave companies more exposed to defense cuts. Cases in point in 2011: ITT's spin-off of its defense business to become ITT Exelis; Northrup Grumman's sale of TASC and spin-off of its shipbuilding operations, Huntington Ingalls, and Lockheed Martin's sale of EIG and PAE.

While the federal government has a vested interest in maintaining the industrial base, and a level of competitiveness among the major players in the A&D industry, the DOD largely has not interfered with spin-off activity unless it has involved elimination of a supplier, as it generally would be opposed to consolidation among prime contractors.

The overriding goal of A&D divestitures and spin-offs is to reposition their portfolios for future growth, a goal that can be achieved if they are able to successfully match their capabilities to the federal government's spending priorities.

A seller looking to improve the success of any given divestiture or spin-off will proactively prepare on a number of fronts:

¹⁰ "Generating Value from Corporate Divestitures in 2011," PwC, 2011

¹¹ "C4ISR spending to remain stable over five years, led by sensors and UAVs, says Frost & Sullivan," by John Keller, Military and Aerospace Electronics, Nov. 18, 2011

¹² "Cyber Security M&A: Decoding deals in the Cyber Security industry," PwC 2011

Repositioning to seize opportunities

By employing a well-defined and regular portfolio process, a company can leverage significant opportunities for improvement in business and product portfolio improvement. Forward-thinking companies identify appropriate divestiture candidates based on financial, operating, and commercial parameters such as a business maturing or becoming ripe for sale due to restructuring or market factors; a business requiring a capital infusion or specialized knowledge that resides in the capacity of the portfolio company or company's management; or the business is part of a larger acquisition and does not fit with the overall strategic plan of the company or its portfolio businesses.

After settling on a business to exit, the process begins in earnest by validating the case for separation. The process can encompass resolving such issues as:

- What is the appropriate type of exit for my investors? Is it realistic?
- Which buyers in which markets are most likely to be willing and able to pay full price?
- Would a strategic partner add value? If so, which candidates are a good match for the business to be divested?
- What scope of diligence on prospective buyers or partners is needed from both a financial and commercial perspective?
- Which deal structures strike the appropriate balance between buyers' and sellers' needs?

Evaluating operations in advance

In today's environment, concerns that buyers might have overlooked in previous years can damage or even derail a deal. To prepare for a divestiture, sellers conduct an assessment of operations and identify and correct any significant issues, such as unusually high back-office costs and plant inefficiency, and restructure options before going to market. Even if the issues cannot be corrected prior to closing, buyers are keen to gain a full understanding of the target's costs and benefits.

Walking in the buyer's shoes

Adopt a buyer's perspective by performing due diligence of the business before buyers are involved. A full review of the unit slated for sale can be essential when sellers' and buyers' pricing expectations vary significantly. Advance diligence can also help the seller identify and promote the unit's strengths and evaluate alternative transactions and structures from an informed perspective.

Buyers often are suspicious that executing a divestiture is merely a strategy for companies to rid themselves of a problem asset. To defuse that issue, sellers should be equipped to answer critical questions:

- Why is the asset for sale?
- Why has it been underperforming?
- Why is it expected to do well outside the company?
- How will the forecast be prepared?

Determining separation issues early during the process

Human resources, intellectual property, information technology systems, employee benefit plans, and other systems and processes that took years to create may be disentangled during a divestiture. The process includes the development of transition service agreements (TSAs), which provide for services between the seller and the buyer post-closing. Buyers will want not only to outline all of the issues and time lines involved but also to incorporate all TSA and post-TSA costs into their initial valuations.

Presenting the business in the most favorable light

Historical financial results may need to be revised to accurately reflect the unit as a standalone unit and exclusive of nonrecurring items. Those results should be clearly and convincingly described in a business plan that links in the forecasts and actions to drive profits.

For the most challenging divestitures to be successful, the vendor may develop a detailed business plan that can be presented to prospective purchasers. The plan will include a detailed analysis of the recurring historical figures and move to describe the forecasts and actions that could need to be implemented. A vendor can make a divestiture more attractive to potential purchasers by using strategies such as providing them with contracts for a pre-determined time. Such incentives may be considered when preparing the business plan.

Sellers also may consider all of the various tax and accounting structures available to them and choose the one that is reasonable from a deal perspective.

Moving quickly to minimize value deterioration

Divestiture transactions, as with acquisitions, can be lengthy processes. Depending on whether a carve-out audit was required and other buyer financing and regulatory requirements, a divestiture typically can take six months to a year, according to a group of corporate development executives surveyed by PwC. The long transaction period can be driven by the complexities of developing an accurate financial understanding of the business unit or carve-out, and disentangling its employees and operations from the larger corporate parent — the latter a process that can last another six months and tie up resources long after the transaction closes.

A long, cautious preparation period can be critical to a successful sell transaction. The journey to getting the asset marketed and ultimately off the company's balance sheet begins once a business unit is chosen for divestiture. While planning can extend the time spent on a divestiture, it can save time and costs overall, as the process is likely to be more efficient once the seller goes to market.

Avoiding pitfalls

The divestiture process can be long, labor-intensive, and complex. Business development executives recently surveyed by PwC agreed on the need to avoid nine common pitfalls. Among the areas that can damage or derail a deal:

- Failing to understand your anticipated buyer profile
- Failing to address critical pension issues
- Failing to address critical financial reporting issues
- Lack of detailed credible support for the business plan
- Data reconciliation issues while going to market before vetting the numbers, requiring significant bridging from the confidential information memorandum (CIM) to the data room information
- Stranded cost identification
- Lack of risk identification and response
- Lack of a clear transition services plan as well as a vision for post-TSA period
- Lengthy divestiture process due to lack of structure or data preparedness

The critical factor shared by companies achieving their goals for successful divestitures and spin-offs: extensive preparation. Unpreparedness can be costly. Sellers in some industries that found themselves startled by the speed and scope of the economic crisis discovered little bargaining power against buyers that could cherry-pick attractive assets and operations.

In many cases, negotiations moved too quickly to let sellers effectively argue the value of their assets, and having prepared too late, they had no alternative except to take what they were offered or scramble to survive during an extended process. Preparing early and effectively lets sellers act when necessary, retain negotiating power, and, most importantly, realize improved value from their divestiture.

PwC spotlight

In an uncertain global economy, liquidity issues and stakeholder pressures for improved performance have led to an increased focus on divestiture activities in the short term. The need to divest may be an inevitable reality. But a smaller pool of likely buyers and greater scrutiny from banks have resulted in increased levels of buyer due diligence, often extending the sales process and sometimes eroding sale prices.

Readying a company for more rigorous buyer due diligence can be critical to preserving the value of a divestiture for the seller. Also important: preparations for mitigating other areas of frequent value loss, including ineffective terms and pricing of TSAs and insufficient infrastructure planning for stranded costs.

How PwC can help

While market conditions have fluctuated dramatically in recent years, extracting top value remains the overriding goal of the divestiture process. The divestiture professionals with PwC's Transaction Services support clients by enabling them to accelerate the speed to market/close, and helping ready companies for the sale, in order to gain the full value of the business in the offering price. Our divestiture professionals, part of a TS team of about 1,000 deal professionals in 16 cities across the United States, can address carve-out financials, standalone audit requirements, identification of potential buyer deal issues, transition service agreements, data room assistance, and structural alternatives designed to help maintain the value of the divestiture.

Divestiture management support: PwC has put together a winning approach to launching and managing divestitures. We bring a time-tested divestiture and separation methodology and an expansive set of processes, tools, templates, and guides to support the overall divestiture.

Functional divestiture assistance: PwC is equipped with core competencies in the fundamental infrastructure areas that form the building blocks for capturing (and preserving) value in a divestiture. Our experienced divestiture professionals leverage their subject matter and process experience to help clients position the business for sale and improve overall results from transition to transformation.

PwC helps clients ready themselves for rigorous buyer due diligence. We can deliver support, methodology, tools, and templates from start to finish of the divestiture process, assisting with areas including:

- Divestiture strategy
- Candidate acquirer screening
- Sell-side commercial due diligence
- Sell-side financial due diligence
- Financial and tax structuring
- Financial statements and reporting
- Carve-out statements and regulatory filings for regulatory compliance
- People and HR matters, employee benefits
- Operational carve-out analysis
- Insurance risk

- Contract transition
- Divestiture management and separation

PwC deploys a team specially tailored to each engagement to advise clients. In addition to supporting a speedy, more efficient go-to-market process and close, rigorous divestiture management and due diligence helps clients:

- Execute a smooth transaction, close, and post-close transition
- Reduce risks, avoid costly surprises, and enhance overall control over the process
- Address operation separation issues early, including TSAs and potential stranded costs
- Avoid value deterioration throughout the process and post-close
- Reduce disruptions to both the target and remaining businesses
- Decrease regulatory, financial reporting, and operational risks
- Improve transaction value for the seller

Our tailored approach gives clients the appropriate balance of transaction, functional, and industry experience across the value chain. We start with a client's transaction viewpoint and investment thesis, and then guide a company through assessments and evaluations of divestiture considerations; exclusive or auction situation; planned capital structure and financing sources; timing and deliverables; critical deal and valuation issues; and integration challenges and solutions.

Case study

Issue	A global defense company sought opportunities to divest several business operations that were not central to the organization's core mission. The company urgently needed cash to pay a lender loan and was required to efficiently conduct a series of divestiture transactions.
Action	PwC performed sell-side due diligence on the divested entities, analyzing earnings trends, working capital issues, and potential separation concerns. We helped management gain an accurate view of normalized earnings and working capital, and helped prepare the company for buyer diligence by identifying areas of value leakage. PwC also helped the company establish a central divestiture management office and achieve its operational separation goals, including transition service agreements and tactical IT and people separation.
Impact	<p>PwC's involvement helped the company's management and its bankers prepare for the deal negotiations. With the first few weeks of PwC's field deployment, the company:</p> <ul style="list-style-type: none">• Established its divestiture management office• Developed operational and functional Day One separation plans• Conducted separation activities with transition teams <p>The company successfully closed the transactions by the debt call date, raising enough cash to restructure its debt.</p>

PwC's aerospace and defense experience

Deep aerospace and defense experience

PwC's A&D practice is a global network of nearly 1,200 partners and client service professionals who provide industry-focused assurance, tax, and advisory services to leading A&D companies around the world. This A&D experience is enhanced by 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 the full spectrum of industry-specific challenges across areas such as assurance, tax, operational improvement, supply chain management, program management effectiveness, IT effectiveness and security, compliance, export control, 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 organizations. PwC is a sponsor of leading industry conferences and frequently writes articles for, or is quoted in, leading industry publications. We are proud of our relationships with *Aviation Week* and *Flight International* as well as our participation in industry conferences and associations, such as the Aerospace Industries Association and American Conference Institute. Our involvement in these organizations reflects our commitment to addressing industry needs and the furthering of dialogue with A&D industry leaders.

Quality deal professionals

PwC's Transaction Services practice, with approximately 6,500 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 an industry point of view.

Local coverage, global connection

In addition to the 1,200 professionals who serve the A&D industry, our team is part of an extensive Industrial Products group that consists of more than 31,500 professionals, including approximately 18,600 providing assurance services, 7,700 providing tax services, and 5,200 providing advisory services. This expands our global footprint and enables us to concentrate efforts in bringing clients a greater depth of talent, resources, and experience in the most effective and timely way.

Contacts

PwC's global aerospace and defense practice

PwC's A&D practice provides industry-focused assurance, tax, and advisory services. Through our global network, we can draw upon the in-depth industry experience of professionals in every country where your company operates. Our people can help you deal with the challenges of today, and they understand the implications for tomorrow.

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Methodology

Mission Control is an analysis of mergers and acquisitions in the global aerospace and defense industry. Information was sourced from Thomson Financial and includes deals for which targets or 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; and (6) space research and technology.

This analysis includes all individual mergers and acquisitions for disclosed or undisclosed values, leveraged buyouts, privatizations, minority stake purchases, and acquisitions of remaining interest announced between January 1, 2002, and December 31, 2011, 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 and announcements. Unless otherwise noted, the term deals refers to all deals with a disclosed value of at least \$50 million.

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, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain. Oceania includes Australia, New Zealand, Melanesia, Micronesia, and Polynesia. Overseas territories were included in the region of the parent country. China, when referenced separately, includes Hong Kong.

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