

I. Key developments in the main arms-producing countries

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The ongoing consequences of the global financial and economic crisis have led to many countries in the Global North discussing and implementing substantial spending cuts to reduce deficits in government finances. These proposed cuts to current and future public expenditure have generally included military expenditure, and could thus have an impact on the arms-producing and military services industry.¹

In the United States in particular political disagreement about how to reduce the budget deficit along with the drawdown and eventual withdrawal from Iraq and the planned withdrawal from Afghanistan have created a highly unpredictable situation for US military expenditure, and thus for the global arms industry. Cuts in military expenditure as part of deficit-reduction efforts in Western Europe also have potential implications for how weapon programmes are developed and implemented. These developments are reducing the rate of increase of the arms sales of the SIPRI Top 100 arms-producing and military services companies: it peaked at 13 per cent in 2003 and continued at a lower level between 2006 and 2009 but fell to 1 per cent in 2010 (see table 5.1).

Initial reports of arms sales in 2011 have been mixed. In some cases, sales fell, as expected, following completion of a contract. For example, BAE Systems of the United Kingdom reported reduced 2011 half-year figures due to lower volume in its Land and Armaments unit and to completion of its part of the F-22 programme.² Other companies reported higher sales as the programmes they worked on continued. In its financial report for the third quarter of 2011, the US company Lockheed Martin estimated that its total sales in 2011 would reach \$47 billion, with increases in three of its four business units and little change in the fourth.³ Similarly, the total sales of Aselsan of Turkey in the first nine months of 2011 were 33 per cent higher than in the same period in 2010.⁴ Still others had sales increases that can in part be attributed to acquisitions, as with the French company Safran's purchase of small- and medium-sized enterprises.⁵

¹ On changes in military spending see chapter 4, sections I, III and V, in this volume.

² BAE Systems, *Half-yearly Report and Presentation 2011* (BAE Systems: London, 2011).

³ Lockheed Martin, 'Lockheed Martin announces third quarter 2011 results', Press release, 26 Oct. 2011, <<http://www.lockheedmartin.com/us/news/press-releases/2011/october/3Q-2011-earnings.html>>.

⁴ Aselsan, '30 Eylül 2011 tarihinde sona eren dokuz aylık ara doneme ait özet konsolide finansal tablolar', [Consolidated financial statements for the period ended 30 September 2011], <<http://www.aselsan.com.tr/Content.aspx?mid=119&oid=934>>.

⁵ Safran, 'Safran reports improved half-year results for 2011 with a recurring operating margin of nearly 10% of revenue', Press release, 28 July 2011, <<http://www.safran-group.com/site-safran-en/finance-397/financial-publications/financial-press-releases/2011-727/>>.

Table 5.1. Arms sales of companies in the SIPRI Top 100 arms-producing and military services companies, 2002–10

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2002–10
<i>Arms sales at constant (2010) prices and exchange rates</i>										
Total (\$ b.)	257	279	317	325	340	356	379	406	411	
Change (%)		13	10	2	5	5	6	7	1	60
<i>Arms sales at current prices and exchange rates</i>										
Total (\$ b.)	196	235	274	289	312	347	385	399	411	
Change (%)		20	17	5	8	11	12	4	3	110

Note: The figures in this table refer to the companies in the SIPRI Top 100 in each year, which means that they refer to a different set of companies each year, as ranked from a consistent set of data. In particular, the figures shown above for 2009 differ from those in table 5.4.

Source: Table 5.5; and the SIPRI Arms Industry Database.

Many countries outside Western Europe and North America, such as India and some countries in the Middle East, are maintaining large arms procurement projects and as a result many West European and North American companies are adopting strategies that prioritize marketing of their arms in these countries.⁶ Similarly, Japan's announcement in late 2011 that it is to lift its ban on arms exports—in part to support its domestic arms industry and potentially lower costs per unit—is indicative of increasing prioritization of arms exports in the Global North.⁷ Overall, the budget uncertainty that persists in many places contributes to general uncertainty regarding future arms sales.

The US National Defense Authorization Act for 2012

The National Defense Authorization Act (NDAA) for financial year 2012, which was passed by the US Congress in December 2011, gives an indication of what to expect in the short term in the US arms market.⁸ While discussions on this document have tended to focus on the level of US military spending, a major role of the NDAA is to authorize annual funding for equipment purchases, and it therefore has implications for the arms industry.

⁶ See e.g. BAE Systems, *Annual Report 2010: Total Performance Across Our Markets* (BAE Systems: London, [2011]), p. 4; and Harris Corporation, *When It Matters Most, Who Can You Trust? 2010 Annual Report* (Harris Corporation: Melbourne, FL, 2010), p. 17.

⁷ Dawson, C., 'Japan lifts decades long ban on export of weapons', *Wall Street Journal*, 28 Dec. 2011; and Japanese Ministry of Defense, 'Press conference by the defense minister', 27 Dec. 2011, <<http://www.mod.go.jp/e/pressconf/2011/12/111227.html>>.

⁸ National Defense Authorization Act for Fiscal Year 2012, US Public Law no. 112-81, signed into law 31 Dec. 2011, <<http://thomas.loc.gov/cgi-bin/bdquery/z?d112:h.r.01540>>. On the US budget debate and US military spending see also chapter 4, section III, in this volume.

Although the public spending crisis is growing in some sectors of US Government spending, the 2012 NDAA demonstrates that many large weapon producers are currently experiencing less pressure. It contains no significant large-scale equipment funding cuts, indicating that spending on arms in the world's largest arms market will continue at near-current levels. Nonetheless, one key justification cited as the basis for company strategies and decisions on job cuts or mergers and acquisitions is a perceived decrease in arms spending in the USA as a result of the public spending crisis.

Among programmes for which spending is maintained by the 2012 NDAA are the Ground Combat Vehicle (GCV), tactical wheeled vehicle and C/MV-22 aircraft programmes.⁹ Despite significant cost and delivery overruns, the NDAA also authorizes continued spending on the F-35 (Joint Strike Fighter) programme.¹⁰ It is the most expensive and perhaps the most controversial weapon-procurement programme in US history, costing the USA a projected \$382 billion for 2443 aircraft.¹¹ Led by Lockheed Martin, the programme joins companies in nine partner countries in the development and production of the fifth generation fighter. While it is in no danger of deep cuts in the short term, the NDAA requires the US Undersecretary of Defense for Acquisition, Technology and Logistics to implement the 2009 Weapon Systems Acquisition Reform Act for the F-35 programme, in part to better assess the project's costs.¹² In addition, the NDAA requires future low-rate, initial production (LRIP) lots—which allow equipment to be tested prior to mass production and purchase of the system—to be fixed-price contracts, with Lockheed Martin agreeing to take full responsibility for cost overruns.¹³ This is a significant change from the earlier contract, in which the government agreed to pay cost overruns.

⁹ US House of Representatives, Armed Services Committee, 'The National Defense Authorization Act for FY 2012: highlights of the conference report', 12 Dec. 2011, <<http://armedservices.house.gov/index.cfm?p=ndaa-conference-report-highlights>>.

¹⁰ US House of Representatives (note 9); US Government Accountability Office (GAO), *Joint Strike Fighter*, GAO-10-382 (GAO: Washington, DC, Mar. 2010); and Dunn, M. M., 'Washington perspective: FY12 NDAA', Air Force Association Blog, 16 Dec. 2011, <<http://airforceassociation.blogspot.com/2011/12/washington-perspective-fy12-ndaa.html>>.

¹¹ This figure does not include the lifetime expense to the USA of operating and maintaining the aircraft, as pointed out by the Department of Defense, meaning that costs could surpass \$1 trillion. US Department of Defense (DOD), *Selected Acquisition Report (SAR): F-35* (DOD: Washington, DC, 31 Dec. 2010), p. 53; and Thierney, D., 'The F-35: a weapon that costs more than Australia', *The Atlantic*, Mar. 2011. On recalculation of the figures see Gertler, J., *F-35 Joint Strike Fighter (JSF) Program: Background and Issues for Congress*, Congressional Research Service (CRS) Report for Congress RL30563 (US Congress, CRS: Washington, DC, 26 Apr. 2011).

¹² This law reformed how the US Department of Defense purchases and contracts for major weapon systems and requires, e.g., analysis of the cost of new projects and more weapon testing before production runs begin. Weapon Systems Acquisition Reform Act of 2009, US Public Law no. 111-23, signed into law 22 May 2009, <[http://thomas.loc.gov/cgi-bin/bdquery/z?d111:s.00454:](http://thomas.loc.gov/cgi-bin/bdquery/z?d111:s.00454:;)>; and Tirpak, J. A., 'Make or break time for the F-35', *Airforce Magazine*, Aug. 2011.

¹³ Levin, C. (Senator), 'Senate Armed Services Committee completes conference on National Defense Authorization Act for FY12', Press release, 12 Dec. 2011, <<http://levin.senate.gov/news>>

While the US Department of Defense (DOD) and the US Congress agree that the impact on the USA's defence industrial and technological base should be considered when making spending cuts and that the arms industry's profit should be safeguarded, the change to the F-35 contract is one of a number of cases where the DOD has proposed amendments to its contracts with arms-producers that aim to allocate some of the cost risk to the industry side.¹⁴ In November 2011, in a joint letter coordinated by the Aerospace Industries Association, over 100 US executives from the aerospace and defence industry commented on the DOD's proposed amendments to contracts.¹⁵ They warned the US Secretary of Defense, Leon Panetta, that the increased risk built into contracts would lead to the proposed amendments decreasing competition and thereby contributing to lower innovation, increased costs and employee lay-offs.

Other sections of the 2012 NDAA that are not related to funding also affect the arms industry.¹⁶ Provisions on political influence mean that arms producers are no longer required to disclose political contributions before participating in DOD tenders. Provisions on counterfeit parts task the DOD and the arms industry with developing mechanisms for tracking, stemming and penalizing those who traffic in and use counterfeit parts in US weapon systems.¹⁷

Acquisitions, spin-offs and sell-offs in the United States

Arms-producing companies can choose from a variety of strategies in response to budgetary pressures, including consolidation of military businesses, diversification into commercial (i.e. non-military) activities and

room/press/release/senate-armed-services-committee-completes-conference-on-national-defense-authorization-act-for-fy12>.

¹⁴ Panetta, L., 'Defense priorities: today and tomorrow', Lee H. Hamilton Lecture, Woodrow Wilson Center, Washington, DC, 11 Oct. 2011, <<http://www.wilsoncenter.org/event/defense-priorities-today-and-tomorrow-secretary-leon-panetta>>; Carter, A., 'The defense industry enters a new era', Prepared remarks, Cowen Investment Conference, New York, 9 Feb. 2011; US Department of Defense, 'Contracts', no. 1010-11, 9 Dec. 2011, <<http://www.defense.gov/contracts/contract.aspx?contractid=4681>>; Adler, L., 'Pentagon open to mergers, but not at the very top', Reuters, 9 Feb. 2011, <<http://www.reuters.com/article/2011/02/09/>>; Shalal-Esa, A., 'Pentagon vows to keep defense industry healthy', 2 Dec. 2011, <<http://in.reuters.com/article/2011/12/01/pentagon-industry-idINDEE7B00O20111201>>; and Moore, J., 'Sharing the pain & gain of a multimillion-dollar contract', GovConExec, 2 May 2011, <<http://www.govconexec.com/2011/03/02/sharing-the-pain-the-gain-of-a-multimillion-dollar-contract/>>.

¹⁵ The letter, which was not released, is summarized in Shalal-Esa, A., 'U.S. defense firms blast Pentagon on contract changes', Reuters, 6 Dec. 2011, <<http://www.reuters.com/article/2011/12/07/us-pentagon-industry-idUSTRE7B608O20111207>>.

¹⁶ US House of Representatives (note 9); and Levin (note 13).

¹⁷ Levin (note 13); and Corrin, A. and Weigelt, M., 'Counterfeit parts, fixed-price contracts, contractor pay rules and SBIR addressed in Senate Defense Authorization bill', Georgia Institute of Technology, Contracting Education Academy, 2 Sep. 2011, <<http://contractingacademy.gatech.edu/2011/12/counterfeit-parts-fixed-price-contracts-contractor-pay-rules-and-sbir-addressed-in-senate-defense-authorization-bill/>>.

streamlining by spinning off non-core businesses. Developments in mergers and acquisitions in the USA give some indication of the strategies that are being pursued.

While welcoming mergers and acquisitions in the arms industry more broadly, in February 2011 the US DOD reiterated its policy of discouraging mergers and acquisitions between the largest arms-producing and military services companies. Referring to the 1993 'last supper' speech, which promoted arms industry consolidation, the US Undersecretary of Defense for Acquisitions, Technology and Logistics, Ashton Carter, stated that today's environment is different and mergers among the largest companies are discouraged by the DOD. As for spin-offs, Carter questioned the long-term survival of the resulting new companies.¹⁸ Later in 2011 another DOD official stated that, while there are no set rules, it would 'take some convincing' for mergers and acquisitions among the upper tier of US arms-producing companies to gain approval.¹⁹ However, if spending cuts significantly decrease demand for certain weapon systems, it is possible that the DOD will reconsider its opposition to large-scale company acquisitions.²⁰ These disparate messages make it unclear whether the US Government supports major mergers and acquisitions in the arms industry and what the implications might be.

Many arms-producing and military services companies have large cash reserves and are interested in moving into adjacent commercial sectors via acquisitions, some large-scale.²¹ In September 2011 United Technologies Corporation (UTC) agreed to acquire Goodrich Corporation, an aerospace manufacturing company, for approximately \$18.4 billion (including \$16.5 billion in cash).²² According to UTC, the deal will strengthen its position in the aerospace and defence industry by increasing the range of commercial services offered at a time when production in the commercial aerospace industry is increasing. It will also contribute to UTC's military-related sales.²³ This transaction is by far the largest deal in the global arms industry in recent years and may reflect a move towards large-scale deals among arms-producing and military services companies, at least in the USA.

¹⁸ Adler (note 14). On the 'last supper' see Dunne, J. P. and Surry, E., 'Arms production', *SIPRI Yearbook 2006*, pp. 399–401.

¹⁹ Shalal-Esa (note 14).

²⁰ Shalal-Esa, A., 'Bigger firms seen in the next US defense consolidation', Reuters, 20 Sep. 2011, <<http://www.reuters.com/article/2011/09/20/us-defense-consolidation-idUSTRE78J4MY20110920>>.

²¹ Shalal-Esa (note 20).

²² United Technologies Corporation, 'United Technologies to acquire Goodrich Corporation: complements and strengthens position in aerospace and defense industry', Press release, 21 Sep. 2011, <<http://utc.com/News/Press+Releases/>>. UTC is ranked 10th and Goodrich 41st in the SIPRI Top 100 for 2010. See section IV below.

²³ Lemer, J., 'UTC to acquire Goodrich for \$16.5bn', *Financial Times*, 22 Sep. 2011.

Other companies intend to streamline their businesses by spinning off non-core and underperforming units in order to prepare for what they anticipate will be a tightening market.²⁴ ITT Corporation split into three separate companies in 2011, including ITT Exelis, the former ITT Defense and Information Systems unit. This spin-off was reportedly initiated largely based on the flat performance of ITT Defense and Information Systems and the anticipation that military spending cuts will create more competition for contracts in the areas in which ITT Exelis operates.²⁵

In July 2011 L-3 Communications Holding announced that it was to spin off businesses from its Government Solutions unit into a publicly traded government services company, Engility Corporation, which will focus on a variety of services for the US DOD, civilian US Government agencies and international customers. In addition, L-3 will combine its cyber, intelligence and security solutions businesses into a new unit named National Security Solutions in order to focus on DOD, intelligence and global security customers. According to L-3's management, the spin-off is the result of a lengthy strategy review that addresses changing dynamics in the industry and the need to refocus on those technology-based solutions that the company considers to be its strengths.²⁶

The debate on arms industry cooperation in the European Union

The debate on the public spending crisis includes renewed discussion of the potential for deeper and wider cross-border cooperation in weapon production in the European Union (EU), especially Western Europe. Calls for cooperation are partially motivated by the duplication in infrastructure and equipment, and the subsequent higher costs, that result from multiple weapon programmes with similar output. The prospect of coordination leading to cheaper military services—including combined equipment repair and maintenance and testing and evaluation—is also a motivating factor.

²⁴ The spin-offs in the arms-production and military services industry may indicate a wider trend in the corporate world to rationalize business and streamline activities. See Thomas, H., 'Rise in spin-offs as groups focus on valuation', *Financial Times*, 4 July 2011.

In addition to the deals covered here, another notable spin-off in early 2011 was Northrop Grumman's spin-off of its shipbuilding unit as Huntington Ingalls Industries. Northrop Grumman, 'Northrop Grumman completes spin-off of Huntington Ingalls Industries, Inc.', Press release, 31 Mar. 2011, <<http://investor.northropgrumman.com/phoenix.zhtml?c=112386&p=irol-newsArticle&ID=1544584>>.

²⁵ Potter, M., 'ITT Exelis lays off workers as SINGCARS production ends', *Defense Procurement News*, 17 Nov. 2011, <<http://www.defenseprocurementnews.com/2011/11/17/itt-exelis-lays-off-workers-as-singcars-production-ends/>>.

²⁶ L-3 Communications, 'L-3 announces plan to spin-off a new publicly traded government services company', Press release, 28 July 2011, <http://l-3com.com/media-center/press-releases.html?pr_id=1589960>.

These concerns predate the public spending crisis but are considered to be especially salient now.²⁷

The prestige associated with retaining national arms industries acts as a barrier to cooperative arms production.²⁸ In the European context, multiple producers in the same market create more competition for both national government funds and export markets. As an example, even though demand is lower than in previous decades and export competition is fiercer, companies in France, Germany and Poland offer at least four competing designs for armoured vehicles.²⁹

However, certain characteristics need to be fostered before European arms production cooperation can become commonplace, including a shared regional identity; trust and confidence in partners; a level playing field for European arms producers; and low levels of corruption.³⁰ Overall, current and potential arms industry cooperation in Europe involves an ever more complicated set of bilateral relationships. As this trend continues, the industry's role will strengthen in relation to government, and achieving any change will require more than just political will: it will take coordination among a variety of actors from government, industry and civil society as well as the ambition to move from bilateral to multilateral cooperation and towards a level playing field.³¹

Some European states have agreed to bilateral arms industry cooperation. In their 2010 Treaty for Defence and Security Co-operation, France and the United Kingdom agreed to develop joint arms production in some areas.³² A December 2011 summit to further this cooperation, including on a joint unmanned aerial system (UAS) programme, was delayed so that the two countries could focus on the continuing public spending crisis and the related euro monetary issues.³³ At a meeting held in November 2011 in response to the British–French treaty, the German and Italian defence

²⁷ Velasek, T., *Surviving Austerity: The Case for a New Approach to EU Military Collaboration* (Centre for European Reform: London, Apr. 2011); Rizzi, A., 'Crisis boosts European military cooperation', *Presseurop*, 12 Aug. 2010, <<http://www.presseurop.eu/en/content/article/314541-crisis-boosts-european-military-cooperation>>; and chapter 4, section V, in this volume.

²⁸ See Jackson, S. T., 'Arms production', *SIPRI Yearbook 2011*, pp. 233–36.

²⁹ See Dickow, M. et al., *Weimar Defence Cooperation: Projects to Respond to the European Imperative*, German Institute for International and Security Affairs (SWP) Working Paper FG03-WP no. 06 (SWP: Berlin, Nov. 2011).

³⁰ O'Hagan, P., Gaebel, C. and Crawford, C., 'The prospect for further European defence cooperation', Konrad-Adenauer-Stiftung, 22 June 2011, <<http://www.kas.de/grossbritannien/en/publications/23523/>>.

³¹ Chick, C., '2011 FBC annual defence conference report', Franco-British Council, 31 Mar. 2011, <<http://www.francobritishdefence.org/conferences.php?id=37>>.

³² Treaty between the United Kingdom of Great Britain and Northern Ireland and the French Republic for Defence and Security Co-operation, signed 2 Nov. 2010, Cm 7976 (The Stationery Office: Norwich, 10 Nov. 2010). See also Jackson (note 28), p. 233.

³³ International Institute for Strategic Studies (IISS), Dec. 2011. 'Anglo-French defence: "Entente Frugale plus"', *IISS Strategic Comments*, vol. 17, no. 47 (Dec. 2011), <<http://www.iiss.org/publications/strategic-comments/past-issues/volume-17-2011/december/>>.

ministers issued a letter of intent on cooperation in arms production.³⁴ This was followed by an industry association memorandum of understanding on the formation of the German–Italian Defence Industry Cooperation Group to support a dialogue between the German and Italian arms industries and to make recommendations to their respective governments on developing and sustaining industrial cooperation in arms production.³⁵ In addition, Germany is arguing for closer ties with France, especially in UAS projects (see below). Under Nordic Defence Cooperation (NORDEFECO), Denmark, Finland, Iceland, Norway and Sweden have agreed to promote the competitiveness of their arms industries and have made efforts to increase Nordic industrial cooperation.³⁶ However, despite the increased rhetoric about cooperation, large-scale European cooperative arms production is not expected in the short term.

West European arms producers are trying to compete in the US- and Israeli-dominated market for UASs.³⁷ Not only is the global UAS market expected to expand in the short and medium terms—especially in terms of demand for reconnaissance, intelligence and surveillance UASs—there is also pressure on Europe to fill a gap in its capabilities that was exposed during air operations against Libya in 2011.³⁸ At present there are two main avenues of UAS development in Western Europe: the British–French Telemos programme of BAE Systems and Dassault and EADS’s Talarion programme supported by Germany, France and Spain, although the latter programme has stalled. In another illustration of how bilateral cooperative relationships are becoming increasingly complicated, in January 2012 Cassidian, an EADS subsidiary, formed a partnership with Rheinmetall to

³⁴ Kington, T. and Müller, A., ‘Italy, Germany make their own pacts’, *Defense News*, 19 Dec. 2011.

³⁵ Memorandum of Understanding between AIAD, the Italian Industries Federation for Aerospace Defence and Security, and BDSV, the Federation of German Security and Defence Industries Association, 16 Dec. 2011, <http://www.aiad.it/aiad/en/aiad_mou.wp>.

³⁶ Memorandum of Understanding on Nordic Defence Cooperation (NORDEFECO), signed 4 Nov. 2009, <<http://www.norden.org/da/om-samarbejdet/aftaler/aftaler/forsvarsspoergsmaal/>>; Norwegian Ministry of Defence, ‘Nordic Defence Cooperation: NORDEFECO’, <<http://www.regjeringen.no/en/?id=532212>>; and NORDEFECO, *Military Level Annual Report 2010* (Norwegian Armed Forces Media Centre: Oslo, Feb. 2011). On Nordic cooperation programmes that were a prelude to the formation of NORDEFECO see Kiss, P., ‘Eastern European defense review: defense cooperation within the Visegrad Group. Unexplored opportunities?’, Center for Strategic and International Studies, 25 Feb. 2011, <<http://csis.org/blog/eastern-european-defense-review-defense-cooperation-within-visegrad-group-unexplored-opportunit>>; and Hagelin, B., ‘Hardware politics, “hard politics” or “where, politics?”: Nordic defence equipment cooperation in the EU context’, eds A. J. K. Bailes, G. Herolf and B. Sundelius, SIPRI, *The Nordic Countries and the European Security and Defence Policy* (Oxford University Press: Oxford, 2006).

³⁷ An unmanned aerial system is the larger system, including e.g. control systems and data links, that includes an unmanned aerial vehicle (UAV).

³⁸ ‘NATO allies to hold talks on Libya, Afghanistan wars’, Al Arabiya News, 5 Oct. 2011, <<http://www.alarabiya.net/articles/2011/10/05/170293.html>>. See also chapter 2, section I, and chapter 3, section II, in this volume.

develop and produce Rheinmetall's UASs.³⁹ While each of these projects might seem to be cost-saving to their respective partner countries, the duplicate research and development (R&D) being carried out by the large European UAS programmes is likely to contribute to overall cost increases at a time when West European countries are likely to face budget cuts. According to an official with the German Ministry of Defence, not only are the costs of the Telemos and Talarion programmes too high, they will also be competing with each other in export markets.⁴⁰ A number of European countries are also engaged in unmanned combat air vehicle (UCAV) projects. Since R&D for UCAVs is particularly expensive, potential cost savings may become an incentive for increased cooperation.⁴¹

In June 2011 the European Commission initiated a process for developing and producing UASs in the EU. A principal purpose of this process is to develop a civil UAS strategy that takes advantage of the exponential growth in military applications of UASs. The Commission scheduled five workshops for 2011–12, with the first, in July 2011, focusing on the UAS industry and market. It primarily received input from company and industry representatives on how to manage and increase UAS development and production in the EU as well as the EU's share of the global UAS market. In line with the purpose of the overall process, many of the workshop comments and recommendations focused on the dual-use potential of UASs.⁴²

Within the UAS market as a whole, countries and companies seek to increase their market share, while arms producers are looking beyond military applications to civilian sectors for medium- and long-term growth in sales.⁴³ This illustrates the wider debate on coordinating military and civil capabilities in dual-use markets, which in turn highlights issues concerning the arms industry's influence on broader security discussions.⁴⁴

³⁹ EADS, 'Cassidian and Rheinmetall pool their unmanned aerial systems activities', Press release, 20 Jan. 2012, <http://www.eads.com/eads/int/en/news/press.20120120_cassidian_rheinmetall_uas.html>.

⁴⁰ Beemelmans, S., 'Il faut reconcevoir le marche europeen de la defense' ['We must redesign the European market for defence'], *La Tribune*, 23 Nov. 2011; and 'Germany calls for Franco-German UAV cooperation', Security & Defence Agenda, 29 Nov. 2011, <<http://www.securitydefenceagenda.org/Contentnavigation/Library/Libraryoverview/tabid/1299/articleType/ArticleView/articleId/2991/Germany-calls-for-FrancoGerman-UAV-cooperation.aspx>>.

⁴¹ International Institute for Strategic Studies (note 33).

⁴² European Commission, Directorate General Enterprise and Industry, 'Strategy for unmanned aircraft systems in the European Union', <<http://ec.europa.eu/enterprise/sectors/aerospace/uas/>>.

⁴³ Aerospace and Defence Association of Europe, UAS Working Group, 'Industry & market issues', Written contribution, UAS Industry and Market Workshop, 15 July 2011, <<http://ec.europa.eu/enterprise/sectors/aerospace/uas/>>.

⁴⁴ Boulanin, V. and Bellais, R., 'Towards high-tech "Limes" on the edges of Europe? Managing the external borders of the European Union', Paper presented at conference 'Fences, Walls and Borders: State of Insecurity?', Montreal, 17 May 2011.

Table 5.2. Selected cybersecurity acquisitions by OECD arms-producing and military services companies, 2011

The table lists major acquisitions in the arms industries of member states of the Organisation for Economic Co-operation and Development (OECD) that were announced or completed between 1 Jan. and 31 Dec. 2011. It is not an exhaustive list but gives an overview of strategically significant and financially noteworthy transactions. Figures for deal value and revenue are in US \$m., at current prices. Companies are US-based unless indicated otherwise.

Buyer company (country)	Acquired company (country)	Seller company (country)	Deal value (\$ m.)	Revenue or employees ^d
Avnet	Pinnacle Data Systems	Publicly listed	22.0	..
BAE Systems (UK)	Intelligence Services Group	L-1 Identity Solutions	297.0	1000 employees
BAE Systems (UK)	Norkom Group (Ireland)	Publicly listed	287.0	350 employees
BAE Systems (UK) ^b	Stratsec (Australia)	Privately owned	23.0	70 employees
Boeing	Solutions Made Simple	Privately owned	..	c. 60 employees
CACI International	Advance Programs Group	Privately owned	..	110 employees
CACI International	Pangia Technologies	Privately owned	..	\$18.5 m.
CACI International	Paradigm Holdings	Publicly listed	61.5	c. 185 employees
Camber Corp.	Defense Security and Systems Solutions	EADS (trans-European) ^c
General Dynamics	Network Connectivity Solutions	Privately owned	..	160 employees
Jacobs Engineering	Unique World	Privately owned	..	c. 50 employees
Kratos Defense and Security Solutions	SecureInfo Corp.	Insight Venture Partners	17.5	\$2.5 m.
Raytheon	Hengeler Computer Consultants	Privately owned	..	142 employees
ManTech	TranTech	Privately owned	21.6	\$40 m.
ManTech	Worldwide Information Network Systems	Privately owned	90.0	c. 150 employees
National Security Partners	Summit Solutions	Privately owned	..	\$17 m.
Raytheon	Applied Signal Technology	Publicly listed	490.0	c. 800 employees
Raytheon	Pikewerks Corp.	Privately owned	..	c. 33 employees
Sotera Defense Solutions	Potomac Fusion	Privately owned	..	\$40 m.
Sotera Defense Solutions	Software Process Technologies	Privately owned	..	\$35 m.
Ultra Electronics (UK)	3e Technologies International	EF Johnson Technologies	30.0	\$29.1 m.
Ultra Electronics (UK)	Special Operations Technology	Privately owned	38.4	130 employees
Ultra Electronics (UK)	Zu Industries	Privately owned	76.6	20 employees

^a Since companies do not always disclose the values of transactions, the acquired company's annual revenue is listed where known (either actual revenue for 2010 or expected revenue for 2011 or 2012). Where information is not available for the acquired company's revenue, the acquired company's number of employees is shown, where known.

^b Stratsec was bought by BAE Systems Australia, rather than directly by the parent company.

^c Defense Security and Systems Solutions was sold by EADS North America, rather than directly by the parent company.

Diversification into cybersecurity

While arms production and military services companies continued major acquisitions in the industry in order to streamline and increase military specialization, many of these companies' mergers and acquisitions in 2011 were outside of traditional arms production and military services areas. One noticeable area for acquisitions was in cybersecurity, as companies looked to shield themselves from potential cuts in military spending on arms acquisitions and move into adjacent markets that also have civilian applications (see table 5.2).⁴⁵

While a majority of the company press releases announcing cybersecurity-related acquisitions cite mixed motivations, many include either starting sales or increasing products offered to civilian US Government agencies, especially for intelligence and homeland security. It seems that these acquisitions bridge the civilian and military sectors of government. A few of the acquisitions are even commercial (i.e. non-military) in focus, being marketed at the financial sector, for example, or for the protection of critical infrastructure.

Individual company motivations included broadening military product offerings (e.g. Ultra Electronics); increasing access to the intelligence market (e.g. ManTech); strengthening 'home market' positions (e.g. BAE Systems); improving positions in US civilian government markets, including intelligence (e.g. CACI International); and securing supply chains (e.g. Boeing). In making acquisitions outside the arms industry, arms producers have found themselves competing with other companies for position in the cybersecurity market (e.g. IBM, which acquired i2 in 2011).⁴⁶

⁴⁵ The term cybersecurity is often used but left undefined. From an industry perspective it might include 'protection against [threats] deriving from the unauthorised use of digital information and communications systems'. Finmeccanica, *2010 Consolidated Financial Statements* (Finmeccanica: Rome, 2011), p. 36.

⁴⁶ Bell, M., 'IBM extends cyber footprint with i2 purchase', *Jane's Defence Industry*, 2 Sep. 2011.