9. Arms production

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I. Introduction

The process of adaptation to the new security environment continues in the arms industry. In the United States the industry is adjusting to the new demands created by the ongoing transformation of the armed forces, the privatization of military services and the increasing importance of the homeland security sector. In Europe the emphasis is on intra-European consolidation and access to the expanding US 'market', that is, the US Government's arms procurement budget.

This chapter describes recent developments in the major arms-producing companies in Europe and North America. Section II considers data on the 100 largest arms-producing companies in the world (excluding China) in 2003. Section III analyses the major acquisitions of companies with arms-producing activities in 2004 and compares company size in the arms industry and the size of some national economies. Section IV provides a brief description of the military services industry, which has expanded in the post-cold war period, in particular in the USA, and has been further reinforced by the war in Iraq. In Europe the two sectors that have undergone the least restructuring during the post-cold war period are the military vehicle and military shipbuilding industries: section V describes attempts to restructure the European military shipbuilding industry during 2004.

Section VI considers transparency in the arms sales of the major arms-producing companies and sets this in the context of other types of transparency initiative in the industry more generally. It describes a loosely defined industry that is subject to a wide variety of attempts at regulation, emphasizing that such attempts tend to be directed not specifically at arms-producing companies but at broader industrial sectors. Company responses to the demand for data on arms sales are assessed, drawing on a table of original data compiled for the SIPRI top 100 list of arms-producing companies.

Section VII provides a short summary and the conclusions of the chapter. Appendix 9A presents financial and employment data on the top 100 arms-producing companies in the world (excluding China) in 2003. Appendix 9B lists the major national and transnational acquisitions of arms-producing firms and units by North American and West European companies in 2004.

¹ Companies in China are excluded owing to a lack of data. Other countries that could possibly have companies that are large enough to appear in the top 100 list include Kazakhstan and Ukraine.

Table 9.1. Regional and national shares of arms sales for the top 100 arms-producing companies in the world excluding China, 2003 compared to 2002

Arms sales figures are in US\$ b., at current prices and exchange rates. Figures do not always add up because of the conventions of rounding.

Number of companies	Pagion/	Arms sales (\$ b.) ^a		Change in sales, 2002	Share of total arms	
	Region/ country	2002	2003	Nominal ^b	Real ^c	sales, 2003 (%)
39	North America	116.4	149.1	28	25	63.2
38	USA	116.0	148.6	28	25	63.0
1	Canada	0.4	0.5	15	0	0.2
42	Europe	58.0	72.0	24	5	30.5
12	UK	23.7	26.9	13	1	11.4
9	France	13.4	17.6	32	7	7.5
1	Trans-European ^d	5.6	8.0	42	16	3.4
3	Italy	4.7	6.4	36	10	2.7
5	Germany	4.5	5.2	14	-5	2.2
6	Russia ^e	2.8	3.4	25	7	1.5
2	Sweden	1.4	2.1	48	21	0.9
2	Spain	1.1	1.3	26	-1	0.6
1	Switzerland	0.5	0.6	32	13	0.3
1	Norway	0.3	0.4	30	13	0.2
10	Other OECD	7.3	7.7	6	-2	3.3
7	Japan	5.9	6.1	3	-4	2.6
2	Korea, South ^e	1.2	1.3	10	3	0.5
1	Australia	0.3	0.4	32	8	0.2
9	Other non-OECD	6.4	7.1	11	3	3.0
4	Israel	3.2	3.5	9	5	1.5
3	India	2.1	2.3	11	1	1.0
1	Singapore	0.8	0.9	7	4	0.4
1	South Africa	0.3	0.5	41	-5	0.2
100	Total	188.2	236.0	25	17	100.0

OECD = Organisation for Economic Co-operation and Development.

Source: Appendix 9A, table 9A.1.

^a Arms sales include both sales for domestic procurement and export sales.

^b This column gives the change in arms sales 2002–2003 calculated in current dollars.

 $^{^{}c}$ This column gives the change in arms sales 2002–2003 calculated in constant (2003) dollars.

^d The company classified as trans-European is EADS, which is based in three countries—France, Germany and Spain—and registered in the Netherlands.

^e Data for Russian and South Korean companies are uncertain.

II. The SIPRI top 100 arms-producing companies

The value of the combined arms sales of the top 100 companies in the world (excluding China) in 2003 was \$236 billion. Of the 100 companies, 38 are USA-based and one is Canadian and together these accounted for 63.2 per cent of arms sales by the top 100, while 42 European companies (including 6 Russian ones) accounted for 30.5 per cent of sales. Ten companies based in other member countries of the Organisation for Economic Co-operation and Development (OECD) had a 3.3 per cent share and nine companies in other non-OECD countries accounted for 3.0 per cent of arms sales by the top 100 in 2003 (see table 9.1).

In comparison with 2002, the top 100 companies in 2003 increased their combined arms sales by 25 per cent in current dollars. Because of the sharp deterioration in the value of the US dollar during 2003, the increase in real terms was much smaller: roughly 17 per cent. The decline of the dollar had a strong impact on companies located in countries other than the USA, since these companies have revenues in dollars but costs in local currency. This impact was strongest in the countries in the eurozone and in Sweden, Switzerland and Australia. Thus, much of the increase in the arms sales of European (except the United Kingdom) and Australian companies was offset by the decline in the value of the dollar, and thus in revenues in local currency.

The 38 US companies in the top 100 had the greatest increases in arms sales—28 per cent in current dollars and 25 per cent in real terms—and so their combined share of the total also increased. The 42 European companies increased their arms sales by 24 per cent in current dollars but by only 5 per cent in real terms. The combined arms sales of the 10 companies in other OECD countries increased by 6 per cent in current dollars but in real terms they fell by 2 per cent, and those of the 9 companies in non-OECD countries increased by 11 per cent in current dollars but by only 3 per cent in real terms (table 9.1).

The composition of the list has not changed much since 2002. Only four new companies entered the list in 2003 (see table 9.2), with Avio appearing as a consequence of Fiat divesting its engine manufacturing subsidiary FiatAvio to the Carlyle Group (USA) and Finmeccanica (Italy) during 2003.2 More significantly, the Swedish electronics company Ericsson increased its arms sales by 253 per cent principally as a result of revenue from sales of the Erieye radar system to Brazil and Greece. Dyncorp lost its independent ranking in the list following its acquisition by Computer Sciences Corporation in March 2003. General Motors left the arms industry entirely when it sold its Canadian

² The Carlyle Group, 'The Carlyle Group and Finmeccanica: agreement for the acquisition of Fiat-Avio's aerospace business', Press release, 2 July 2003, URL http://www.thecarlylegroup.com/eng/ industry/l3-topnews-article2600.html>. Avio appears in the SIPRI top 100 list as an independent company since the SIPRI definition of an arms-producing company does not include investment companies such as the Carlyle Group.

Table 9.2. Companies that entered and exited the SIPRI top 100 list of arms-producing companies in 2003

Rank				Rank			
2003	2002	Company	Country	2003	2002	Company	Country
Enterii	ng compa	nies		Exiting	g compan	ies	
67	S	Avio	Italy	S	24	Dyncorp	USA
85	128	Ericsson	Sweden	147	41	General Motors	USA
92	104	Curtiss-Wright	USA	110	48	Fiat	Italy
100	105	SNPE	France	108	96	Bombardier	Canada

S = subsidiary company.

Source: The SIPRI Arms Industry Database.

subsidiary GM Canada to General Dynamics;³ and Bombardier divested its Military Aviation Services unit to L-3 Communications' Canadian division.⁴

III. Mergers and acquisitions in 2004

The process of concentration of the arms industry has been slowing down since the late 1990s. While still significant, mega-mergers no longer dominate the pattern of acquisition. In 2003 there were six acquisitions with a deal value exceeding \$1 billion.⁵ In 2004 there was only one deal of this size (see appendix 9B): the acquisition by Finmeccanica of Italy of the British firm GKN's 50 per cent share in their previous joint venture, the helicopter company AgustaWestland and related assets, for €1.59 billion (\$1.98 billion).⁶ A major merger—between Lockheed Martin and Titan—that had been negotiated during the year fell through because of a 'government bribery probe'.⁷

Acquisition activity was more intense in the USA than in Western Europe. The large number of major acquisitions that took place in the USA was concentrated in a smaller number of companies, each making several acquisitions. The most active companies among these were L-3 Communications, a supplier of intelligence, surveillance and reconnaissance products and secure communications systems, and SAIC, a provider of information technology and systems integration.

³ General Dynamics, 'General Dynamics completes acquisition of GM Defense', Press release, 3 Mar. 2003, URL http://www.generaldynamics.com/news/press_releases/2003/March 3">http://www.generaldynamics/press_releases/

⁴ Bombardier, 'Bombardier closes the sale of its military aviation services unit', Press release, 3 Nov. 2003, URL http://www.bombardier.com/en/0 0/pressreleaselist.jsp>.

⁵ Surry, E. and Baumann, H., 'Table of acquisitions, 2003', *SIPRI Yearbook 2004: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2004), pp. 429–30.

⁶ Finmeccanica, 'Finmeccanica: closing with GKN of the acquisition of 100% of AgustaWestland', Press release, 30 Nov. 2004, URL http://www.finmeccanica.it/>.

⁷ 'Titan extends dead-line for 2011 notes offer', Air Letter, 15 July 2004, p. 6.

The pattern of acquisitions in the US arms industry was strongly oriented towards two broad areas. One group of acquisitions focused on companies providing products and, primarily, services in the fields of (often space-based) communications, remote sensing and imaging in order to target the markets for network-centric solutions and unmanned air vehicles. A major example was the \$725 million acquisition by ITT Industries of the Remote Sensing Systems unit of Eastman Kodak, which was targeted at the \$6 billion government, science and commercial remote sensing markets.8 The second group of acquisitions was aimed at the markets for individual protection, public safety and homeland security more generally. This indicates that current acquisitions are driven by those sections of the US defence budget with the strongest growth, partly as a result of the war in Iraq and the expansion in the homeland security sector. Overall, the current pattern of acquisitions in the US arms industry may not have a strong effect on the concentration of the industry, since it is focused on developing and strengthening new capabilities, often by acquiring companies outside the traditional arms industry.

The expectation that the expansion of these sectors will generate a new wave of acquisitions in the US arms industry has again drawn banking and investment firms into the business of brokering such deals, as in the wave of acquisitions in the late 1990s, when such firms played a major role. In 2004 four major arms industry deals involved banking and investment firms: the Carlyle Group's acquisitions of a unit of Dunlop Standard for \$670 million and of Stellex Aerostructures for an undisclosed sum, Veritas Capital's acquisition of Dyncorp International for \$850 million, 10 and the decision by the owner of AM General, the producer of HMMWV (Humvee) armoured vehicles, to form a new joint venture with MacAndrews & Forbes Holdings to own the company.¹¹ In 2004 a new merchant banking firm, TCG Financial Partners, was established by William Cohen, a former US defence secretary. The aim of this company, which includes leading former defence officials such as Lord Robertson, former NATO secretary-general, and Joseph Ralson, former NATO supreme allied commander Europe, is to broker arms industry mergers. 12 This new firm is a similar venture to the Carlyle Group, which was formed in the 1990s by former US defence secretary Frank Carlucci and since then has completed 27 transactions in the aerospace and defence industries, with a combined purchase price of over \$5.8 billion.¹³

⁸ ITT Industries, 'ITT Industries to acquire Kodak's Remote Sensing Systems (RSS)', Press release, 2 Sep. 2004, URL http://www.itt.com/news/>.

⁹ For an analysis of the role of Wall Street in the restructuring of the US arms industry during the 1990s see Markusen, A., 'The post-cold war persistence of defense specialized firms', eds G. Susman and S. O'Keefe, The Defense Industry in the Post-Cold War Era: Corporate Strategies and Public Policy Perspectives (Elsevier: Oxford, 1998), pp. 121–46.

¹⁰ 'Computer Sciences to sell DynCorp assets', Associated Press, 13 Dec. 2004, URL .

¹¹ AM General, 'New joint venture created to own AM General', AM General corporate news, 10 Aug. 2004, URL http://www.amgeneral.com/corporate news.php>.

¹² Bloomberg News, 'Banking on military firms', Long Island Newsday, 20 Aug. 2004.

¹³ See the website of the Carlyle Group, URL http://www.thecarlylegroup.com/>.

Table 9.3. The top 10 arms-producing companies in 2003: comparison of company sales with the national output of select countries

Figures are in US\$ b., in current dollars.

Δ	1		Country of comparison					
	k Company	Country/ region	Arms sales	Total sales	(compared w arms sales) Country	ith GDP	(compared w total sales) Country	ith GDP
1	Lockheed Martin	USA	24.9	31.8	Guatemala	24.7	Slovakia	31.9
2	Boeing	USA	24.4	50.5	Tunisia	24.3	Ukraine	49.5
3	Northrop Grumman	USA	22.7	26.2	Syria	21.5	Slovenia	26.3
4	BAE Systems	UK	15.8	20.5	Angola	31.2	Bulgaria	19.9
5	Raytheon	USA	15.5	18.1	El Salvador	14.4	Serbia-Mont	. 19.2
6	General Dynamics	USA	13.1	16.6	Kenya	13.8	Belarus	17.5
7	Thales	France	8.4	11.9	Zimbabwe	8.3	Uruguay	11.2
8	EADS	Europe	8.0	34.0	Ghana	7.7	Kuwait	35.4
9	United Technologies	USA	6.2	31.0	Uganda	6.2	Kazakhstan	29.7
10	Finmeccanica	Italy	5.3	9.3	DR Congo	5.6	Jordan	9.8
Subtotal top 10 companies Total top 100 companies				249.9 992.6	Low-income	e (61) co	ountries 1	101.0

GDP = gross domestic product.

Sources: Appendix 9A; and World Bank, World Development Report 2005: A Better Investment Climate for Everyone (Oxford University Press: New York, 2004), table 3, pp. 260–61.

European companies have also made acquisitions in the USA, in particular the two British companies BAE Systems and Smiths, which each acquired five US companies in 2003. BAE Systems' acquisition of DigitalNet for \$600 million is aimed at enhancing 'its ability to address evolving U.S. national security priorities for network centric infrastructure and information sharing between the intelligence, homeland security and warfighting communities'. At the time of the acquisition, BAE Systems North America had total sales of \$5 billion, had more than 26 000 employees in the USA, accounted for more than 20 per cent of BAE Systems total sales and had a 10 per cent growth in annual organic sales (i.e., excluding sales growth through acquisitions). 15

Within Europe there were few major acquisitions in the arms industry in 2004 and all except one were domestic. One intra-European acquisition was very significant, however: the acquisition by BAE Systems of the British vehicle manufacturer Alvis. BAE Systems outbid the US tank producer General Dynamics, which had already received clearance from the European Commission to buy Alvis, one of its main competitors in Europe. The deal

¹⁴ BAE Systems, 'BAE Systems agrees to acquire DigitalNet', Press release, 11 Sep. 2004, URL http://www.baesystems.com/newsroom/2004/sep/110904news1.htm.

¹⁵ BAE Systems (note 14).

reflects BAE Systems' ambition to have a major role in the Future Rapid Effects Systems, a new British Government armoured vehicle programme. 16

Company size

The concentration process in the arms industry since the early 1990s has resulted in some very large companies, several of which are strongly dependent on military sales. However, there is a strong national and regional variation in company size. The 38 US companies in the top 100 list had average arms sales of about \$3900 million in 2003 and the 36 West European companies roughly half of this, or \$1900 million. In contrast, the average arms sales of the 6 Russian companies were around \$570 million, those of the companies in other OECD countries were \$770 million and those of the companies in other non-OECD countries were \$790 million.

During the past decade the top arms-producing companies have grown immensely in size, primarily through acquisitions. They are now comparable in economic importance to many other multinational corporations and, like them, the largest arms-producing companies have sales of a magnitude that make them major economic entities, not only in their domestic environment but also globally. The value of their arms sales exceed the gross domestic product (GDP) of most poor countries and their total sales compare to the GDP of medium-sized developed or industrializing countries (see table 9.3). A comparison for the entire group of top 100 companies shows that the value of their total sales in 2003 is roughly equal to the combined national output of all 61 low-income countries in 2003. The top 10 companies had average arms sales of \$14 billion and average total sales of \$25 billion, while the 61 lowincome countries had an average GDP of \$18 billion.

IV. The expanding military services industry

With the increasing outsourcing of services from defence ministries and armed forces to the private sector, a growing number of the top 100 companies specialize in services. This trend is most pronounced in the USA, but exists also in the West European industry. Table 9.4 shows the US companies in the SIPRI top 100 list for 2003 for which services accounted for more than 85 per cent of contracts awarded to them by the US Department of Defense (DOD) in financial year (FY) 2003. The table shows the total value of the DOD contracts awarded to them during FYs 1996–2003 according to the list of DOD top 100 companies for the respective years. Most of these companies show a gradual increase in DOD contracts awarded, and in FY 2003 the increase was particularly strong. Some of these services companies have increased their sales to the DOD as a result of the war in Iraq, but most have expanded as part of a more general trend towards the privatization of military services.

¹⁶ 'BAE trumps rival to buy Alvis for \$651 m', Air Letter, 7 June 2004, p. 7.

Table 9.4. US services companies: total value of US Department of Defense prime contract awards, financial years 1996–2003^a

Figures are in US\$ m., in current dollars.

	Financi	ial year ^b						
Company (parent company)	1996	1997	1998	1999	2000	2001	200	2003
Companies specializing in	researc	ch and de	velopme	nt servic	es			
Aerospace Corporation	156	298	339	365	334	443	473	540
Companies specializing in	other s	ervices						
Anteon			123	220	317	324	336	509
CACI International				177	228	249	311	454
Computer Sciences, CSC	709	704	647	712	1 165	819	808	2 531
Dyncorp (CSC)	380	535	537	566	771	909	1 359	1 663
EDS	415	359	261	238	330	223	468	772
Halliburton	574	290	286	658	595	428	484	3 921
Brown & Root	533							1 542
Services (Halliburton	n)							
KBR (Halliburton)				657	594	427	484	2 170
Jacobs Engineering	140		130	406	387	409	486	557
Mantech International		188		180	211	166	210	317
Mitri	375	304	394	417	409	441	474	456
SAIC	1 066	1 095	1 224	1 358	1 522	1 748	2 075	2 616
Titan			136	162	314	345	502	799
URS Corporation				171	145	165	801	578

^{.. =} Not included in the US Department of Defense's list of 100 companies with the largest prime contract awards (source below) for that year. These companies may have contracts smaller than those of the company with rank 100 (\$205 million in financial year (FY) 2003).

Sources: US Department of Defense, '100 companies receiving the largest dollar volume of prime contract awards', annual publication, 1996–2003, URL http://www.dior.whs.mil/peidhome/procstat/procstat.htm.

Contractors for the war in Iraq

The war in Iraq has generated a large number of contracts for the private sector, both for the equipment used during the initial combat phase and for reconstruction work during the 'post-war period', defined as starting in May 2003 when US President George W. Bush declared that 'major combat operations in Iraq' had ended.¹⁷ Information on contracts awarded is difficult to find. The US Government has not produced any comprehensive lists of con-

 $[^]a$ This table includes US companies in the SIPRI top 100 list for 2003 for which services accounted for more than 85% of contracts awarded to them by the US Department of Defense in FY 2003

^b The US FY runs from 1 Oct. of the previous year to 30 Sep. of the named year.

¹⁷ Bush, G. W., Statement, USS Abraham Lincoln, 1 May 2003, URL http://www.state.gov/p/nea/rls/rm/20203.htm.

tracts, but some US non-governmental organizations (NGOs) have made a great effort to do so.18 It is also difficult to find information on the extent to which awarded contracts have been implemented in actual projects.

The business generated by the war can be divided into three basic types: (a) DOD contracts for military equipment used both during and after the initial combat phase; (b) DOD contracts awarded for reconstruction work during the post-war period; and (c) contracts awarded for post-war reconstruction by US government departments other than the DOD, such as the departments of State, Commerce and Interior, and by the US Agency for International Development (USAID). In the first category are many major US armsproducing companies supplying aircraft, missiles, IT systems and other equipment used in the war and requiring replacement after the end of the war. It is difficult to trace the impact of the war on these companies because war replacement orders are included in larger contracts. However, it is most likely that some of the increases in arms sales of the major suppliers of such equipment are for war replacement.¹⁹ After the 'combat phase' of the war, there has been continuing violence and thus a need for continuing supplies of military equipment. In particular, armoured vehicles have been in high demand, as shown by the increase in orders for armoured versions of HMMWV light vehicles and trucks and for armour kits for other vehicles.²⁰

The contracts awarded as a consequence of the war in Iraq—and to a lesser extent those following the war in Afghanistan—will have a noticeable impact on the structure of the arms industry. The Center for Public Integrity, a US NGO that has investigated contracts awarded to US companies for post-war work in Afghanistan and Iraq, partly based on 73 requests and appeals under the US Freedom of Information Act, had identified prime contract awards with a combined value of \$48.7 billion to 150 US companies by July 2004.²¹ Table 9.5 shows a selection of these contracts: the US companies with the largest total value of DOD contracts for reconstruction work in Iraq. Only five of these companies are included in the SIPRI top 100 list for 2003, but several more are likely to appear in the list for 2004.²²

Table 9.5 does not include contracts awarded by USAID or by US government departments other than the DOD. Nor does it include contracts awarded to non-US companies. Not all companies were initially eligible to bid for these

¹⁸ Relatively comprehensive information is provided by the Center for Public Integrity, URL http:// www.publicintegrity.org/>; and the Center for Corporate Policy, URL http://www.corporatepolicy.

¹⁹ Center for Corporate Policy, 'War profiteers: the Center for Corporate Policy's ten worst war profiteers of 2004', URL http://www.corporatepolicy.org/topics/topten2004list.htm.

²⁰ Sher, A., 'Army orders speed up of Humvee armor production', aol.journals, 12 Dec. 2004. URL http://journals.aol.com/sharonmc2002/McMinnMurmurs/entries/426/>.

²¹ Politi, D., 'US awards \$48.7 billion in contracts for postwar Afghanistan and Iraq', Business Journal, 9 July 2004, URL http://www.publicintegrity.org/wow/report.aspx?aid=338.

²² Defense News already included more of these companies in its top 100 list for 2003. The reason for their inclusion could be that Defense News has access to different information to SIPRI, or that their definition of defence companies differs from SIPRI's definition of arms-producing companies. See 'Defense News top 100', Defense News, 28 June 2004, pp. 11-34; for SIPRI's definition see appendix 9A in this volume.

Table 9.5. US companies with the largest US Department of Defense contract awards for work in Iraq, 2002–June 2004

Figures are in US\$ m., in current dollars. Companies are listed by total contract value.

Company (parent company)	Contracts (\$ m.)		Contracts (\$ m.)
KBR (Halliburton) ^a	10 832	International American Products	628
Parsons Corp.	5 286	Titan ^a	402
Fluor Corp.	3 755	Harris	165
Washington Group International	3 133	$SAIC^a$	159
Shaw Group	3 051	Lucent Technologies World Services	75
Perini Corp	2 525	EOD Technology	72
Contrack International	2 325	NANA Pacific	70
Tetra Tech Inc.	1 542	Earth Tech Inc.	65
USA Environmental	1 542	Vinnell (Northrop Grumman) ^a	48
CH2M Hill	1 529	Parsons Energy	43
American International Contractors	1 500	Louis Berger Group	28
Odebrecht-Austin	1 500	AECOM	22
Zapata Engineering	1 479	Blackwater Security Consulting	21
Environmental Chemical Corp.	1 475	Motorola	16
Explosive Ordnance Technologies	1 475	Raytheon Tech. Services (Raytheon)	¹ 12
Stanley Baker Hill	1 200	Ronco Consulting Corp.	12

^a These companies were on the SIPRI top 100 list in 2003.

Source: 'Contractors: Iraq', Center for Public Integrity, Windfalls of war website, URL http://www.publicintegrity.org/wow/>.

contracts.²³ The US Government list of countries whose companies could be awarded US primary reconstruction contracts excluded those that did not participate in the coalition effort or otherwise support it, for example, France, Germany and Russia.²⁴

The huge number of large post-war reconstruction contracts has led to severe problems in the contracting process, since government oversight has been difficult. The Office of the Coalition Provisional Authority Inspector General (CPA-IG),²⁵ established to monitor Iraqi reconstruction work, had by the end of September 2004 managed or coordinated 113 criminal investigations and opened cases on 272 reports on fraud, waste and other problems.²⁶

²³ 'Iraq contracts bar war opponents', BBC News Online, 10 Dec. 2003, URL http://news.bbc.co.uk/2/3305501.stm; and 'US defends ban on Iraq contracts', BBC News Online, 11 Dec. 2003, URL http://news.bbc.co.uk/2/3308997.stm.

²⁴ 'U.S. faces backlash over contracts', CNN, 11 Dec. 2003, URL http://edition.cnn.com/2003/WORLD/meast/12/10/sprj.irq.contracts/>.

²⁵ According to a decision signed by President Bush on 29 Oct. 2004, the CPA-IG has been succeeded by the Special Inspector General for Iraq Reconstruction (SIGIR) since the provisional authority was dissolved on 28 June 2004. The SIGIR's mandate will last until 10 months after 80% of the money allocated to the Iraq Relief and Reconstruction Fund is committed to contracts. The SIGIR will report to the US DOD and State Department, instead of the administrator of the CPA, as was previously the case. See the website of the SIGIR, URL http://www.cpa-ig.com/>.

²⁶ Weisman, J., 'Only a small part of funds to help rebuild Iraq', Washington Post, 1 Nov. 2004.

Independent researchers have also reported on serious mismanagement of these funds.²⁷ One such study described the post-war reconstruction contracting process as 'a complex and lucrative system of private enterprise, where billions of tax dollars are spent, and sometimes misspent, to support warriors and rebuild Iraq'.28

The company that has benefited most from post-war Iraq contracts awarded by the US DOD is KBR, a subsidiary of Halliburton (and formerly known as Kellogg, Brown and Root). With total DOD contract awards of \$10 832 million for activities in Iraq (in addition to \$599 million for work in post-war Afghanistan),²⁹ Halliburton has moved from rank 66 in the SIPRI top 100 list for 2002 to rank 12 for 2003 (see appendix 9A).³⁰ This company, together with a few others, has come to symbolize the deficiencies of the contracting process. Nine reports by government auditors during the period December 2003– December 2004 found widespread, systemic problems with almost every aspect of Halliburton's work in Iraq, from cost estimation and billing systems to cost control and subcontract management, and 'multiple criminal investigations into overcharging and kickbacks involving Halliburton's contracts'.31 However, Halliburton is not alone; it simply represents the general problems with the contracting process for the war in Iraq. This process resulted in costplus contracts, guaranteeing a set profit on top of costs, and a rapid outsourcing of work to private companies, while at the same time the number of personnel at the DOD's Defense Contract Audit Agency was almost halved.³²

V. The European military shipbuilding industry

Consolidation of the European military shipbuilding industry continued to be on the agenda during 2004. These efforts were focused on two initiatives: to create a naval counterpart to what EADS represents in aerospace, and to con-

²⁷ 'The profit motive goes to war', *Financial Times*, 17 Nov. 2004.

²⁸ Chatterjee, P., Iraq, Inc.: a Profitable Occupation (Seven Stories Press: New York, 2004); summarized in Scherr, J., 'Berkeley author investigates Iraq war Profiteers', Berkeley Planet, 30 Nov. 2004, URL http://www.berkeleydaily.org/text/article.cfm?issue=11-30-04&storyID=20204.

²⁹ Center for Public Integrity, 'Post-war contractors ranked by total contract value in Iraq and Afghanistan, from 2002 through July 1, 2004', URL http://www.publicintegrity.org/wow/resources. pro&fil=AF>, and 'Contractors: Iraq', URL http://www.publicintegrity.org/wow/bio.aspx?act=pro& fil=IO>.

³⁰ The success of Halliburton in the award of contracts was particularly noteworthy because of the company's strong links to the Bush Administration. US Vice-President Dick Cheney is a former chief executive officer who retired from Halliburton in 2000. The extent to which he maintained a financial interest in the company after this date is a matter of some dispute. See Chatterjee (note 28), pp. 42–44; and 'Cheney may still have Halliburton ties', CNN, 25 Sep. 2003, URL http://money.cnn.com/2003/09/ 25/news/companies/cheney/>.

³¹ Waxman, H. A., ranking minority member of the Committee on Government Reform, US House of Representatives, 'Fact Sheet: Halliburton's Iraq contracts now worth over \$10 billion', Truthout, 9 Dec. 2004, URL http://www.truthout.org/docs 04/121004A.shtml>. See also 'Halliburton Watch' at the website of the Center for Corporate Policy (note 18).

³² Chaffin, J., 'Focus on Halliburton masks deeper problems with Iraq contracts', *Financial Times*, 30 Mar. 2004.

Table 9.6. Owners of major European shipyards, as of end 2004

Company (owner)	Country	Shipyard	Country
DCN (state)	France	DCN shipyards	France
ThyssenKrupp	Germany	Blohm+Voss	Germany
	-	Blohm+Voss Repair	Germany
		HDW Werft	Germany
		HDW-Nobiskrug	Germany
		Nordseewerke	Germany
		Hellenic Shipyards	Greece
		Kockums	Sweden
Fincantieri (state)	Italy	Riva Trigoso	Italy
Royal Schelde	Netherlands	Royal Schelde yards	Netherlands
New Izar (state, SEPI)	Spain	Izar shipyards	Spain
Babcock International	UK	Rosyth	UK
BAE Systems	UK	Barrow-in-Furness	UK
		Govan	UK
		Scotstoun	UK
Devonport Management Limited (KBR, USA)	UK	Devonport	UK
Swan Hunter	UK	Wallsend	UK
VT Group	UK	Portsmouth	UK

Sources: The SIPRI Arms Industry Files.

solidate and develop an industrial strategy for the British shipbuilding industry.

The shipyard side of the European naval shipbuilding industry is still fragmented compared to other sectors in the arms industry (see table 9.6). Other parts of the naval industry—companies that produce naval electronics (radar, sonar and combat systems) and propulsion systems and those that act as systems integrators—are more consolidated, with only a handful of companies in Europe. The significant decline in the demand for military ships since the end of the cold war and competition from a more consolidated US naval industry have created pressure for European consolidation. It is still uncertain whether recent policy developments towards increased military intervention in distant areas—involving, for example, the reorienting of the military planning of both the North Atlantic Treaty Organization and the European Union—will result in new demand for naval vessels such as large amphibious vessels for troop transport and logistical and operations support, mine countermeasures vessels and submarines.³³

European consolidation efforts have focused on the French and German shipyards, but extend also to Italian and Spanish yards; separate efforts are being made at the national level in the UK, where the arms industry had already gone through an earlier phase of considerable consolidation. The strat-

³³ Bauer, S., SIPRI, 'Naval shipbuilding in the EU: escaping cross-border consolidation?', Unpublished manuscript, 14 May 2004.

egy proposed by the French Government to the German Government—to form a 'naval EADS' by merging the French state-owned shipbuilding company DCN and the naval activities of the French electronics company Thales with the German shipyards—has been met with a lukewarm response from the German Government and industry. Two major reasons for this are that DCN is state-owned and heavily subsidized and fear of French dominance in a merged company.³⁴ In late October 2004 the French defence minister announced that France would enact a law allowing Thales to buy a 49 per cent stake in DCN, but the French Government would not allow its stake to drop below 51 per cent.35

Consolidation of the German naval industry took a major step in 2004, when an agreement was signed to form a new German shipbuilding group under the control of ThyssenKrupp Marine Systems. It combined the shipyards of ThyssenKrupp with those of HDW, owned by the US company One Equity Partners (OEP), with the latter company receiving a 25 per cent stake in ThyssenKrupp Marine Systems. The new group combines shipyards in Germany, Greece and Sweden (see table 9.6) with total annual sales of about €2.2 billion and a workforce of 9300.36

Italian and Spanish shipyards are likely to be part of the European consolidation process. The Franco-Italian FREMM frigate programme may serve as a common basis for a merger between the French and Italian naval industries, both of which are state-owned, but the shipyards may be left out of this.³⁷ The split of the Spanish shipbuilding company Izar into two companies, one of which, 'New Izar', will comprise all military activities, may also facilitate its merger with other companies.38

The British naval industry also saw attempts at consolidation in 2004, in response to the British Government's efforts to build a new relationship with the naval industry that would cut costs and remove duplication.³⁹ The industry for its part has been concerned that a decline in large British procurement programmes could jeopardize the British shipbuilding capability. The shipyards of BAE Systems are not expected to move into profit until well into 2008 at the earliest.⁴⁰ The industry has therefore sought to persuade the government to abandon competition and instead allocate contracts in a planned manner to enable as many shipyards as possible to survive. For this purpose, BAE Systems proposed a concept that would merge its three shipyards with three

³⁴ 'Germany rejects French shipbuilding plan', defense-aerospace.com, citing Deutsche Welle German Radio, 15 Oct. 2004; and 'European shipbuilders think of mergers, but eye each other wearily', Defense News, 28 Oct. 2004.

³⁵ 'France to allow DCN/Thales merger', Financial Times, 26 Oct. 2004, p. 28.

³⁶ ThyssenKrupp, 'German shipyard alliance forged—ThyssenKrupp and OEP sign agreement to merge ThyssenKrupp Werften and HDW', Press release, 8 Oct. 2004, URL http://www.thyssenkrupp. com/en/presse/art detail.html&aid=1231>.

³⁷ 'Giuseppe Bono', *Defense News*, 25 Oct. 2004.

³⁸ 'Restructuring plan calls for separate arms of Izar', *Defense News*, 28 Dec. 2004. 'New Izar' will be known as Navantia.

³⁹ 'UK seeks industry change for ship plan', *Defense News*, 18 Oct. 2004, p. 6.

⁴⁰ Jameson, A., 'BAE hopes that naval review will secure shipyards' future', *The Times*, 10 Sep. 2004, URL http://business.timesonline.co.uk/article/0,,9067-1254804,00.html.

yards owned by Babcock International, Devonport Management Limited and the VT Group, with a combined workforce of about 10 000, and comprising most of the British warship-building capacity.⁴¹ As of early 2005, it seemed that these plans have failed, as it was reported that the British Ministry of Defence did not see the need for a merger of producers of surface warships, 'particularly as the efficiency savings resulting from any merger were not proven'.⁴²

The British Government's plans to build two new-generation aircraft carriers—the largest warships ever constructed in the UK—in coordination with France's procurement of a second aircraft carrier, will have a great impact on the future of the British shipbuilding industry. The issue became highly controversial when the British Government in 2004 changed its procurement approach, from having selected BAE Systems and Thales UK to build the ships jointly, to opting to have the ships built by a broad alliance of companies, with one company taking the 'physical integrator' role. This was seen as a major setback for the British companies, which had expected work on sections of the aircraft carriers to become a major activity for their shipyards for the next four years. In late December it was announced that the winner in the selection process for the physical integrator role was KBR.

The future structure of the European military shipbuilding industry is closely linked to future procurement plans and to progress in European harmonization, two factors of great uncertainty.

VI. Transparency in the arms industry

While transparency in the government military sector has been on the political agenda since the 1970s and has resulted in voluntary schemes for reporting military expenditure (see appendix 8C) and international arms transfers (see chapter 10)⁴⁶ to the United Nations, no similar reporting requirements have been developed for the arms production industry. Company reporting of the military share of their sales is rare and incomplete, and reporting of the military share of their exports and research and development is almost non-existent.

'Transparency in the arms industry' is a phrase that is often used but less often defined. The terms 'transparency' and 'arms industry' can mean very different things from different perspectives, and both can have political over-

⁴¹ Klinger, P., 'BAE will consider merging UK's naval shipyards', *The Times*, 27 Sep. 2004, URL http://business.timesonline.co.uk/article/0,,9067-1281005,00.html.

⁴² 'UK shipyard consolidation falters', *Defense News*, 17 Jan. 2005.

⁴³ 'UK and France cooperate on warships', *Financial Times*, 5 June 2004, p. 8; and 'France, UK find common ground on new carriers', *Defense News*, 14 June 2004, p. 12.

⁴⁴ 'UK looks beyond military procurement methods', *Defense News*, 15 Nov. 2004, pp. 14, 18.

⁴⁵ This may have an impact on the choice of subcontractors for the British aircraft carrier programme, since KBR owns 51% of Devonport Management Limited, the owner of the Devonport shipyard. 'UK shipyard consolidation falters', *Defense News*, 17 Jan. 2005.

⁴⁶ See also Wezeman, S. T., 'The future of the United Nations Register of Conventional Arms', SIPRI Policy Paper no. 6, SIPRI, Stockholm, 2003, URL http://www.sipri.org/>.

tones. The majority of the initiatives in this field have focused on either the broad issue of regulating multinational enterprises or the more narrow issue of combating corruption in the arms industry.⁴⁷ Often overlooked is the basic stumbling block to any kind of research in this area: the lack of publicly available information on company arms sales. This section is confined to this particular aspect of 'transparency': the extent to which companies fully and accurately report their sales, including sales for domestic procurement and for export, in the 'military', 'arms' or 'defence' sector.48

SIPRI makes a systematic effort to monitor developments in armsproducing companies for several reasons. These companies develop and produce military goods and services and thus provide the material basis for military activities. The analysis of companies' military-related financial and employment data provides a firm foundation for the study of armaments issues, both for policy makers and the wider public. It helps to assess broad trends in company strategies and industry development—including company dependence on arms sales and exports for their revenues and profits, and trends in employment—and to propose reasons for these. All these goals are hard to achieve, however, without consistent, regular and reliable reporting by companies of data on their revenues, profits, exports and employment arising from their supply of military equipment, research and other military services.

The demand for information

There is a clear demand for information on the arms industry from parliaments, the public and NGOs interested in disarmament and similar issues. Since the arms industry's products have a direct impact on national security, they are fundamentally different from other industrial products. The level of public interest in what kinds of military goods and services are produced and where they are sold is high.

Transparency is a condition for regulation. International initiatives on transparency and regulation in the military sector focus on arms exports, 49 leakage of arms to non-state actors and, recently, the foreign activities of private secur-

⁴⁷ On attempts at regulation of multinational enterprises see the brief history in Abrahams, D., 'Regulating corporations: a resource guide', United Nations Research Institute for Social Development, Geneva, July 2004, URL http://www.unrisd.org/publications/>, pp. 1–5. On the issue of corruption in the arms trade see Courtney, C., 'Corruption in the official arms trade', Transparency International (UK) Policy Research Paper no. 001, Apr. 2002, URL http://www.transparency.org/working_papers/; and the section on transparency in chapter 10 in this volume.

⁴⁸ There is no one universally accepted definition of what these industries actually are. SIPRI defines an arms sale to be the sale of military goods and services to military customers. On the different ways in which to define the defence industry see Chu, D. and Waxman, M., 'Shaping the structure of the American defense industry', eds Susman and O'Keefe (note 9), pp. 36-39.

⁴⁹ E.g., the European Union Code of Conduct on Arms Exports. For a recent study see Bauer, S. and Bromley, M., 'The European Union Code of Conduct on Arms Exports: improving the annual report', SIPRI Policy Paper no. 8, SIPRI, Stockholm, 2004, URL http://www.sipri.org/>.

Table 9.7. Numbers of companies reporting arms sales for 2003^a

		Level of transparency ^b								
	Company sample	Compar	ny sources	Other sources		_				
Country		(a) Exact data	(b) Similar data	(c) Enough information	(d) Exact data	(e) Similar data	(f) No data			
World	150	41	33	12	33	25	6			
Australia	3	1	0	0	2	0	0			
Brazil	1	1	0	0	0	0	0			
Canada	2	0	1	0	0	1	0			
Czech Republic	1	0	0	0	0	0	1			
Denmark	1	1	0	0	0	0	0			
Finland	1	1	0	0	0	0	0			
France	9	6	2	1	0	0	0			
Germany	8	4	0	0	3	0	1			
Greece	1	0	0	0	0	0	1			
India	3	1	0	0	1	1	0			
Israel	5	1	1	3	0	0	0			
Italy	4	0	0	0	4	0	0			
Japan	17	0	0	0	0	17	0			
Korea, South	4	1	0	1	1	0	1			
Netherlands	2	2	0	0	0	0	0			
Norway	1	1	0	0	0	0	0			
Russia	10	1	0	0	9	0	0			
South Africa	1	1	0	0	0	0	0			
Singapore	1	1	0	0	0	0	0			
Spain	3	0	1	1	1	0	0			
Sweden	5	2	0	0	3	0	0			
Switzerland	1	1	0	0	0	0	0			
Taiwan	2	0	0	0	0	0	2			
Turkey	4	0	0	0	4	0	0			
UK	13	7	0	3	3	0	0			
USA	47	8	28	3	2	6	0			

^a See appendix 9A for the SIPRI definition of arms sales.

Source: The SIPRI Arms Industry Database and Arms Industry Files.

b The levels of transparency are: (a) the company reports its arms sales in its normal reporting procedures, e.g., in an annual report, press release or website; (b) the company reports data that are similar to arms sales, e.g., sales to a defence ministry, some share of which may be for non-military applications; (c) the company reports sufficient information to enable a rough estimate of the company's arms sales, e.g., the defence shares of different divisions; (d) the company's arms sales are reported but not by the company itself in its normal reporting procedures, e.g., data are obtained by special request from SIPRI or are reported by a research institute, a trade journal or other media source—this may be with the cooperation of the company but not part of normal company reporting procedure, and is therefore considered to be at a lower level of transparency; (e) reports of data that are similar to arms sales are made by others than the company itself, e.g., reports by a government of the value of contracts awarded to a company in a financial year; (f) no data, or insufficient information to enable an estimate, were available to the standard SIPRI sources in 2003.

ity companies.⁵⁰ However, efficient disclosure and regulation in these areas require transparency also in the supply of goods and services, including by the supplier companies. Supplier transparency can be seen as the first level upon which transparency and regulation of other activities can be built. Without a solid structure of coherent and comparable reporting by suppliers of military goods and services, this basis is lost.

There have been different attempts to influence and regulate corporate transparency, some of which have focused on the arms industry but most on industry more generally. These have taken different forms, including industry selfregulation; multilateral initiatives; and what could be described as civilsociety-driven corporate social responsibility initiatives. None of these initiatives legally obliges a company to report its arms sales, however. Many encourage companies to be financially transparent and to reveal the extent of their social and environmental impact, but there are no enforcement mechanisms.

The supply of information

There has been no major transparency initiative that applies specifically to the 'arms industry'. While legal frameworks generally exist that compel publicly listed companies to report financial data to their shareholders, there is no legal obligation for them to report what share of their revenue comes from arms sales. Of the three broad classes of pressure identified above, the case for compelling companies to declare their arms sales fits best into the last, the civil-society-driven corporate social responsibility initiatives.

Table 9.7 presents the reporting of arms sales data for 2003 for 150 armsproducing companies in 26 countries. The table identifies six categories of disclosure, a to f, in approximate declining order of transparency. It shows that company reporting of arms sales varies widely, both between and within countries. Of the 150 companies, only 41 can be described as having fully and completely disclosed their arms sales in a company financial document (category a). At the other end of the scale there were 6 companies for which no information was available on the value of their arms sales in 2003 (category f). Between these two extremes is a 'grey area' characterized by inconsistent reporting or reporting only of data that are similar to arms sales data.⁵¹ Another point of interest is that some companies do not report these data in their widely distributed annual reports but choose instead to do so only in their less widely read '10-K' financial statements.⁵² Twelve companies did

⁵⁰ Holmqvist, C., 'Private security companies: the case for regulation', SIPRI Policy Paper no. 9, SIPRI, Stockholm, Jan. 2005, URL http://www.sipri.org/>.

⁵¹ E.g., 'sales to department of defence' may not all be for military application.

⁵² Each publicly traded company in the USA is required to file a 10-K report every year with the Securities and Exchange Commission (SEC). These documents frequently contain information that is not available in the company's annual report. E.g., the 10-K document filed with the SEC by CACI on 29 Sep. 2003 contained the following statement: 'We derived 63.6% of our total revenue in FY2003 . . . from contracts with agencies of the DoD.' The same information was not provided in their 2003 annual report. CACI International Inc., 'Form 10-K: Annual report under section 13 or 15(d) of the Securities

not report their arms sales but provided enough information to allow accurate estimates to be made (category c).

The level of transparency varies widely between the countries listed in table 9.7. Finding arms sales data for companies based in the Nordic countries presented no major problems for the present study. France and the UK also had high levels of transparency. Companies in the USA had a fair degree of transparency but often reported 'sales to the DOD' or 'sales to government' without precisely reporting their volume of arms sales. Two countries stand out as having consistently low transparency: Japan and Russia. China was not included in the study, but the level of transparency there is very low.⁵³

For Japanese companies, arms production generally accounts for only a small part of their overall revenue. Japan's pacifist constitution means that the issue of arms production is politically sensitive.⁵⁴ None of the 17 Japanese companies listed in the table provided data on their arms sales or data from which estimates could be made. Instead, SIPRI relies on a list provided annually by the Japan Defense Agency. This list ranks companies by the value of contracts awarded by the agency, so the data give only an approximation of the value of arms produced by that company in a year.

Of the sample of 10 Russian companies in table 9.7, only one, Irkut, could be described as being transparent. This is of particular interest because Irkut is the only major Russian military company to have been listed on a stock exchange: 23.3 per cent of the company's shares were sold in an initial public offering on the Russian RTS Stock Exchange in March 2004.⁵⁵ At around the same time the company website was updated and information on arms sales was added to the front page.⁵⁶ The company has also started to produce annual financial statements audited to US GAAP (Generally Accepted Accounting Principles) standards. Russian state secrecy laws still limit what Irkut can disclose,⁵⁷ but it is not unreasonable to conclude that the public listing of the company may have been a factor in this increased level of transparency.⁵⁸ The other major Russian arms-producing companies are government owned and release little information.

Exchange Act of 1934 for the fiscal year ended June 30, 2003', SEC File no. 0-8401, SEC, Washington, DC, 29 Sep. 2003, URL http://www.sec.gov/edgar/searchedgar/companysearch.html.

⁵³ See note 1.

⁵⁴ Mizushima, A., 'Japan should maintain ban on arms exports', *Asahi Shimbun*, 8 Sep. 2004, URL http://www.asahi.com/english/opinion/TKY200409080110.html.

⁵⁵ 'Russian plane maker embraces capitalism', *New York Times*, 11 Mar. 2004, section W, p. 1. KAMAZ, a Russian producer of heavy vehicles, including trucks used by militaries, became the first incorporated company in the USSR in 1990. See the company history at URL http://www.kamaz.net/eng/corporation/history/

⁵⁶ See the Irkut website, URL http://www.irkut.com/en/>.

⁵⁷ 'The operations of the Group related to the construction and sale of military aircraft are subject to the Law of the Russian Federation on State Secrets signed by the President of the Russian Federation on July 21, 1993.' Irkut, 'Consolidated financial statements December 31, 2003 and 2002', 27 Aug. 2004, URL http://www.irkut.com/en/for investors/reports/>, p. 8.

⁵⁸ Irkut announced its quarterly financial results for the first time under international accounting standards on 11 Feb. 2004, just a month before the public offering was to take place. Irkut, 'Irkut Corporation announces 9 months results under US GAAP', Press release, 11 Feb. 2004, URL http://www.irkut.com/en/news/press release archives/index.php?id48=62>

The low level of transparency in arms sales: some possible explanations

The 'arms industry' is a loosely defined group of companies engaged in a wide variety of industrial sectors. It is therefore difficult to generalize about what makes some companies more transparent than others. Several factors may act in concert to encourage a company to fully and accurately disclose the nature of its business. Based on the difficulties in gathering data encountered by the SIPRI Arms Production Project, however, it is possible to make some general observations.

Ownership model

The SIPRI arms production database shows that there is a correlation between arms industry transparency (as defined in this section) and company ownership. Shareholder-owned companies are accountable to their investors, while family- or government-owned companies are not. This may partly account for the low level of transparency in Russia, as all but one of the major armsproducing companies (Irkut) are government owned. Annual reports are produced primarily for shareholders, and government-owned companies are obliged only to report to their respective governments. Companies that are not publicly listed are also under no obligation to report their arms sales.

Shareholder-owned companies frequently come under pressure from their own investors to disclose the exact nature of their business. This may be the result of shareholder activism with political motives or simply of the demands of investors to be able to better assess the extent to which their company is dependent on arms production for revenue and profit. Requests can be made at shareholder meetings for disclosure of additional data not provided in annual company statements.59

Industry sector

There are many examples of publicly listed companies that do not fully and accurately describe their arms sales, however, so factors other than ownership model must also be relevant. One important factor is the type of work performed by the company. Companies that produce electronics may find it particularly difficult to distinguish sales that are for military purposes. Hightech military goods may have civilian applications, and there may be import-

⁵⁹ E.g., Boeing responded to a shareholder request for information on company arms sales as follows: 'Publication of such information would put Boeing at a disadvantage in its business, may breach contractual arrangements and would not be in the best interest of the Company or the majority of its shareholders.' Boeing Company, 'Proxy statement: annual meeting of shareholders, May 1, 2000', 21 Mar. 2000, URL http://www.boeing.com/companyoffices/financial/finreports/annual/00proxy/1074t08.pdf, 'Proposal 3, Shareholder Proposal on Foreign Military Contracts', p. 37. Another example is a 2004 shareholder proposal made to the Textron board of directors for a report that would include 'Categories of military equipment or components, including dual use items exported for the past three years, with as much statistical information as permissible'. Textron Inc., 'Proxy statement pursuant to Section 14(a) of the Securities Exchange Act of 1934', 19 Mar. 2004, URL http://investor.textron.com/financials/edgar. cfm>, p. 35.

ant questions of commercial sensitivity regarding proprietary technologies in such products, as well as other competition considerations.

A second important factor is the problem of definition; in other words, the question of what actually constitutes a military product. For example, a company producing radio components for military applications may not consider these as arms sales.

The 'culture of transparency'

Table 9.7 shows that some countries have particularly low levels of transparency in comparison with other parts of the world. There may be several explanations for this. Countries with only a short experience of private enterprise, such as Russia, may require additional time before pressures from shareholders and the general public result in greater transparency at the enterprise level. Equally, efforts to attract investment may prompt Russian companies to provide more details about their arms sales.⁶⁰ A lack of financial information on Chinese arms-producing companies means that China is not included in the SIPRI top 100 list.

It may also be possible to draw the conclusion that governments in regions with a precarious security environment are less inclined to allow their arms-producing companies to release data on their arms sales. This is likely to be a factor that contributes to the low level of transparency in South Korea and Taiwan. In Israel the major arms-producing companies are government owned and do not produce publicly available annual reports with detailed information on their activities.

VII. Conclusions

Arms sales by the large arms-producing companies are increasing. This is primarily the result of rising arms procurement budgets in the USA but is also caused by the concentration in the arms industry. These two trends are interlinked since concentration activities are focused on those sectors where arms procurement is expanding. Among the top 100 companies the share of services companies is increasing, owing to the privatization of services that were formerly provided by the armed services. The concentration of the arms industry in the USA and Western Europe since the early 1990s has resulted in some very large companies, comparable in size to the national output of most developing countries and even exceeding many of them.

The pattern of US acquisitions in 2004 was heavily oriented towards strengthening capabilities in the sectors that are most relevant for military transformation and homeland security. The focus on new war-fighting capabilities is clearly reflected in the US acquisitions. A large proportion of the

⁶⁰ There is a growing trend towards producing annual financial statements among Russian companies seeking to attract investment. See, e.g., Iskyan, K., 'The mighty Red Army's IPO', *Slate*, 22 Mar. 2004, URL http://fray.slate.msn.com/id/2097499/>.

acquired US companies are companies from outside the traditional arms industry which provide sought-after technological capabilities. Thus, these acquisitions contribute to a broader defence-industrial base rather than to further concentration of the industry.

In Europe, the military vehicles and military shipbuilding industries are still fragmented between many companies in several countries. Some initiatives were taken to consolidate the European military shipbuilding industry during 2004, and continued restructuring efforts can be expected in both these sectors during the next few years.

The war in Iraq has increased the share of the arms production industry held by services companies and has reinforced the focus on new military technologies. Transparency in the contracting process for work in Iraq is limited; what transparency there is depends on NGOs trying to compile information about the size and content of these contracts and about the companies that receive them.

Only limited information is available on company arms sales worldwide. This lack of data makes it difficult to establish a firm foundation for political and public discussion of issues relating to arms production and arms sales. Pressures on companies to report their arms sales are weak and current reporting relies entirely on voluntary disclosure of information by the companies themselves. Comprehensive, regular and standardized reporting can be ensured only through internationally harmonized legal requirements for companies to report.