



The consolidation of the military vehicles industry in Western Europe and the United States — Background paper for the SIPRI Yearbook 2003

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I. Introduction

The military vehicles industry has seen less consolidation than the military aircraft or electronics industries. This paper describes the current degree of consolidation and its limitations. The focus is on producers of main battle tanks from the USA and Western Europe. The industry for military vehicles has been shrinking since the end of the Cold War. The number of employees in the German military vehicles industry dropped from 44 000 to 10 000 in the years 1989 to 2000.¹ The major French producer of military vehicles, GIAT, reduced the number of its employees from 17 000 in 1991 to 7000 ten years later.² In 2000 British procurement expenditure on combat vehicles represented a mere 30 per cent of the 1990 level.³

The traditional trade in ever more modern MBTs has virtually collapsed. The armies of France, Germany, the UK, and several other countries all have holdings of modern tanks that are expected to remain in service for another 25 to 30 years.⁴ There are only few big contracts on the international markets so that the penalty for losing has increased considerably. After Krauss-Maffei Wegmann (KMW) of Germany won the competition to supply MBTs to Greece in March 2002, the pressure is weighing on companies like GIAT of France and Vickers of the United Kingdom to restructure.⁵ A great number of companies started producing lighter military vehicles for tasks such as peacekeeping. A consulting firm to the arms industry calculated that the

¹ Bundesministerium der Verteidigung *Bericht zur Lage der deutschen wehrtechnischen Industrie* [Report about the state of the German defence industry], released to the members of the defence committee of the German Federal Parliament, 3 February 2002, p. 8.

² SIPRI arms industry database.

³ Defence Analytical Services Agency (DASA), *UK Defence Statistics 2002* (National Statistics: London, 2002), p. 24, available at URL <<http://www.dasa.mod.uk/natstats/stats/ukds/2002/ukds.html>>.

⁴ Andersson, J.J., 'Cold War dinosaurs or hi-tech arms providers? The West-European land armaments industry at the turn of the millennium', Institute for Security Studies, Western European Union, *Occasional Papers*, February 2001, p. 17.

⁵ Foss, C.F., 'Greek tank choice to have no immediate impact on Vickers' *Jane's Defence Weekly*, 3 April 2002, p. 19. Forecast International/DMS press release 'World Tank Market in Transition', 11 April 2002. Lewis, J.A.C., 'Leclerc MBT assembly line under threat', *Jane's Defence Weekly*, 8 May 2002, p. 5.

number of manufacturers of light tracked vehicles worldwide increased from 12 to 55 in the ten years since 1993.⁶ These figures illustrate the overcapacities in the military vehicles sector.

The US is currently pursuing the most advanced development concepts for military vehicles by integrating them into a network of weapons systems, the future combat system (FCS). Interestingly, the prime contractor is not a traditional land armaments company but the 'systems integrator' Boeing, illustrating the decreasing significance of traditional producers of military vehicles.⁷

II. The end of the road for national integration

Concentration in the UK has led to the emergence of just one major producer of military vehicles. On 2 August 2002 Alvis announced that it was going to buy Vickers from Rolls-Royce.⁸ The deal was no surprise and its timing probably depended on the outcome of the Greek MBT competition, which resulted in a decline of the value of Vickers. The company had fielded its Challenger II, delivery of which to the British army ceased in April 2002.⁹ The acquisition leaves the new Alvis Vickers as the only producer of military combat vehicles in the UK. Alvis had started buying up its competitors in 1998 when it acquired GKN land systems. In return, GKN took a 29.9 per cent stake in Alvis. Although GKN had been in the winning consortium for the Anglo-Dutch-German Multi Role Armoured Vehicle (MRAV) in 1998¹⁰, the company decided to sell the unit because it had no orders until the start of MRAV's construction phase in 2004.¹¹ Alvis acquired the Swedish Hägglunds in 1997. Furthermore, Alvis spokespeople have indicated that the company is open to international consolidation both on the European and the transatlantic level.¹²

⁶ Forecast International, 'A major contributor to the glut — the M113', *Market Alert News Center*, 14 June 2003, available at URL <http://www.forecast1.com>.

⁷ Department of Defense press release, 'DARPA, army announce future combat system integrator', 7 March 2002, available at URL <http://www-defenselink.mil/>.

⁸ Lake, Darren, 'Armour consolidation in UK as Alvis buys Vickers', *Jane's Defence Weekly*, 7 August 2002, p. 3.

⁹ 'Standortbestimmungen der Panzerindustrie' [Determining the state of the tank industry], *antimilitarismus information*, Nov. 2001, p. 6. 'Challenger 2 main battle tank, United Kingdom', *Army-Technology.com*, viewed on 2 April 2003, available at URL <http://www.army-technology.com/projects/challenger2/index.html>.

¹⁰ The winning consortium for the MRAV included the German companies Krauss-Maffei, Wegmann, and MaK, as well as the British GKN and the French GIAT. GIAT exited the consortium after France withdrew from the MRAV programme. The losing consortium included the German Henschel/KUKA, the British producers Vickers and Alvis, as well as the French company Panhard & Levassor.

¹¹ Andersson (note 4), p. 13.

¹² Chuter, A., 'Armor mergers ahead?', *Defense News*, 24-30 June 2002, p. 1 & 4.

In Germany the outcome of the MRV competition also resulted in major restructuring. Rheinmetall acquired Henschel and KUKA, which both belonged to the losing consortium. Their owner IWKA exited the military market altogether and acquired the engineering branch of Rheinmetall Jagenberg in return. This has been interpreted as a partial re-conversion on the part of Rheinmetall.¹³ Although it belonged to the winning consortium, Krauss-Maffei sold its military activities to Wegmann, which merged the operations into KMW.¹⁴ The MRV thus led to the creation of the two major producers of military vehicles in Germany, Rheinmetall and KMW. In July 2002 the two companies set up the Panther System GmbH to build the German army's 'Igel' combat vehicle. The defence ministry reportedly awarded the contract to the joint venture rather than to a single firm to avoid a similar shake up as in 1998 – and the impression that it was favouring one 'national champion' over the other.¹⁵ As early as October 2000 KMW, Rheinmetall, and Diehl declared that they would form a 'strategic alliance' with possible cross-shareholdings to prepare the companies for further European restructuring.¹⁶ This declaration in conjunction with the German government envisaged European consolidation to precede transatlantic mergers. Yet American companies have taken an interest in the German producers. United Defense reportedly presented a takeover bid to Rheinmetall while General Dynamics is said to want to purchase the 49 per cent stake in KMW held by Siemens.¹⁷

The situation in France is very different. In 1971 GIAT became the major producer of military vehicles when the French land armaments sector was merged into one state-owned industry group. GIAT preserved a highly decentralized and inefficient character. Production is spread over 9 different locations, each with a great deal of autonomy, local political support, and their own business strategy. Restructuring started in 1990 but GIAT never became economically viable without state support. In 1993 the United Arab Emirates became the first and only export customer for the Leclerc MBT but GIAT will

¹³ Lock, P., 'Rheinmetall, un paradigme de la restructuration de l'industrie d'armement en Allemagne', in J.-P. Hébert (ed.), Naissance de l'Europe de l'armement, in *Cahier d'Etudes Stratégiques*, no. 27 (autumn 2000). Also available in English as 'Rheinmetall: a paradigm of restructuring of the defence sector in Germany', URL <<http://www.Peter-Lock.de/txt/rheinmetall.html>>.

¹⁴ Krauss-Maffei press release, 'Kartellamt genehmigt den Zusammenschluss der Wehrtechnik von Krauss-Maffei und Wegmann' [Cartel authority clears the merger of the defence units of Krauss-Maffei and Wegmann], 13 Oct. 1998.

¹⁵ Aguera, Martin, 'Germany orders joint effort on Panther', *Defense News*, 24-30 June 2002, p. 4.

¹⁶ Bundesministerium der Verteidigung, *Gemeinsame Erklärung des Bundeskanzlers und des Verteidigungsministers Deutschlands, Gerhard Schröder und Rudolf Scharping, sowie der deutschen Heeres- und Marineschiffbauindustrie zur europäischen Kooperation* [Joint declaration of the Federal Chancellor and the Defence Minister of Germany, Gerhard Schröder and Rudolf Scharping, as well as the German land armaments and naval shipbuilding industry concerning European cooperation], Berlin, 27 October 2000, available at URL <<http://www.bundeswehr.de/berlin001213/Pdf/berlin001213-brosch.pdf>>.

¹⁷ 'Krauss-Maffei: Keine Beteiligung von US Rüstungskonzernen' [Krauss-Maffei: no shareholding by US arms company], *Financial Times Deutschland*, 15 Oct. 2001, available at URL <<http://www.ftd.de/>>.

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have made a loss of € 1.3 billion on the order by the time the last tank is delivered in 2004.¹⁸ Although GIAT has laid off over half its workforce since 1991, the French state had to spend an aggregated €3.4 billion to keep the company afloat in this period.¹⁹ The French government would like to merge the company with a French or European arms producer, and to this end the state-run company is to close two more plants, reduce operations at several others, cut the workforce by nearly 4 000, and inject another € 1 billion until 2006.²⁰

Apart from producers in France, Germany, and the UK there are a number of smaller military vehicles suppliers in Europe. In Italy a consortium of Iveco Fiat and Oto Melara produce the Ariete MBT for the Italian army. The first tank was delivered in 1995 and the last of the 200 tanks was delivered in August 2002.²¹ The Finnish Patria specializes in light wheeled vehicles like the XA-series armoured vehicles. Land systems only account for about 44.7 per cent of sales of the highly diversified company.²² Patria and the Swedish Hägglunds run a 50-50 joint venture that delivers CV9030 combat vehicles to the Finnish armed forces.²³ EADS holds a 26.8 per cent stake in Patria while the Finnish state owns the rest. Patria's CEO Jorma Wiitakorpi has indicated that the group's shareholder base could become even more international once the Finnish state reduces its holding to 50.1 per cent.²⁴

The concentration of the US arms industry in the 1990s saw the emergence of two major producers in the military vehicles sector: General Dynamics and United Defense. The latter was established through the merger of FMC Defense Systems and BMV Combat Systems in 1994.²⁵ In 2000 the company bought the Swedish Bofors Defense.²⁶ General Dynamics grew through acquisitions. In 1996 it bought the sub-systems supplier Teledyne Vehicle Systems and in 1997 it acquired Lockheed Martin Armament Systems and Defense Systems.²⁷ That same year the company also tried to become the only major supplier of land systems by hosting a takeover bid for United Defense.

¹⁸ Lewis, J.A.C., '\$1 bn lifeline, staff cuts: latest bid to save GIAT', *Jane's Defence Weekly*, 16 Apr. 2002, p. 20.

¹⁹ Lewis, J.A.C., 'Paris injects more cash into GIAT', *Jane's Defence Weekly*, 12 Dec. 2001, p. 21. 'French government seeks proposals to bail out GIAT' *Airletter*, 17 Oct. 2002, p. 5.

²⁰ Lewis, J.A.C., 'Paris injects more cash into GIAT', *Jane's Defence Weekly*, 12 Dec. 2001, p. 21. 'French government seeks proposals to bail out GIAT' *Airletter*, 17 Oct. 2002, p. 5.

²¹ 'Ariete main battle tank, Italy', *Army-Technology.com*, viewed on 2 Apr. 2003, available at URL <<http://www.army-technology.com/projects/ariete/index.html>>.

²² Patria Industries, *Annual Report 2002*, Feb. 2003, p. 8.

²³ Patria Industries, *Annual Report 2001, 2002*, p. 8.

²⁴ Interview with Jorma Wiitakorpi, published in: 'A more focused, more international Patria', *Military Technology*, Aug. 2001, p. 112.

²⁵ 'Future looks bright for BMV and FMC partnership', *Jane's Defence Contracts*, Mar. 1994, p. 5.

²⁶ United Defense press release, 'United Defense completes acquisition of Bofors Defence', 8 Sept. 2000.

²⁷ Foss, C.F., 'New drive give General Dynamics market muscle', *Jane's Defence Weekly*, 19 Feb. 1997, p. 25.

The deal faced antitrust opposition by the Clinton administration and the Carlyle Group of investors bought United Defense.²⁸ In December 2002 General Dynamics acquired GM Defense, a Canadian subsidiary of General Motors, for \$1.1 billion.²⁹ With this deal General Motors continued its withdrawal from arms production, and it now retains only two arms-producing activities—military trucks and transmissions for military and civilian vehicles. In Europe, General Dynamics acquired the Spanish Santa Barbara Blindados in 2001.³⁰ Through its acquisition of GM Defense it also now owns MOWAG of Switzerland and an Australian subsidiary.

III. Internationalization

The pace of internationalization in the military vehicles industry is much slower than in the aerospace and electronics sectors. The number of international mergers and acquisitions is relatively low (see table 1). Joint ventures deal only with single programmes, giving them the character of consortia rather than truly integrated companies (see table 2). Commentators argue that reduced demand for military vehicles and the rising cost of research and development (R&D) are incentive enough for the industry to consolidate.³¹ The argument goes that the end of the road for national integration has been reached; hence international consolidation must be just around the corner.

Table 1 Selected international, West European and transatlantic acquisitions among military vehicles companies 1990-2001

Year	Acquired company (country)	Buyer company (country)
<i>West European</i>		
1990	Steyr-Daimler Puch (Austria)	MAN (Germany)
1997	Hägglunds (Sweden)	Alvis (UK)
2001	Patria Industries 26.8% (Finland)	EADS
2001	RVI (France)	Volvo (Sweden)
2002	Santa Barbara (Spain)	EWK (Germany)
<i>Transatlantic</i>		
1996	ERF (UK)	Western Star (Canada)
1999	MOWAG (Switzerland)	General Motors Canada
2000	Bofors (Sweden)	United Defense (USA)
2001	Santa Barbara Blindados (Spain)	General Dynamics (USA)

Source: SIPRI files on mergers and acquisitions.

²⁸ 'Carlyle to buy United Defense for \$ 850 million', *International Herald Tribune*, 27 Aug. 1997, p. 14.

²⁹ Bowe, C. and Mackintosh, J., 'GD buys General Motors' defence division', *Financial Times*, 20 Dec. 2002, p. 20.

³⁰ Nicoll, Alexander, 'General Dynamics interested in more European deals', *Financial Times*, 2 Apr. 2001, p. 20.

³¹ Chuter, Andrew, 'Armor mergers ahead?', *Defense News*, 24-30 June 2002, p. 1 & 4.

Yet significant international link ups remain scarce because: 1) the military vehicles sector lacks the incentives for internationalization that are present in the aerospace or electronics sector; 2) the ownership structure and government policies can act as obstacles to cross-border concentration. Compared to the aerospace and electronics sector, the military vehicles industry lacks a culture of international cooperation. Burkhard Schmitt has identified an evolutionary road to aerospace industry consolidation: companies started with simple task sharing agreements in the 1960s and 1970s, established semi-structured projects with shared marketing (like the Eurofighter), progressed to production in joint ventures, and finally consolidated in mergers and acquisitions.³² No such process is under way in the military vehicles sector, except for few exceptions. Furthermore, aerospace companies felt strong pressures from commercial markets to consolidate internationally. This pressure is considerably lower on military vehicle companies because of their lower degree of civil-military integration – although, interestingly, the average share of civil and military sales of the two sectors' companies is fairly similar.³³

The ownership structure of the military vehicles industry in Germany and France reduces the pressure for consolidation. Two families hold controlling stakes in KMW and Rheinmetall, the Bode and the Röchling family respectively.³⁴ This immunizes them against hostile takeovers and reduces the pressure to maximize short-term shareholder value. In France, state ownership of GIAT is an obstacle to an international merger. When Britain, France and Germany negotiated the creation of what was to become EADS, the state-owned Aerospatiale-Matra of France was sidetracked for much of the process. The German DASA and British Aerospace feared that Paris would exert undue influence on corporate policy. Aerospatiale-Matra thus nearly missed the opportunity to become part of the first pan-European aerospace concern. Only the acquisition of Marconi by British Aerospace led to a rapprochement between DASA and Aerospatiale-Matra.³⁵

³² Schmitt, Burkhard, 'From cooperation to integration: defence and aerospace industries in Europe', *Chaillot Papers 40*, Paris: Institute for Security Studies of the WEU, July 2000, p. 16-20.

³³ SIPRI arms industry database.

³⁴ Rheinmetall AG, *Geschäftsbericht 2001*, Düsseldorf, 2002, p. 92. Mulholland, D., 'General Dynamics set to buy 49% stake in KMW', *Jane's Defence Weekly*, 24 July 2002, p. 32.

³⁵ Schmitt (note 29), p. 34-37

Table 2: International, West European and transatlantic joint ventures among military vehicles companies, established 1991-2001.

Year	Company name (purpose)	Owner companies (country)
1992	Euro-LAV (light armoured vehicles)	MaK Systems (Germany), Panhard (France)
1999	ARTEC GmbH (Production of MRAV)	Krauss-Maffei Wegmann (Germany), GIAT Industries (France) ^a , Alvis (UK), MaK Systems (Germany)
1999	PatriaHägglunds	Patria (Finland), Hägglunds (Sweden)
1999	Vehicle Armour and Armament Ltd. (Work on stealth reconnaissance vehicle TRACER)	Vickers (UK), General Dynamics (US)

^a GIAT left the joint venture when France exited the MRAV programme.
Source: The SIPRI arms industry files on joint ventures

Finally, government policy can be an obstacle to cross-border consolidation. In France, continued state support for the failing GIAT helped to prevent European consolidation during the 1990s. GIAT had little incentive to seek consolidation — in the safe knowledge that the government would bail the company out if it ran into financial difficulties. In October 2000, a joint declaration of the German government and leading German land armaments companies supported the European consolidation in the sector but rejected a merger with a state-owned company, thus reducing the likelihood of a German-French military vehicles merger.³⁶ The German government, on the other hand, opposes takeovers of German military vehicles producers by US companies. The acquisition of the German shipyard Howaldtswerke Deutsche Werft (HDW) by an American institutional investor has led to fears of a ‘sell out’ of the German arms industry. Critics have argued that US control over strategic German producers could lead to a loss of national arms production capabilities and thus undermine Europe’s independent foreign policy.³⁷ They

³⁶ Bundesministerium der Verteidigung, *Gemeinsame Erklärung des Bundeskanzlers und des Verteidigungsministers Deutschlands, Gerhard Schröder und Rudolf Scharping, sowie der deutschen Heeres- und Marineschiffbauindustrie zur europäischen Kooperation* [Joint declaration of the Federal Chancellor and the Defence Minister of Germany, Gerhard Schröder and Rudolf Scharping, as well as the German land armaments and naval shipbuilding industry concerning European cooperation], Berlin, 27 October 2000, available at URL <<http://www.bundeswehr.de/berlin001213/Pdf/berlin001213-brosch.pdf>>.

³⁷ Dinkelacker, D., Frenzel, M. and Rohde, J., ‘The US armaments industry goes Europe? Der Fall der Howaldtswerke Deutsche Werft AG’ [The US armaments industry goes Europe? The case of the Howaldtswerke Deutsche Werft AG], *SWP Aktuell*, no. 31 (Aug. 2002), p. 3.

http://www.sipri.org/milex/aprod/mv_background.pdf

argue that the government should therefore develop the legal tools to prevent those transatlantic takeovers that are deemed detrimental to the ‘defence industrial base’. Finally, the EU does not play a role in the military vehicles sector.³⁸ The European Commission has developed policies for industries with strong civil-military integration such as space, aerospace and shipbuilding.³⁹ However, as the military vehicles sector is almost purely military, industrial policy remains firmly in the hands of national governments.

IV. Conclusions

The military vehicles industry has not achieved the same degree of consolidation as the aerospace or electronics sectors. Some production lines for MBTs will have to shut down in the next few years because there is too little demand. West European and US companies have reached the end of the road of national integration. Possible outcomes are close-downs or cross-border consolidation. However, the incentives that were present in the military aircraft and electronics sectors are absent and the ownership structure and government policy may be obstacles to consolidation.

³⁸ For a recent discussion of EU influence on arms industry consolidation see Guay, T. and Callum, R., ‘The transformation and future prospects of Europe’s defence industry’, *International Affairs*, vol. 78, no. 4 (2002), pp. 757–76.

³⁹ European Commission, *Star21: Strategic Aerospace Review for the 21st Century* (Enterprise Publications: Brussels, July 2002). Commission of the European Communities, *Green Paper: European Space Policy*, European Commission COM(2003) 17 final, Brussels, 21 Jan. 2003, p. 15, URL <http://europa.eu.int/comm/space/doc_pdf/greenpaper_en.pdf>. The European Commission supports ‘LeaderSHIP 2015’, an initiative by the shipbuilding industries of EU member states similar to the Star21 Report. Vopel, R., ‘Building LeaderSHIP’, *Enterprise Europe*, Oct.-Dec. 2002, available at URL http://europa.eu.int/comm/enterprise/library/enterprise-europe/issue9/articles/en/enterprise05_en.htm.

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