

Some Aspects Regarding Ammunition Market

Sorin Serioja Chivu^{*}, Mariana Eftimie^{**}

^{*} Military Technical Academy, 39 – 49, George Cosbuc Ave, sector 5, 050141, Bucharest, Romania
e-mail: sorin.chivu@mecca.ro

^{**} Faculty of Economic Sciences, Petroleum-Gas University of Ploiești, Bd. București 39, 100680, Ploiești, Romania
e-mail: maryeftimie@yahoo.com

Abstract

In order to correctly identify the size of the market of military technique and technology products, an analysis has to be undertaken, which has to be correlated with the armament contracts' market both in the country, and especially abroad.

Making a relevant study in this area is difficult due to the reluctance displayed by governments and companies working in the industry to disclose relevant information regarding the number and value of undertaken contracts.

The marketing strategy will aim at increasing the visibility of companies and products offered both among potential clients and among firms/institutions that are influential in collaborations or associations.

To capture the current market scale ammunition, the paper presents a brief history of its profits in the U.S. and the level of competitors.

Nationwide are analyzed the main beneficiaries of military technique and technology products; in addition to the internal situation analysis, it is examined the Fiscal Strategy of MAPN budget in 2012-2015.

Keywords: *market, military technique and technology, military spending, army's budget*

JEL Classification: *M 31*

Introduction

An analysis of military products market, based on data provided by the UN and SIPRI (bodies responsible for pursuing this segment of economic exchanges) highlights a number of trends that define the current situation, without claiming that they accurately reflect the reality.

For a better sketch of this market picture, it is relevant to note that over the period 2001-2010 (according to the UN and SIPRI reports) the number of countries that submitted reports to the UN and SIPRI related to the military spending decreased so that if in 2002, about 70 countries submitted these reports, in 2009 only 51 fulfilled this obligation. Table 1 is quite suggestive in this respect, showing the number of countries that are part of that organization and the number of those who submitted the required reports:

Table.1 The situation of UN and SIPRI member states

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
UN system										
No. of member states	189	191	191	191	191	192	192	192	192	192
No. of reports	56	70	64	68	62	69	66	68	51	53
SIPRI system										
No. of member states	164	167	167	167	167	168	168	168	168	168
No. of reports	63	61	64	62	67	60	55	53	58	50

Source: SIPRI, Year Book 2011, Armaments, Disarmament and International Security

Analyzing in relative sizes it can be observed that, although throughout the period 2001-2010 there was an average of 38% of countries that submitted reports on military spending, in 2010 only 31% of the member states submitted the reports.

A more detailed analysis that took into account the regions to which the countries that submitted reports belong, showed that the lowest percentage was recorded in the Middle East and Africa, where there are countries facing internal and external conflicts at the moment.

Moreover, according to the sources cited above, military spending stood in 2010 at about 2.6% of global GDP (\$ 236/per capita), about 1.3% higher than in 2009 and around 50% higher than in 2001 (in absolute value taking into account the dollar value in 2009).

General Market Analysis

Significant variations in the evolution of military spending can be seen in their situation by region. Thus, if in Europe a decreasing trend appeared (by 2.8% compared to 1998), in Asia such expenses slightly increased, while in South America and Africa expenses increased in 2010 compared to 2009 by 5.8% , respectively by 5.2%.

The main countries supplying and purchasing military technique and technology in 2006-2010 are presented in Table 2.

Table 2. Countries that activate on the military product market

Supplying countries	Percentage of the global export	Main purchasing countries	Percentage
USA	30	South Korea	14
		Syria	10
		Australia	9
		United Arab Emirates	8
Russia	23	India	33
		China	23
		Algeria	13
Germany	11	Greece	15
		South Africa	11
		Turkey	10
France	7	Singapore	23
		United Arab Emirates	16
		Greece	12
UK	4	USA	23
		Saudi Arabia	19
		India	10

Source: SIPRI, Year Book 2011, Armaments, Disarmament and International Security

The market trend, from the point of view of its average value, for 2001-2010, is synthesized according to the data provided by SIPRI in Figure 1, which shows an ascending evolution.

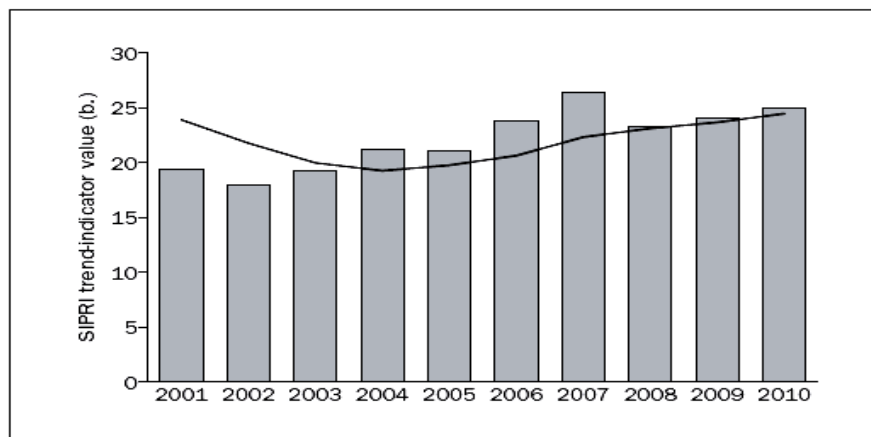


Fig. 1. The evolution of military product market (billion USD)

Source : SIPRI, Year Book 2011, Armaments, Disarmament and International Security

Regarding world military spending in 2011, there was noticed a stabilization, due to the global economic crisis, reaching a level of 1.740 billion dollars (1.320 billion euro), according to a report published by the SIPRI Institute, headquartered in Stockholm (www.business.highbeam.com).

The slight trend of 0.3% in 2011 compared with 2010 marks the end of a relatively long phase of continuous growth in military spending for the period 1998-2010.

Similar data regarding the size of military spending were provided by EDA in the periodic reports, as shown in Figure 2. One can notice the high level of military spending of the USA; the phenomenon is evident during the periods corresponding to military conflicts, respectively the wars in the Persian Gulf. In the same period, Russia recorded significant decreases in military spending, especially during the collapse of the former USSR, followed by an increase in the last years of the analysis. The amount allocated to the military field by the EU is on the rise, with small fluctuations, as shown below.

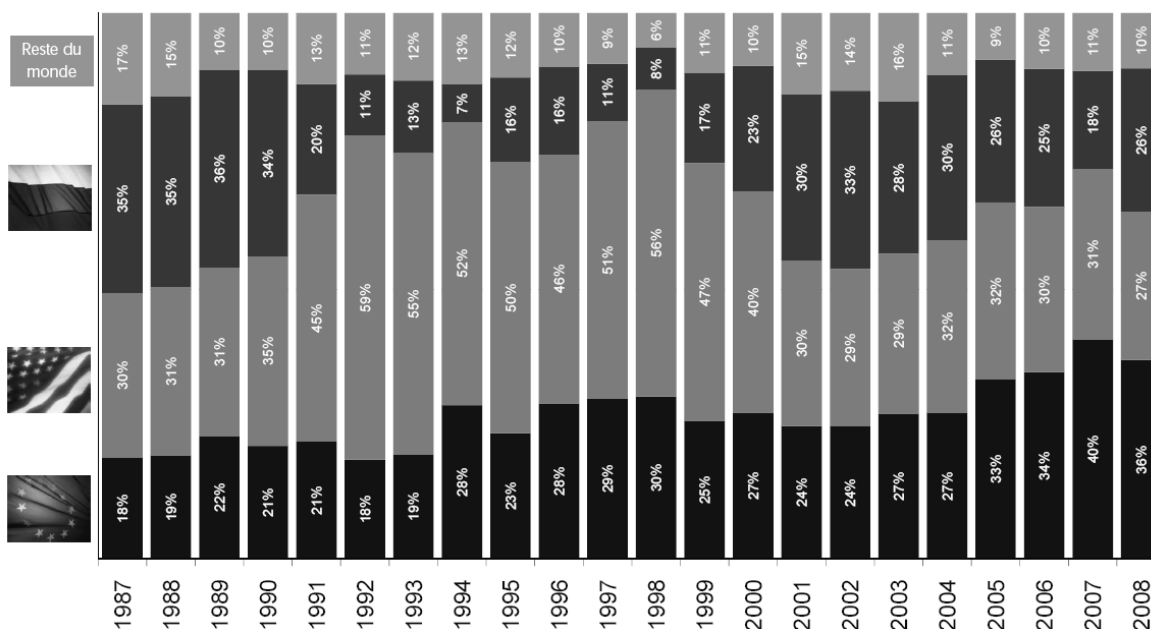


Fig. 2. Military spending on years and regions

Source: EU and US government defence spending fact sheet, Defence Data 2010 booklet

The broad similarity regarding the spending categories between the EU and the US (the two most important players in the field) is marked in Figure 3. As shown here, out of the total spending, logistics spending represents an important share, different from procurement of fight technology and equipment.

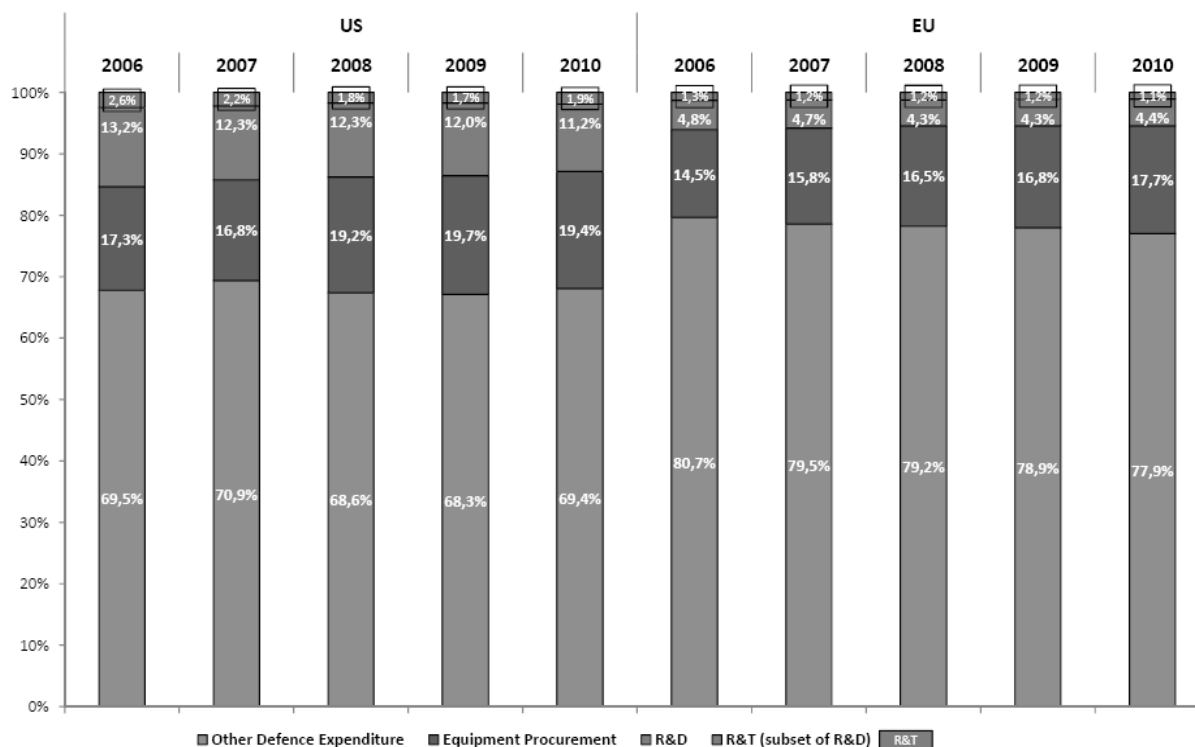


Fig. 3. Military spending structure in US and EU

Source: EU and US government defence spending fact sheet, Defence Data 2010 booklet

As regards the internal market, this must be linked to budget allocations of the main stakeholder that is the Ministry of Defence. Thus, an analysis of budget execution, and forecasts, according to existing sources show that in 2011 the amount of investment reached a value of 613.421 million lei.

The Romanian Government's fiscal-budgetary strategy for 2012-2015 provides annual allocations for the Ministry of Defence (over the above mentioned period) of about 0.8% of the GDP.

Thus, for 2012, the budget of the National Defence Ministry amounted to a total of 4.96 billion lei (0.82% of GDP), out of which more than two thirds represent staff costs, which is about 3.5 billion; 594 million lei are allocated to spending for goods and services (fuel, maintenance, purchasing various services such as: security, transportation, catering, etc.), 251 million lei are allocated to other current transfers, 544 million lei represent investment, out of which the spending on capital goods (purchases of technical modernization, technical infrastructure investment) is 524 million lei.

The budget for 2013 was of 5.25 billion lei (0.81% of GDP), out of which 3.91 billion lei for staff expenses, 591 million lei for goods and services, 277 million lei for other current transfers, 402 million lei for investment spending, out of which 381 million lei for capital spending.

In 2014 the military budget should be 5.35 billion (0.83% of GDP), out of which 3.95 billion lei staff costs, 608 million lei for procurement of goods and services, 302 million lei for other

current transfers, 443 million lei for investment, out of which 422 million lei for capital spending.

The Army budget in 2015 should be 5.45 billion lei (0.79% of GDP), out of which 4.05 billion lei for staff expenses, 608 million lei for goods and services, 307 million lei for other current transfers, 434 million lei for investment spending, out of which 413 million lei for capital spending.

The accurate evaluation of the ammunition market is done in direct correlation with the amounts shown in the description of military spending market, being an integrating part, without giving, however, an indication of its exact value.

For a clear understanding of the ammunition market size it is necessary to present a brief history of volume production of munitions in the US that, under certain conditions, (given the value of US exports) can be extrapolated to the global market.

Thus, the analyzed market history (according to [www. Business.highbeam.com](http://www.Business.highbeam.com)) indicates an increase in the total value between 1950 and 1988 from \$ 1.8 billion to \$ 4.3 billion. After 1990, as a result of the Cold War ending, the value dropped to \$ 2 billion in 1995. The same downward trend continued until 2002 when a reversal of the evolution was observed; thus, in 2005 the amount reached \$ 1.31 billion from \$ 798.8 million in 2002.

An analysis of the multitude of information on market trends as compared to the profitability of activities in this area can be made by synthesizing the data with the profit values reported by the US ammunition market leaders. Thus, the Allied Defense Group Inc. of Virginia, reported in 2010 a revenue of \$ 142.4 million, while Alliant Techsystems Inc. (ATK) of Minneapolis, reported a revenue of \$ 4.8 billion in 2010.

Regarding the exact size of the 40mm strikes market, it cannot be clearly indicated, but it can be estimated on the basis of the screening of the latest global published contracts. Thus, the analysis of this information revealed that since 2009 the main values of commercial agreements that have dealt with grenades of 40mm caliber have been the following:

- \$ 33,676,800 - supplier AMTEC Corp. - the contractual period 2010-2014;
- 22,466,802 \$ - supplier DSE Inc. - the contractual period 2010-2014;
- \$ 6,600,000 - supplier ST Engineering - the contractual period 2010;
- \$ 20.7 million – supplier ST Engineering - the contractual period 2009-2011.

On the domestic market it is worth mentioning the notice of intent 13968/17.01.2009 (source www.licitatiipublice.clubafaceri.ro) where UM 0251 requires the acquisition of 40 mm caliber shots totaling 2,545,017 RON.

Regarding the competition in this sector, there are many international companies which propose selling similar ammunition types, such companies being ST Engineering, AMTECH, ORDTECH etc.

The financial performance of these corporations (significant stakeholders in the field of military products) highlights the potential of sales on the market. In this respect, simplified financial statements of the main competitors on the market can be analyzed (see table 3).

Table 3. Main competitors' profits

Year	2011	2010	2009	2008	2007
Net profit (in millions \$) ST ENGINEERING	607,7	586,7	486,4	509,1	550,3
Net profit (in millions \$) AMTECH	120,7	106,1	93	128,9	109,4

Source: Financial Raport STE 2011

ORDTECH managed to achieve in 2011 sales of approx. \$ 100,000,000 (source: www.ordtech.com)

Regarding the national competition, the activity of SC UPS Dragomiresti is quite remarkable; at present, this company is a direct competitor, but its disadvantage lies in the fact that it is not able to produce certain parts of the blow, these being purchased from other producers in the field (including Tohan SA).

The main customers of the analyzed products are:

- *the national defense system* - which could benefit from NATO compatible products and thus may undertake joint logistics actions with the allied forces, reaching the level of these products.
- *domestic R&D entities* - access to technology by means of specialist's participation in scientific sessions;
- *companies in the defense sector* - which will be able to use parts or apply technologies developed for cal.40x46mm grenades;
- *regional and national business sector* - by boosting the competitiveness of enterprises;
- *the Romanian State* - by raising taxes related to production growth and new jobs, and by lowering the social costs of unemployment.

The Domestic Marketing Strategy and Risk Management

The marketing strategy will aim at increasing the visibility of companies and products offered both among potential clients and among firms/institutions that are influential in collaborations or associations. It will be adapted to target customers, i.e. identify cooperative solutions in the marketing of products, technical support and service. Using the structure of customers and already created sales force will have an impact on potential national and international customers.

Products, by their nature, address a small number of beneficiaries. Exceptionally, modified products can be used in other scientific applications or in other fields.

Under these conditions, the products will be purchased by the beneficiaries through direct negotiations (in the case of certain foreign markets) and when required by public procurement. Company-level strategy provides participation in these auctions both independently when conditions of specification are favorable and in association with other companies that are involved in the ammunition market, when necessary to develop joint/complete bids.

Table 4. Selling methods depending on customer types

Covered market segment	Selling method
<ul style="list-style-type: none"> • Internal and external final beneficiaries 	<ul style="list-style-type: none"> ➤ direct sales ➤ auctions
<ul style="list-style-type: none"> • companies that will integrate products into complex devices 	<ul style="list-style-type: none"> ➤ direct sales

Source: manufacturers' information

Regarding advertising strategy, the aim will be to promote products by:

- participation in domestic and international fairs and exhibitions and printing leaflets;
- manufacturers' web pages;
- publishing articles in professional journals;

The main *risks* that can affect the products' delivery are:

Technical risks:

- delays in product development;

- lack of good supervision of the product development process;
- delays in the delivery of materials;
- inability to provide technical support by the staff may result in delays in completing production;
- changing the originally planned schedule may result in delays.

Financial risks:

- non-approval of the grant application;
- delay in payments of payment applications;
- insufficient resources allocated for products, resulting in the inability to develop them in due time.

Legal risks:

- failure to comply with the legal procedures for awarding public procurement contracts;
- changing the regulatory framework.

Institutional risks:

- lack of institutional collaboration;
- lack of capacity for good management of human and material resources;
- changing the organizational structure of the applicants.

Minimizing technical risks can be done by creating a system of effective penalties for failing to meet contracts by suppliers of materials.

Minimizing financial risks can be done through rigorous forecast of the funds required to cover due payments and cash flow resulted from late payments.

Minimizing legal risks can be done by creating a system that is consistent with current European trends, which Romania intends to meet. Minimizing legal risks can be done through proper management by the project management team.

Minimizing institutional risks can be done by careful choice of a project team consisting of staff who is experienced in the implementation of projects with external financing, staff that is compatible from the point of view of interpersonal relationships.

Strengths:

- a) Reduced consumption of materials in the manufacture of blow by significantly reducing the aluminum consumption;
- b) Low resource in the manufacture of mono-block cartridge tubes with two cameras;
- c) Low manufacturing price due to reduced manufacturing cost;
- d) Using subassemblies (fuses) similar to other products already in production;
- e) Using existing manufacturing process lines already existing in manufacture and used for producing 40x47 mm blows;
- f) The high degree of technical and economic competitiveness of new product ranges.

Weaknesses:

- a) market inertia in the sense of customers orientation' towards major suppliers of military goods and towards products already on the market;
- b) reduction of global conflicts;
- c) budget cuts in the mature markets on the military spending;
- d) political conditions and global strategies can affect the competitive environment.

Opportunities:

- a) market analysis highlighted a significant demand from both end users and product integrators;

- b) potential clients' orientation towards relatively inexpensive solutions and low maintenance cost;
- c) collaboration network enables approaching foreign markets.

Threats:

- a) military sector may be affected by economic developments;
- b) internal profile market can achieve a level of saturation after a certain interval of time, given certain economic conditions;
- c) development of new reliable and competitive products.

Conclusions

The data presented on the financial results of the competitors cannot be classified as relevant, due to the lack of information surrounding the industry, both nationally and internationally. This is even the result of the following situation: the financial part is not separately highlighted by the exclusive selling ammunition component, the great players being at the same time military equipment manufacturers. Despite this, it can be noticed that the major companies in the field obtain large profits, fact that proves the size and profitability of this type of market.

Generally speaking, the ammunition market and cal.40x46mm strikes with explosive and inert NATO compatible grenade; in particular, it has its strengths, weaknesses, opportunities and threats.

The results of the present analysis indicate that the ammunition manufacturers must continuously develop quality products and always keep pace with the latest demands of the end users. Thus, factors that are critical to the success of companies operating in the manufacturing field of military products include the following categories:

- o Price competition
- o Continuous development of military products;
- o Quality of products;
- o Customer confidence in the product;
- o Compatibility.

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