

***Case No COMP/M.4653 -
MBDA / BAYERN-
CHEMIE***

Only the English text is available and authentic.

**REGULATION (EC) No 139/2004
MERGER PROCEDURE**

Article 6(1)(b) NON-OPPOSITION
Date: 31/07/2007

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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 31-VII-2007

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In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus [...]. Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

MERGER PROCEDURE
ARTICLE 6(1)(b) DECISION

To the notifying parties:

Dear Sir/Madam,

**Subject: Case No COMP/M.4653 - MBDA/ BAYERN-CHEMIE
Notification of 26/06/2007 pursuant to Article 4 of Council Regulation
No 139/2004¹**

1. On 26.06.2007, the Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004 ("the Merger Regulation") by which the undertakings BAE Systems plc ("BAES"), European Aeronautic Defence and Space Company EADS N. V ("EADS") and Finmeccanica – Societa per Azioni ("FNM") (together "the parties") acquire within the meaning of Article 3(1)(b) of the Merger Regulation joint control of Bayern-Chemie Gesellschaft fur flugchemische Antriebe mbH ("Bayern-Chemie") and its subsidiary Protac SA ("Protac") (together "the Target") through the MBDA group ("MBDA") by way of purchase of shares.

I. THE PARTIES

2. **BAES** is a British publicly quoted company active in advanced systems for the defence and commercial aerospace sectors, in particular military aircraft, surface ships, submarines, fighting vehicles, radars, avionics, communication, electronics and guided weapons through MBDA.
3. **EADS**, incorporated in the Netherlands, is a defence and aerospace company jointly controlled by Daimler-Chrysler, the French State and Lagardère². It is active in

¹ OJ L 24, 29.1.2004, p. 1.

² See Commission decision COMP/M.1745 EADS

commercial aircraft, telecommunications equipment, civil and military helicopters, space vehicles, drones, military aircraft, defence electronics and systems and guided weapons through MBDA.

4. **FNM** is a publicly quoted Italian company which manufactures and sells aircraft, helicopters, satellites, radars, avionics and communication systems, naval systems, armoured vehicles, land and naval guns and guided weapons through MBDA. The three foregoing companies (BAES, EADS and FNM) are referred to as "the parties".
5. **MBDA** is a French undertaking active in guided weapons and guided weapons systems. It is jointly controlled by BAES, EADS and FNM with effective interests of 37.5%, 37.5% and 25% respectively.
6. **The Target** comprises a German parent company, Bayern-Chemie and its French subsidiary Protac. The Target is jointly controlled and owned by EADS and Thales³, each holding a 50% stake. Bayern-Chemie and Protac are active in the supply of propulsion systems for tactical guided weapons and, more specifically, solid rocket motors and solid ramjets

II. THE CONCENTRATION AND THE COMMUNITY DIMENSION

7. The present operation concerns the acquisition of joint control over the Target by BAES, EADS and FNM through their JV MBDA. Pursuant to a Share Purchase and Transfer Agreement signed on 11 May 2007, Thales and EADS will sell their existing stakes in the Target to MBDA.
8. Following the transaction, the Target will become a wholly-owned subsidiary of MBDA [...]. It results in a change in the quality of control over the Target since BAES and FNM will replace Thales, while EADS remains as a controlling shareholder⁴.
9. The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 billion⁵. Each of them have a Community-wide turnover in excess of EUR 250 million, but they do not achieve more than two-thirds of their aggregate Community-wide turnover within one and the same Member State. The notified operation therefore has a Community dimension.

III. ASSESSMENT

10. The proposed transaction concerns the production and sale of propulsion systems (solid rocket motors and solid ramjets) for tactical guided weapons (or missiles), where Bayern-Chemie is active. MBDA together with SNPE also jointly controls Roxel, another supplier of propulsion systems. Therefore, potential horizontal effects in this

³ Thales is a French company and its activities are primarily defence, aerospace, transport and civil security applications.

⁴ See Commission Jurisdictional notice, §87.

⁵ Turnover calculated in accordance with Article 5(1) of the Merger Regulation and the Commission Notice on the calculation of turnover (OJ C66, 2.3.1998, p25).

market have to be considered. There is also a vertical link between Bayern-Chemie and MBDA because the latter is one of the world's leading suppliers of guided weapons, which is a downstream market of propulsion systems.

A. Relevant product markets

11. A propulsion system is a device that produces thrust to push an object forward. In a previous decision (SNPE/MBDA)⁶, the Commission has found a distinction between propulsion systems for tactical missiles on the one hand and propulsion systems for strategic ballistic missiles on the other hand⁷, due to a lack of demand-side and supply-side substitutability. Respondents to the market investigation have confirmed this distinction.
12. Different technologies can be used in propulsion systems for tactical missiles: solid rocket motors, liquid and solid ramjets and turbo engines. New technologies such as hybrid rocket engines, gel propellant technology and pulse detonation engines remain in the early stages of development and are not yet mature to challenge the solid rocket motors market. The target is only active in solid rocket motors and solid ramjets.
13. Solid rocket motors (SRM) provide thrust by accelerating the exhaust produced by the combustion of a propellant through a nozzle. It is the most common type of propulsion system. Ramjet technology is different in the sense that air is drawn in to assist in the creation of thrust. In terms of performance, ramjets provide much higher distance coverage than solid rocket motors at a price which can be five to ten times higher than for a SRM. A possible distinction between SRM and ramjets has been left open in the SNPE/MBDA case.
14. Ramjets can either use *solid* or *liquid fuel* and there are significant differences in both technologies: liquid ramjets use hydrocarbon fuel (kerosene) which is injected directly into the combustor whereas solid ramjets use solid fuel (propergol) which is cast along the outer wall of the combustor. Liquid ramjets have been used to propel tactical missiles for many years but solid ramjets are still at an early stage of development in the EEA. On the demand side, solid ramjets are preferred over liquid ramjets when variations in altitude or in speed are limited. On the supply side, it can be noted that Roxel supplies liquid ramjets for strategic missiles manufactured by MBDA but it is not active in solid ramjet technology. On the other hand, Bayern-Chemie is active in solid ramjets but does not supply liquid ramjets. This demonstrates the absence of supply-side substitutability between solid and liquid ramjets. As the Target does not manufacture liquid ramjets, the assessment will focus on solid ramjet technology.
15. The market investigation confirmed the lack of demand-side substitutability between SRM and ramjet technology. First, it appeared that these products are not full substitutes and ramjets need to be complemented by a SRM. For example in the case of Meteor ([...] missile programme which is based on solid ramjet [...]), the propulsion system incorporates

⁶ Case n° COMP/M.2938 SNPE/MBDA/JV of 30 October 2002.

⁷ Tactical missiles are used for specific geographically limited actions to protect against the threat of attack or to destroy the enemy infrastructure or capacity whereas strategic missiles are dedicated to State defence and have longer range and destruction capabilities. This distinction is obviously relevant for the markets of missiles (see below).

a solid rocket motor which accelerates the missile to reach a minimum speed and a ramjet which takes over after the boost phase. Second, given their main features and costs, solid ramjets are designed for far-reaching high speed cruise air-to-air missiles which need thrust through the whole flight whereas SRM are preferably used on shorter and medium-range ground-to-air missiles. Solid ramjets are currently being developed solely for incorporation in the air-to-air Meteor missile in the EEA whereas SRM are used on all other applications. As regards turbo engines, which are neither manufactured by the parties nor the Target, they are designed for cruise missiles with long range and relatively low speed. Respondents to the market investigation confirmed that in the future, the market will still be dominated by SRM for short and medium range missiles and turbo engines for the long range missiles.

16. In this case the possible distinction between SRM and solid ramjets can, however, be left open as the transaction does not raise competition concerns under any product market definition.
17. As regards tactical missiles, the Commission has found in previous decisions⁸ that they are generally classified according to functionality and products characteristics (air-to-air, surface-to-air/land, surface-to-air/naval, air-to-surface, anti-ships and anti-tanks) and the range (very short range, short range, medium range and long range). The customers of tactical missiles are Ministries of Defence (MoDs). For the purpose of the present case, this question might probably be left open as it would not materially affect the competitive assessment below.

B. Relevant geographic market

18. In the SNPE/MBDA decision, the Commission has considered that the geographic market for SRM was national where a domestic supplier exists and international (including the EEA and the US) otherwise. As regards the downstream missiles' market, previous Commission decisions have indicated that the geographic market was worldwide but national when a domestic supplier exists.
19. The parties submit that the geographic scope of the SRM and missiles markets is "trans-national" and worldwide respectively, regardless of whether a domestic supplier exists, for the following reasons: there have been recent moves towards multilateral collaborative procurement for major defence projects; decreasing military budgets have lead European prime contractors to increasingly consider US manufacturers of sub-components as possible suppliers even in countries with an established industry base; the use of offset schemes (whereby MoDs request that their national industries are assigned with a proportion of the overall workload generated by a given programme) is in this context gradually declining.
20. A majority of respondents to the market investigation has indicated that both the missile and propulsion system markets are becoming rather international in scope through the growing trend of international cooperation programmes. Furthermore non-domestic propulsion companies are regularly invited to bid by missile prime contractors. The market investigation has pointed to a number of instances where foreign companies won contracts even in countries with an established industry base: the Norwegian company Nammo-Raufoss was awarded by MBDA France a contract to develop and produce the rocket motor

⁸ See inter alia COMP/M.1745 EADS of 11 may 2000

for the Exocet Block 3 in 2004 and Bayern-Chemie produced a rocket motor for the ALARM missile manufactured by Matra BAE Dynamics (now BAES).

21. Despite the views expressed about the developments in the market, on the basis of the procurement data for the last five years and the market shares of the parties and its competitors, it appears that these markets still have a strong national dimension. Although the MoDs leave it up to the main contractor to select the appropriate subcontractor for the propulsion system, they are keen to guarantee to their domestic supplier a work share in proportion to their involvement in the programme⁹. The market investigation has not confirmed that the role of offset schemes is gradually decreasing and the parties themselves have stressed in their notification that offset schemes remain a distinctive feature of defence procurement¹⁰. Whilst prime contractors may invite foreign suppliers to submit bids for their propulsion systems, the outcome of past procurements shows that there remain substantial national preferences in practice. For example the French MoD submitted that it has procured during the last five years 85% of its requirements in solid rocket motors from French SRM suppliers.
22. Market shares in solid rocket motors (see table below) show that some suppliers are only present in their home countries (Avio in Italy, Safran in France) whilst Roxel holds much stronger positions in France and the UK than in the rest of the EEA¹¹. These market shares reflect the outcome of past procurements by MoDs since propulsion systems are only procured with missiles through tenders launched by Defence departments. As regards the presence of US suppliers at the sub-systems level, the market investigation has confirmed that US suppliers are not active as bidders in European programmes, with very limited exceptions when there is no European engine capable of the required performance.
23. In conclusion, although there may be some developments and initiatives which might point to an international scope of these markets, it cannot today be considered that the geographic markets of SRM and/or solid ramjets are wider than national in Member States where domestic suppliers exist. These countries with indigenous industry are France, UK, Italy and to a lesser extent Germany.
24. MoDs with no domestic capabilities can, apart from cooperating in tactical weapons programmes, procure "off the shelf" tactical weapons systems on the international market (generally the US). In this case, the system is procured as a package with no individual selection of the propulsion system. For these countries, the market might be considered as international (including the EEA and the US).

⁹ One MOD has indicated during the market investigation that the use of offset scheme is still a basic requirement.

¹⁰ Form CO page 54 "*Offset schemes therefore guarantee the presence of a diverse range of manufacturers, thereby preserving effective competition*"

¹¹ Roxel is a combination of the former activities in solid rocket motors of Celerg (France) and Royal Ordnance (UK).

C. Horizontal effects

Solid Rocket Motors (SRM)

25. On the market for **SRM**, the competitive landscape is shown in the table below:

	Market value €m	Target	Roxel	Avio	Safran SPS	Nammo- Raufoss	Aerojet	ATK	Others
Global	650	[0-5%]	[15-25%]	[0-5%]	[0-5%]	[0-5%]	[20-30%]	[20-30%]	[20-30%]
Europe	250	[10-20%]	[40-50%]	[0-5%]	[0-5%]	[10-20%]	[0-5%]	[0-5%]	[0-5%]
France	[50-100]	[10-20%]	[55-65%]	-	[10-20%]	[5-10%]	[0-5%]	[0-5%]	-
Germany	[0-50]	[15-25%]	[15-25%]	-	-	[30-40%]	[10-20%]	[10-20%]	[10-20%]
Italy	[0-50]	[0-5%]	[15-25%]	[45-55%]	-	[5-10%]	[0-5%]	[0-5%]	[10-20%]
UK	[50-100]	[5-10%]	[75-85%]	-	-	[5-10%]	[0-5%]	[0-5%]	[5-10%]
Other EEA Countries	[0-50]	[5-10%]	[5-10%]	-	-	[35-45%]	[10-20%]	[10-20%]	[10-20%]

Source: Estimate of the parties

26. As noted above, the horizontal aspects of the transaction stem from the fact that the parties via MBDA hold an interest in Roxel, a JV between MBDA and SNPE. Furthermore, EADS indirectly holds an interest in Nammo-Raufoss. Prior to the transaction, Bayern-Chemie is jointly controlled by EADS and Thales. Through the concentration, Thales is replaced by BAES and FNM as jointly controlling partners.
27. However, the concentration does not materially change the existing relationships. BAES and FNM do not contribute additional horizontal links in markets where Bayern-Chemie is active. The link to Roxel existed already pre-transaction, as EADS jointly controls MBDA. Furthermore, it has to be noted that the links to Bayern-Chemie's competitors exist via JV's, which include independent third parties. Roxel is jointly controlled by MBDA together with SNPE. EADS' interest in Nammo-Raufoss exists via Patria. Nammo-Raufoss is a joint venture between the Norwegian State and Patria, and Patria is a JV between EADS and the Finnish State.
28. As regards the parties' market positions as shown in the table above, it has to be noted that such markets shares do not fully reflect the competitive situation on the market. Defence contracts, including subcontracts, are normally put for tender in bidding competitions. On all possible geographic levels, there are some competitors active who do not have any link to the parties and their JVs such as Avio, or Safran. The American companies Aerojet and ATK are also active in the EEA through sales generated by propulsion systems incorporated in US missiles. It has to be taken into account that according to the market investigation future programmes for new missiles requiring

SRM are likely to be bi- or multilateral programmes, where the circle of candidate bidders is typically wider.

29. Finally, the specificities of the procurement of defence products must be taken into account. Suppliers face a single customer in each country, the national Ministry of Defence. This customer therefore can exercise significant buyer power which, given the existence of alternative suppliers on all levels, is likely to be able to neutralise strong positions on the supplier side. MoDs did not raise concerns with regard to the present transaction in the market investigation.
30. On a potential market for **solid ramjets**, no horizontal overlaps arise, as Bayern-Chemie is the only supplier of solid ramjets, and only in the context of the Meteor programme.
31. On a combined market for SRM and solid ramjets, the market positions would be lower, and all the other countervailing factors mentioned above apply in the same manner.
32. In the light of the above, in particular the absence of any material impact of the transaction on existing horizontal relationships, it can be concluded that the concentration does not lead to horizontal competition concerns.

D. Vertical effects

Input foreclosure

33. The Commission's market investigation confirmed the validity of the parties' arguments that the transaction would not lead to the foreclosure of missile suppliers as regards their access to *solid rocket motors*. Indeed, as the majority of the Target's sales are already made to MBDA, it is evident that other missile suppliers are not dependent upon the target and as such would not be particularly affected by the transaction. Currently the target's only other customer procuring SRM and competing with MBDA on the GWS markets is Thales. The fact that Thales is abandoning control over Bayern-Chemie via the present transaction can be seen as an indication that they do not have supply concerns for the future.
34. With regard to *solid ramjets*, the parties submit that in the absence of future demand for this technology, the issue of input foreclosure is not relevant. Even if such future demand for solid ramjets would appear, the parties submit that the strong purchasing power of MoDs would preclude input foreclosure. The MoD respondents in the market investigation confirmed the absence of any European projects requiring solid ramjet technology (apart from Meteor) in the medium to long term. Some respondents have indicated that solid ramjets could be used on missiles in Russia. However [...] solid ramjets have been developed by the Target only in the context of the Meteor programme. It should be noted that one competitor indicated that ramjet technology might be selected for use in a specific missile programme. However, further investigation revealed that the type of ramjet concerned in the programme in question is liquid rather than solid and linked to a strategic rather than tactical missile programme. The Target is neither active in liquid ramjets nor the supply of propulsion systems for strategic missiles. Hence the transaction does not raise any issues as regards input foreclosure.

Customer foreclosure

35. MBDA is a significant player in the missile markets. On a global market for missiles, it ranks first together with Raytheon with a market share of [30-40%] (worldwide). Competitors are Lockheed-Martin ([20-30%]), Thalès ([5-10%]), Boeing ([0-5%]) and Saab ([0-5%]). At the national level in the EEA, MBDA holds high shares in the UK ([55-65%]), France ([75-85%]), Germany ([50-60%]) and Italy ([65-75%]).
36. The market investigation showed that MBDA will have neither the ability nor the incentive to foreclose other SRM suppliers by limiting their access to missiles programmes awarded to MBDA. In particular, even if MBDA were to absorb the target's entire output, this would not be sufficient for it to satisfy all its SRM requirements with the result that MBDA will have to continue to source substantial amounts from third party SRM suppliers. One respondent in the market investigation indicated that MBDA as a main contractor for future missile systems may favour one of its wholly or partially owned propulsion system companies. Although the market investigation confirmed that the choice of propulsion system supplier is generally left to the prime contractor, usually after competitive tendering procedures, there have been a number of instances (including the Meteor programme) where the customer (MoD) has influenced the choice of propulsion system supplier. In this way, MoDs are able to directly influence the choice of propulsion system supplier for a particular programme. In countries with domestic suppliers, MoDs have the power to guarantee the durability of their respective national industries through offset schemes (for multinational programmes) or national programmes, thereby preventing any risk that the competitors of the Target would be foreclosed as regards their access to missiles programmes awarded to MBDA.
37. Even in the majority of cases where the choice of propulsion system supplier rests with the prime contractor, it is in the latter's interest to select what it considers to be the most cost-effective solution based on the programme's requirements set out by the MoDs such as performance and price. MoDs confirmed that they have specific powers in terms of control of the sub-systems purchasing plans, as regards technical capabilities of invited suppliers, the selection process of potential suppliers and the final choice of the prime contractor.
38. In the light of the above, it can be concluded that the concentration does not raise serious vertical competition concerns.

VI. CONCLUSION

39. For the above reasons, the Commission has decided not to oppose the notified operation and to declare it compatible with the common market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of Council Regulation (EC) No 139/2004.

For the Commission

(signed)

Neelie KROES
Member of the Commission