



Brussels, 19.6.2017
C(2017) 4113 final

<p>In the published version of this decision, some information has been omitted, pursuant to articles 30 and 31 of Council Regulation (EU) 2015/1589 of 13 July 2015 laying down detailed rules for the application of Article 108 of the Treaty on the Functioning of the European Union, concerning non-disclosure of information covered by professional secrecy. The omissions are shown thus [...]</p>	<p style="text-align: center;">PUBLIC VERSION</p> <p>This document is made available for information purposes only.</p>
---	--

Subject: SA.45183 (2017/N) – France – Avance remboursable pour le programme de recherche et développement de l'hélicoptère X6

SA.45185 (2017/N) – Germany – Repayable advances for the research and development programme of the Airbus X6 helicopter

Sirs,

1. PROCEDURE

- (1) By letters dated 20 and 21 April 2016, the French and German authorities pre-notified the above mentioned measure. The Commission requested supplementary information by letter dated 15 June 2016 to which the French and German authorities replied by letters dated 13 July, 22 and 23 September, 17 and 23 November 2016.
- (2) In addition, three meetings were held between the Commission services and the French and German authorities on 3 May, 18 July and 13 December 2016. Following the last meeting, the Commission sent a request for information on 21 December 2016 to which the French and German authorities replied on 2 March 2017 after requesting two extensions of the deadline for responding. They provided additional complementary information on 31 March 2017.

Son Excellence Monsieur Jean-Yves LE DRIAN
Ministre de l'Europe et des Affaires étrangères
Quai d'Orsay 37
F - 75007 - PARIS

Seiner Exzellenz Herrn Sigmar GABRIEL
Bundesminister des Auswärtigen
Werderscher Markt 1
D - 10117 Berlin

- (3) By letter dated 11 April 2017, the Commission invited France and Germany to proceed with the formal notification of the measure which they did on 21 and 25 April respectively.
- (4) By letters dated 15 May 2017, the French and German authorities agreed to waive their rights deriving from Article 342 of the TFEU in conjunction with Article 3 of Regulation 1/1958¹ and to have the present decision adopted and notified in English.

2. DESCRIPTION OF THE MEASURE

2.1. Objective of the measure

- (5) The notified measure concerns the partial public financing of the development of the new Airbus helicopter X6.
- (6) The new X6 helicopter is designed [...]. The French and German authorities claim that the X6 will provide higher standards in terms of performance (higher radius of action coupled with improved fuel efficiency), comfort, safety and lower operating costs. The X6 is to be positioned in the segment of heavy duty helicopters (take-off weight between 11 and 15 tonnes).
- (7) According to the French and German authorities, the scope of the project is such that the associated risks are very high and the investments required exceed the self-financing capability of Airbus Helicopters SAS and of Airbus Group², in a context where the financial markets are not willing to finance an R&D project that is considered as very risky and for which the return on investment is expected over a rather long period of time.
- (8) Therefore, in order to carry out the development of the X6 project, Airbus helicopters has requested partial financing support from both the French and the German governments.

2.2. The beneficiary

- (9) Airbus Helicopters SAS and Airbus Helicopters Deutschland GmbH (hereafter "Airbus Helicopters") will receive the public funding for the development of the helicopter X6.
- (10) Airbus Helicopters SAS is a 100% subsidiary of Airbus SE. Formerly known as Eurocopter Group, it was established in 1992 after the merger of the rotorcraft divisions of Aérospatiale (France) and Messerschmitt Bölkow Blohm (MBB - Germany)³. The company was rebranded Airbus Helicopter SAS in January 2014. Airbus Helicopters SAS specialises in the production and sales of helicopters, offering a wide range of civil and military helicopters, from light, single-engine to heavy ones⁴.

¹ Council Regulation No 1 determining the languages to be used by the European Economic Community, OJ 17, 6.10.1958, p. 385

² In the text of this decision Airbus Group refers to Airbus SE and its subsidiaries.

³ European Commission, 25.02.1991, IV/M.0017 – Aérospatiale/MBB, OJ C 59 of 08.03.1991.

⁴ Source : http://www.airbushelicopters.com/website/en/ref/Mission-&-Values_164.html

- (11) Airbus Helicopters Deutschland GmbH is a 100% subsidiary of Airbus Helicopters SAS, headquartered in Donauwörth, Germany, where the two light civil helicopters H135 and H145 as well as the military helicopters models Tiger and NH90 are produced and technically maintained.
- (12) Today, the Airbus Helicopters division is mainly present in three countries: in France, at Marignane⁵ (8 750 employees) and La Courneuve (700 employees) (with the subsidiary Airbus Helicopters SAS), in Germany at Donauwörth⁶ and Kassel (5 600 employees – with the subsidiary Airbus Helicopters Deutschland GmbH) and in Spain at Madrid and Albacete (450 employees – with the subsidiary Airbus Helicopters España SA). Moreover, it has a global presence through a network of 31 subsidiaries and customers centers (7 400 employees). Airbus Helicopters is therefore a major employer in a high technology innovative sector which generated turnover of EUR 6.7 billion in 2016.
- (13) Airbus Helicopters and Airbus Helicopters Deutschland GmbH are controlled directly by the Airbus SE which has two other divisions: Airbus Commercial Aircraft (EUR 45.2 billion of turnover in 2016) and Airbus Defence and Space (EUR 11.9 billion of turnover in 2016).
- (14) The French and German authorities confirmed that Airbus Helicopters SAS and Airbus Helicopters Deutschland GmbH are not companies in difficulty in the meaning of Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty⁷.

2.3. Granting decisions

- (15) By letter dated 16 November 2012, Airbus Helicopters SAS requested support from the French State for the development of the new X6 helicopter. The French authorities confirmed they will financially support the project on 22 June 2015⁸. Airbus Helicopters SAS started the works on 13 March 2013.
- (16) By letter dated 28 November 2014, Airbus Helicopters Deutschland GmbH requested support from the German State. The German authorities confirmed they will financially support the project on 23 January 2015⁹. Airbus Helicopters Deutschland GmbH started the works in October 2015.
- (17) The internal decision to launch the X6 project was taken [...].

2.4. Description of the project

2.4.1. R&D&I activities and innovative content of the X6 project

- (18) The project is divided into 7 work packages:

⁵ Marignane is main Airbus Helicopters site where the Super Puma activities are based.

⁶ Airbus Helicopters Deutschland GmbH will supply several work packages, mainly the development of the airframe and the integration of specific vehicle systems.

⁷ OJ C 249 of 31.07.2014, p.1

⁸ Prime Minister's decision n° 2015-AERO-05 of 22 June 2015.

⁹ Letter from State Secretary in the Ministry of Economy and Energy to Airbus Helicopters Deutschland GmbH' CEO dated 23 January 2015.

- (a) engine and dynamic assemblies: the X6 will integrate an innovative [...] engine [...] ¹⁰. Dynamic assemblies include the development and integration of a new main gear box and rotor blades [...]. This work package consists of 3 sub-packages:

Innovative breakthrough	
Engine architecture	The X6 will integrate an innovative [...] engine [...]. The main risks and challenges concern [...] and [...].
Main gear box	The main gear box (MGB) of the X6 will be [...] new, capable of [...]. Works will focus on [...].
Rotor and blades	The X6 will be equipped with new blade profiles called "Protege". The new blades will integrate [...] ¹¹ , thus, increasing aircraft performance and decreasing external noises and fuel consumption. The X6 will also integrate a blade folding system designed to [...] as well as a de-icing system [...].

Table 1: Main innovative breakthrough of R&D&I activities of the engine and dynamic assemblies work package

- (b) control and advanced piloting laws: this package will consist in developing an electrical flight control system [...]. The flight control system will be based on [...] Fly-by-Wire ¹². The flight control system and [...] are designed to change the way of piloting and performing missions during operation. According to the French and German authorities, they will significantly reduce the risks of human errors in piloting and may also allow performing more perilous missions and increasing the flight envelope (low speed flight, hover, low altitude flight).
- (c) avionics: with the development and integration of a new [...] display system, the French and German authorities indicate that the X6 will become [...].

Innovative breakthrough	
Avionics	A completely new [...] Display System ([...]) will be developed leading to a fully integrated consistent cockpit and better safety and operational efficiency, through reduced pilot workload and increased situational awareness. Interconnectivity will be improved, with the development of [...]. As a result, the helicopter will become [...].

Table 2: Main innovative breakthrough of R&D&I activities of the avionics work package

- (d) versatility of cabin interior: modularity of the cabin's equipment ([...]) should be possible within [...].
- (e) composite airframe and manufacturing process: the frame of the helicopter structure will be realised in [...] which implies the acquisition of technical knowledge about the behaviour of the composite components and integration of this information in the manufacturing process and tool simulation methods. The objective here is to reduce [...]. This will also lead to [...].

Innovative breakthrough	
[...] frame	The frames of the X6 helicopter structure will be realized in [...]. This means that the frame, [...]. As a result [...] are reduced [...] are minimized ([...]).
[...] materials	[...]
Windows	A new windshield concept with [...] glass [...] will be evaluated and developed. It will improve [...] and increase [...].

¹⁰ [...]

¹¹ [...]

¹² According to the French and German authorities, this will be the first time Fly-by-wire with advanced control laws will be certified on such a civil heavy aircraft.

Table 3: Main innovative breakthrough of R&D&I activities of the composite airframe and manufacturing process work package

- (f) continuous maintenance: the X6 will also be equipped with [...], the continuous maintenance concept ("CBM"), that should allow performance of maintenance operations as needed, [...]. The CBM concept will [...].
- (g) maturity concept: Airbus will implement new innovative processes in order to [...]. The maturity requirement will be part of the initial development phases. Airbus therefore aims at improving [...].

2.4.2. *Specific works on Key Enabling technologies (KETs)*

- (19) The French and German authorities indicated that the project will also bring two significant contributions to the Key Enabling Technologies (KETs) initiative¹³.
- (20) Firstly, the X6 will integrate [...] Radio Frequency Identification Technology (RFID) that qualifies as a KET in the nano/semi-conductors sector¹⁴. RFID is a technology that incorporates the use of electromagnetic or electrostatic coupling in the radio frequency portion of the electromagnetic spectrum to uniquely and automatically identify and track tags attached to objects. This therefore allows to [...]. An RFID system consists of three components: an antenna and transceiver (often combined into one reader) and a transponder (the tag). The tag contains electronically stored information. [...].
- (21) Airbus Helicopters will study [...] RFID tags that do not exist on the market: [...].
- (22) These tags will be developed by Airbus Helicopters [...]. The French and German authorities claim these technologies can be used in the automobile sector or any other sector that could use automatic configurations.
- (23) Secondly, Airbus intends to build the X6 with an Advanced Manufacturing System (AMS). This specific digital tool, qualifying as KET, will be developed with [...]. Today, the manufacturing of helicopter would [...] ([...]¹⁵ and [...]¹⁶).

2.4.3. *Rules on Intellectual Property Rights (IPRs)*

- (24) Independent suppliers of Airbus Helicopters will be responsible for R&D activities in 12 out of 25 sub-work packages. These R&D works are to be performed on key innovations of the new helicopter, e.g. engine architecture, piloting laws and avionics.
- (25) [...] The performance of the contracts covers the initial research and development phases but also the production, sale and support phases. Therefore, the contracts cover the rights of use of IPR for the purpose of performing the R&D&I activities

¹³ Communication from the Commission of 30 September 2009, "Preparing for our future: Developing a common strategy for key enabling technologies in the EU", COM (2009) 512 final.

¹⁴ These RFID components (tags), used to mark the components/parts of the helicopter, shall contain a lot of information [...].

¹⁵ [...]

¹⁶ [...]

concerned as well as further rights of use of such IPRs, notably for further exploitation, alone or with third parties.

- (26) In this regard, the French and German authorities indicated that, for the suppliers already selected, it has been agreed that, [...].

2.5. Description of the aid measure

2.5.1. Eligible costs

- (27) The French and German authorities indicated that the activities performed during the project qualify as "industrial research" and "experimental development" in the meaning of point 15 (q) and (j) of the Framework for State aid for research and development and innovation (hereafter "the R&D&I Framework"¹⁷), the major part of the activities consisting of experimental development.
- (28) They indicated that the total costs for the development, certification and industrial production of the X6 are estimated at EUR [...] over the period 2013- [...].
- (29) The eligible costs represent an amount of EUR 1.502,5 billion¹⁸ over the period 2013- [...] out of which EUR 1.313,5 billion are eligible with respect to the French aid instrument and EUR 189 million are eligible with respect to the German aid instrument¹⁹.

Eligible costs in million EUR	France			Germany	Total
	Industrial Research	Experimental Development	Total	Experimental development	
Personnel costs	[...]	[...]	[...]	[...]	[...]
Costs of instruments and equipment	[...]	[...]	[...]	[...]	[...]
Costs of buildings and land	[...]	[...]	[...]	[...]	[...]
Costs of contractual research, knowledge and patents bought or licensed from external sources and costs of consultancy services	[...]	[...]	[...]	[...]	[...]
Additional overheads incurred directly as a result of the project ²⁰	[...]	[...]	[...]	[...]	[...]
Other operating expenses ²¹	[...]	[...]	[...]	[...]	[...]
Total	232.2	1081.3	1313.5	189	1502.5

Table 4: Eligible costs per category of expenditure, per research category, per Member State (in million EUR)

- (30) The French and German authorities also provided a breakdown of the costs of the project per year.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	[...]	Total
French eligible	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	1 313.5
German eligible			[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	188.9

¹⁷ OJ C 198 of 27.06.2014, p. 1

¹⁸ [...]

¹⁹ All activities carried out by Airbus Helicopter Deutschland GmbH qualify as experimental development in the meaning of point 15(j) of the RDI Framework.

²⁰ E.g. travelling costs.

²¹ E.g. costs related to flight hours (including insurance costs and risk premiums, for instance).

<i>non eligible</i>			[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]
TOTAL	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]

Table 5: Total costs per year (in million EUR)

2.5.2. The aid instrument

2.5.2.1. The French aid instrument

- (31) The aid given by the French authorities takes the form of a repayable advance provided according to the stated expenditures of Airbus Helicopters SAS as the project unfolds. [...] upon each new delivery of an X6 aircraft ([...]), the manufacturer will repay the relevant part of the advance to the State. Once the principal and the interest on the advance have been repaid, Airbus Helicopters SAS will continue to pay the French State royalties calculated on the basis of sales of X6 helicopters, as well as on revenue generated by spare parts.
- (32) [...]. According to the French authorities, this public support enables risk-sharing between the manufacturer and the State, thereby facilitating the company's decision-making and future development of the activity.
- (33) **Amount of the repayable advance:** the repayable amount of the advance envisaged for Airbus Helicopters for development of the X6 helicopter is EUR 330 million²².
- (34) **Interest rate applicable:** the interest rate applied to the repayable advance will be [...] % per year. The French authorities specified that this rate has been calculated, in line with the Communication on the revision of the method for setting the reference and discount rates²³ ("the 2008 Reference Rate Communication"), by adding [...] basis points to the base rate of the European Commission at the date when Airbus Helicopters obtained the agreement of the French State regarding the modalities of the project support, which at that time (22 June 2015) was 0.22%.
- (35) **Provisional payment schedule:** the repayable advance of EUR 330 million will be paid between 2017 and [...] according to the following provisional schedule: [...]

Table 6: Provisional payment schedule ([...]) (in million EUR)

- (36) **Repayment period:** the repayable advance agreement concluded between the French authorities and Airbus Helicopters will remain valid until [...]. This period is designed to cover the lifespan of the X6 project, as well as that of any possible derivatives²⁴.

²² The French authorities clarified that this is a maximum amount and in no case a lump sum. The French regulations in force do not provide for its actual payment until the corresponding expenditures have been made.

²³ OJ C 14, 19.1.2008, p. 6.

²⁴ If Airbus Helicopters develops derivative versions of the X6, the contribution of these derivatives to payment of the repayable advance and to the royalty will be evaluated in light of the "commonality" (i.e. the technological proximity) between the derived products and the basic versions of the X6,

- (37) **Sales projections:** the repayment scheme is based on a forecast market share of [...] % for the future X6 aircraft in the civil and parapublic heavy market and on deliveries commencing in [...]. The sales projections used to establish the programme are, year per year, the following: [...]

Table 7: Provisional schedule of X6 deliveries ([...])

- (38) **Amounts of repayments:** [...], the unit repayment amount per aircraft will be progressive:
- (a) for the first [...] helicopters sold, Airbus Helicopters will repay EUR [...] per aircraft to the French authorities;
 - (b) for the next [...] helicopters sold ([...] to [...]), EUR [...] per aircraft;
 - (c) for helicopters sold afterwards ([...] and above) and until full repayment of the advance, EUR [...] per aircraft.
- (39) On the basis of forecast deliveries, the French authorities anticipate that full repayment of the advance (principal and interest) should take place upon the delivery of [...] aircrafts expected in [...].
- (40) [...].
- (41) If the X6 sales do not permit full repayment of the advance by [...], it has been agreed that [...]. The French authorities indicated that this would not affect payment of royalties described in recital (42) below.
- (42) **Amount of and ceiling on the royalties:** after repayment of the advance, Airbus Helicopters will pay the French State a royalty of [...] % of revenue resulting from the X6 Project sales of aircraft and spares. Payments of this royalty are limited in time until the earlier of:
- (a) expiry of the convention, which is set for [...]; or
 - (b) when, in a value discounted at the same rate of [...] %, the accumulated amount of the royalty reaches [...] % of the repayable amount of the advance.
- (43) The French authorities consider that this double ceiling limits both the royalty payment period, and the cost of the advance to the manufacturer, while providing a return to the State for taking on risks and for contributing to the development of the project.

2.5.2.2. The German aid instrument

- (44) The aid given by the German authorities takes the form of a loan (EUR 15.27 million) combined with a repayable advance (EUR 47.25 million). The German authorities indicated that contract negotiations on both instruments will start after the approval of the notified measure by the European Commission. They however provided general information on the conditions to be applied.

possible recovery of the markets and the additional development efforts required on the part of the manufacturer.

- (45) **Loan instrument:** the loan shall be redeemed on the basis of annual, unconditional instalments, to be rendered irrespective of the aircraft deliveries and/or project success. A repayment period of [...] years is currently envisaged ([...]), starting in [...]. The interest rate to be applied will be a market rate (equal to the higher three-months EURIBOR applicable for the relevant time period and the reference rate applicable to Germany plus a margin depending on the rating of Airbus Helicopters SAS and Airbus Helicopters Deutschland GmbH). The German authorities confirmed that the interest rate will be calculated in line with the 2008 Reference Rate Communication that provides a proxy for the market rates applicable to loans.
- (46) **Repayable advance instrument:** the German authorities indicated that [...] ²⁵ [...].
- (47) The repayment period of the advance would be [...] years (from [...]) and repayment would be made in [...]. On the basis of forecast deliveries, the German authorities anticipate that full repayment of the advance (principal and interest) should take place upon delivery of [...] aircrafts. Throughout this period, repayments will be of the same amount for every aircraft delivered (no progression). Once the advance is fully recovered, a royalty (success fee) of at least [...] % of the sales price of the each aircraft will be applied.

2.5.3. Aid intensities

- (48) Airbus Helicopters will receive State support amounting to a total of EUR 393 million ²⁶ that will be effected as follows, depending on the activities to be performed:
- (a) EUR 82 million of aid for industrial research activities, i.e. an aid intensity of 35.3 %;
 - (b) EUR 295.25 million of aid for experimental development activities in form of repayable advances, i.e. an aid intensity of 23.2%.
 - (c) EUR 15.27 million of support for experimental development activities in form of a market-conform loan.

3. ASSESSMENT

- (49) Given its objectives and the aid amounts involved, the measure is subject to individual notification and compatibility assessment under the R&D&I Framework.

3.1. Existence of aid

- (50) Article 107(1) TFEU states that “*any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods*”

²⁵ [...].

²⁶ The amount of EUR 393 million comprises of EUR 330 million of repayable advance from France, EUR 47.25 million of a repayable advance from Germany and EUR 15.27 million of a loan from Germany.

shall, in so far as it affects trade between Member States, be incompatible with the internal market”.

- (51) Both the French and German aid instruments (repayable advances and loan instrument) will be financed with funds stemming from French and German State budgets. The measure therefore involves State resources. The decision to grant the financing has been taken by the Prime Minister in France and by the Federal Minister for Economic Affairs and Energy in Germany. Thus, the aid is imputable to the State.
- (52) As indicated in recital (45) above, a part of the German support to the project will be granted in form of a loan of EUR 15.27 million. In order to determine the interest rate applicable to this loan, the German authorities committed to apply the provisions of the 2008 Reference rate Communication. The German authorities confirmed [...]. The Commission used, in its case practice, the 2008 Reference Rate Communication, as a method for assessing the market conformity of the loans²⁷. Therefore the Commission considers that this support, as it will be granted on market terms on the basis of this established methodology, does not qualify as aid within the meaning of Article 107(1) TFEU.
- (53) The support granted in form of repayable advance by France and Germany, is granted to Airbus Helicopter SAS and Airbus Helicopters Deutschland GmbH that are both directly controlled by the Airbus SE. The aid is granted to a single economic entity and therefore the measure is selective. By contributing to the financing of their R&D&I activities with funds that would not have been available otherwise under normal market conditions, the measure gives Airbus Helicopter SAS and Airbus Helicopters Deutschland GmbH a selective economic advantage.
- (54) Airbus Helicopters SAS and Airbus Helicopters Deutschland GmbH are operating in the market of helicopters which is an economic sector open to intra-community trade. Therefore, the measure may affect trade between Member States.
- (55) By reinforcing Airbus Helicopters SAS and Airbus Helicopters Deutschland GmbH's position in the targeted market, the measure is therefore liable to distort competition by putting the beneficiary at a competitive advantage as compared to its competitors.
- (56) In the light of the foregoing, the Commission considers that only the public resources granted to Airbus Helicopter SAS and Airbus Helicopters Deutschland GmbH in form of a repayable advance for the development of the X6 Helicopter qualify as aid within the meaning of Article 107(1) TFEU.

3.2. Legality of the aid – standstill clause

- (57) The measure has been notified on 21 and 25 April 2017 by the French and German authorities respectively, in line with the provisions of the R&D&I Framework.

²⁷ See case Commission decision of 03.10.2013 in case SA.23600 (C-38/2008, ex NN53/2007) – Germany - Financing arrangements concerning Munich Airport Terminal 2. OJ L 313 of 29.11.2013.

- (58) The French and German authorities both confirmed that effective implementation of their granting decisions is conditional upon the approval of the notified measure by the European Commission.
- (59) Therefore, the France and German authorities have complied with their obligations under Article 108(3) TFEU.

3.3. Compatibility

- (60) According to Article 107(3)(c) TFEU, aid may be compatible with the internal market if it facilitates the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest.
- (61) The objective of the notified measure is to promote R&D activities. Such aid falls within the scope of the R&D&I Framework, as defined in section 1 of this Framework.
- (62) The R&D&I Framework sets forth criteria based on which the Commission will assess whether aid for certain R&D&I activities is compatible with the internal market under Article 107(3)(c) TFEU.

3.3.1. Contribution to a well-defined objective of common interest

- (63) The French and German authorities emphasized in their notification that the project contributes to increase R&D&I investment, which is one of the objectives of common interest of the EU 2020 Strategy. They indicated that the project fosters additional R&D&I efforts from the company in order to develop helicopters with higher performance, improved safety and increased competitiveness in response to market expectations globally.
- (64) According to the French and German authorities, the X6 project will result in a very innovative and high-technology product that contributes to further improve existing standards, which is fully in line with the Europe 2020 Initiative Innovation Union Communication²⁸. In this document, the Commission underlined the need for the Union and for Member States to "*continue to invest in R&D*", "*to improve conditions and access to finance for research and innovation, to ensure that innovative ideas can be turned into products and services that create growth and jobs*".
- (65) In order to demonstrate that the aid granted to Airbus strengthens the R&D&I activities in the Union, the French and German authorities, in accordance with point 46 of the R&D&I Framework, provided the following information:
- (66) **Increase in the scope of the project:** [...].
- (67) **Increase in total R&D&I spending by the aid beneficiary and increase in skilled employees assigned to the R&D&I activities:** in the absence of State support, Airbus Helicopters would not incur the expenses necessary to finance the

²⁸ Communication of 3 October 2010 from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *Europe 2020 Flagship Initiative Innovation Union* COM(2010) 546 final.

project's total costs, i.e. EUR [...] over [...]. The French and German authorities indicated that this total amount, which corresponds to EUR [...] per year on average, will represent approximately [...] % of Airbus Helicopters' R&D total expenditure over the next 5 years. On average [...] employees per year (full-time equivalent) will be dedicated to the X6 R&D activities.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	[...]	Total
R&D staff	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]
R&D expenditures (€ million)	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]

Table 8: Airbus Helicopters R&D Expenditures and Staff for the X6 Project (2013-[...])

- (68) The Commission concludes that the aid, by increasing the scope and size of the project, leads to a net increase of the R&D&I performed by the company.
- (69) As explained below in recitals (148) to (152) below, Airbus Helicopters is the only European helicopter manufacturer present in the heavy-duty helicopter segment of the market. In accordance with point 47 of the R&D&I Framework, the French and German authorities explained that, [...]. The Commission can conclude that, by allowing Airbus to develop a new innovative product on this specific segment of the market, the aid will therefore contribute to the overall increase of R&D&I spending in the aeronautic sector, [...].
- (70) In light of the considerations set out in recitals (63) to (69) above, the Commission concludes that the measure contributes to a well-defined objective of common interest.

3.3.2. Need for State intervention

- (71) Section 4.2 of the R&D&I Framework indicates that "*State aid should be targeted towards situations where it can bring about a material improvement that the market cannot deliver on its own*". In this case, it is therefore necessary to verify whether the implementation of the X6 project could, absent the aid, be compromised by one or more market failures. The French and German authorities consider in particular that the project suffers from imperfect and asymmetric information on the financial markets (section 3.3.2.1 below). They also consider that the aid will generate positive environmental externalities (section 3.3.2.2 below) as well as knowledge spill-overs (section 3.3.2.3 below).

3.3.2.1. Imperfect and asymmetric information

(a) Risks affecting the project

- (72) The French and German authorities indicated that the risks linked to the development of the X6 project were assessed [...]. Those risks have been evaluated by the company at EUR [...] (probability weighted) and, in the worst case scenario at EUR [...]. They indicated that the development of the X6 project is more specifically affected by the following risks:
- (73) **Technological risks:** due to the high level of innovation of the X6 (especially with new systems such as the [...]), the technological risks are essentially linked to technical issues that can occur at the early stage of the project and are considered by the company as exceeding risks usually observed in more standard

development. The fact that the project has several highly innovative work streams which will be carried out by a range of third party suppliers is relevant for the analysis of this particular project. Airbus Helicopters is essentially an integrator of parts and it therefore suffers risks from delays from any single supplier ([...]) and these risks can be significant (as quantified in the previous paragraph).

- (74) A large number of potentially cumulative technological hazards²⁹ could quickly lead to an unacceptable failure in performance which could require unforeseen additional work (studies, modifications, tests) in order to reach the initial objective, hence leading to significant delays and additional costs (both for the different components and the project as a whole).
- (75) The French and German authorities stressed that, although it is common in the aviation industry for manufacturers to be confronted with additional costs, in the present case the extent of the additional costs is totally unpredictable and in case expected to reach an even higher level due to the ambition of the project.
- (76) **Commercial risks:** the French and German authorities indicated that unlike aeroplane manufacturers, helicopter manufacturers do not have a critical number of orders before deciding to launch a new model. The order book is only filled once the development activities have started. In addition, helicopter manufacturers shall answer with a unique helicopter platform to different needs covering a full range of missions, offering polyvalence for a very large envelope in terms of performance but also in terms of comfort and mission equipment. In addition to these general commercial risks affecting helicopter manufacturers, the French and German authorities indicated that the heavy helicopter market is a key market for Airbus Helicopters³⁰ and the X6 project is particularly tied with the oil & gas (O&G) market and missions which, according to them, adds another layer of risk given the volatility of this market and the current downturn. In addition to these risks, recent serious accidents of helicopters (in particular of heavy aircraft operating on the O&G market) add a further level of risk for the company³¹.
- (77) The Commission recognizes that the development of the X6 helicopter intrinsically bears exceptionally high technological and commercial risks due to a combination of characteristics, which include: the large number of highly innovative features to be developed in this project (also by third parties) and the particular reliance of future demand on a given industry with strong dependence on overall economic growth (which means that the X6 project has specific risk that cannot be easily diversified away by investors). In these circumstances, it seems necessary to verify whether, and if so, to what extent, the traditional financiers' perception of the project's financial viability is likely to jeopardize its financing.

(b) Airbus' financial constraints and access to finance

- (78) As a preamble, the French and German authorities recalled that the aviation industry suffers from general market failure associated with the length of the

²⁹ [...]

³⁰ The French and German authorities indicated that the Super Puma / H225 program generated [...] % of Airbus Helicopters turnover in [...].

³¹ Following the crash of a H225 off the coast of Norway on 29 April 2016, all Super Pumas were grounded by the European Aviation Safety Agency ("EASA") until 7 October 2016.

cycles for programmes spreading over twenty to thirty years at a minimum. Because of the significant risks, manufacturers who specialize in the aerospace sector suffer for their long-term R&D&I projects from a general lack of finance. The amortization period of the development projects is far too long to attract "traditional" financing on the financial markets and private investors are not in a position to correctly appreciate the scale of the risks, both technological and commercial, which fluctuate according to numerous exogenous factors. According to them, the financial markets do not offer an instrument for sharing these risks that is comparable to "repayable advance" type of financing³².

- (79) The French and German authorities indicated that in elaborating the X6 project, the company has continuously explored several sources of funding, including intra-group financing, external financing and other risk sharing opportunities.
- (80) **Intra-group financing:** the French and German authorities indicated that within the Airbus Group, divisions and subsidiaries are responsible for the financing of their own projects and for new programmes launched to renew their product range. Airbus SE (as the parent company) is in charge of corporate financing and must ensure that the financial structure of the group as a whole ([...]) is such as to guarantee that the group remains a viable business concern and maintains reasonable cash flow levels.
- (81) The Commission considers that the argument that Airbus Group is generally not able to shift funds across divisions to finance a project cannot be accepted as a separate market failure that would in itself justify the need for state intervention. However, the French and German authorities explained convincingly that in this particular case due to the unique nature of extraordinary (non-diversifiable) risks involved in the project no intra-group financing was available for the X6 project.
- (82) In general, in holding companies it is to be expected that funds within the company group are allocated efficiently towards projects that yield the highest return on investment. In the current case, this is further strengthened by the fact that Airbus SE is listed on the stock exchange as a holding company and is rated by credit agencies as a group. Therefore, the claim that within "Airbus Group each division is responsible for (i) evaluating and selecting the best development projects to complement existing product offerings and (ii) financing them through its own funds and complementary external financing."³³ is not sufficient to justify a lack of funds available across various divisions. The task of the central management of a holding company is to maximize the value of the company to their shareholders. This occurs by allocating funds to the most profitable projects in the firm, including across company divisions, potentially over a longer time horizon.

³² For a more detailed argumentation regarding the difficulties helicopter manufacturer face in financing their R&D programmes, see case SA.33467 (2011/N) – France – *Avance remboursable pour le développement de l'hélicoptère X4*, Decision of 07.03.2012, OJ C 2006 of 13.07.2012, recitals 99 to 101 and case SA.33731 (2011/N) – Italy – *Aiuto alla RSI ad AgustaWestland SpA – Nuovo modello elicottero da transport light intermediate AW 169*, Decision of 07.03.2012, OJ C 135 of 09.05.2012, recitals 55 and following.

³³ Reply to Request for Information of 21 December 2016 (Set #2), of 1 March 2017, Response to Question 25.

- (83) Even though in theory there may be some short term restrictions to the ability of a holding company to shift funds across various divisions, in the present case, such a theoretical restriction does not seem relevant. The X6 project is a long term, strategic project of Airbus Group as a whole, which had been prepared and planned ahead for a longer period.
- (84) Furthermore, even if it had been documented that the various Airbus divisions finance projects *"through [their] own funds and complementary external financing"*³⁴, it must be noted that such a company policy does not affect the possibility to provide equity across divisions. External loans are just one source of raising funds for a project. Airbus Group however can also provide equity to finance projects of various divisions, or decide at the level of the Group to retain profits within a particular division in order to increase equity in that division. This seems to [...] ³⁵[...] ³⁶.
- (85) The Commission therefore considers that in theory intra-group financing may, in general, be available across various divisions of Airbus Group. However, the Commission accepts the arguments of the French and German authorities stating that in this particular case intra-group financing is not available for the X6 project, due to the unique nature and extraordinary (non-diversifiable) risks involved in the project. To substantiate this claim, the French and German authorities provided an extensive catalogue of risks that affect the X6 project³⁷.
- (86) In principle, the riskier a project, the higher the rate of return that fund providers will require, i.e. the higher the project's cost of capital (WACC). As known from the corporate finance literature, not all types of risks are equally relevant in this respect³⁸. When considering the cost of capital, investors are not necessarily concerned about the risk of the project as such, but rather about risk they cannot *"diversify away"* by investing in a large portfolio of projects or firms in the economy. This is called the non-diversifiable (or systemic) risk.
- (87) The French and German authorities add that *"the development risk of the X6 is largely specific to the project and therefore diversifiable (at least at the level of investors), the commercial risk has a strong non-diversifiable component. On the one hand, this is due to the project's strong dependence on overall economic growth and the general business cycle. On the other hand, it is also possible to refer to other relevant (and systemic) risk factors such as the oil price or political risks [...]"*³⁹.
- (88) The French and German authorities added furthermore that the Airbus Group self-financing capabilities would not be sufficient to cover the entire costs of the project. Airbus Helicopters division expects to spend, between 2016 and 2019, more than EUR [...] ⁴⁰ and cannot devote more internal R&D resources to the X6

³⁴ Reply to Request for Information of 21 December 2016 (Set #2), of 1 March 2017, Response to Question 25.

³⁵ [...].

³⁶ [...]

³⁷ Notification memorandum, par.224-241.

³⁸ For a discussion of diversifiable and non-diversifiable risks see for example Brealey, Myers, Allen, *"Principles of Corporate Finance"*, McGraw-Hill, 10. Edition, page 198, 202-205, 252, 901.

³⁹ Reply to Request for Information of 21 December 2016 (Set #2) of 1 March 2017, Response to Question 30.

⁴⁰ [...]

project. According to them, financing the X6 through resources from Airbus Group would impact the group's cash flow negatively.

- (89) The Commission therefore considers that the extraordinary exposure of the X6 project to commercial risks that are systemic and atypical even within Airbus Helicopters, as well as the magnitude of initial investment to start the works make intra-group financing absent state support very unlikely.
- (90) **External financing:** the French and German authorities indicated that in order to finance the development of the X6 programme, Airbus Helicopters considered several types of external financing, without positive result. According to them, traditional loans cannot be considered for the X6 programme which far exceeds the nature and the level of risk that is acceptable for banking institutions. The requests made to banks were framed so as to correspond to the key characteristics of the needs of Airbus Helicopters for such a project, notably in terms of maturity and risk sharing and to allow banks to consider a large array of possible instruments. The company provided rejection letters from several banks which indicated they don't provide long term risk-sharing financial instruments⁴¹. The Commission notes that such an outcome is to be expected as the risk-sharing type of finance required by Airbus Helicopters, which resembles equity, does not represent the core business of banks⁴². If therefore due to the unique and extraordinary nature of (non-deversifiable) risks involved in the project no intra-group financing was available, it is very unlikely that banks that are not operationally active in the helicopter manufacturing industry would be willing to bear similar risks as industry players.
- (91) As the market did not appear to provide any financial solution adequately addressing the specific needs and risks of the X6 Project in order for Airbus Helicopters to be able to carry out the strategic development required, the company requested aid from France and Germany in order to share the technological and commercial risks of the project and limit the level of financial exposure generated by the expenditure of the program over the duration of the project.
- (92) It should be noted that, in the absence of financial instruments available on the market, the company explored the possibility of **industrial partnerships with risk sharing**, i.e. partnering with suppliers consisting in sharing the risk of the overall costs of the project. This has resulted in an agreement with an [...] manufacturer [...]⁴³. The French and German authorities indicated that other opportunities may be explored during selection of suppliers with other major suppliers (including in particular [...]) but these will not represent any significant risk sharing. The French and German authorities indicated that such opportunities would not cover significant amount of research and development costs compared to the total costs of the project. In addition, they indicated that such partnerships

⁴¹ Letter from [...], 18 July 2014; letter from [...], 25 July 2014; letter from [...], 24 March 2015.

⁴² It emerges explicitly from the rejection letters Airbus Helicopters received from banks that the requested measure is closer to equity than debt. [...] refused to offer financing "[...]" associated with the program. These are risks an equity investor typically bears. [...] in its refusal letter explicitly suggested turning to equity investors instead of banks (par. 257-258 of Notification memorandum). Also the claim in par. 251 of the Prenotification memorandum is consistent with the view that the funding requested is closer to equity than debt: "[...]"

⁴³ [...].

bear specific constraints (in terms of design of the product for instance) and risks of additional costs that would be difficult to incorporate in a project of the scope of the X6.

- (93) In light of the foregoing, the Commission recognizes that, considering the level of technological breakthrough and risks inherent to the project, its financing via external traditional sources was very unlikely to occur.

3.3.2.2. Positive externalities generated by the X6 project

- (94) According to the French and German authorities, the beneficial effect of the project will be to spread part of the technological knowledge acquired throughout the supply chain. Among the many innovations that will be integrated into the new X6 model, many will be beneficial to the entire aerospace industry, and some even to other related industrial sectors (e.g. automotive).
- (95) **Environmental externalities:** the French and German authorities indicated that Airbus Helicopters' ambition for the X6 is not only to comply with applicable environmental regulations at the time of its certification, but also to anticipate future requirements and to minimise, from the design on, the entire environmental footprint of the aircraft, from production until dismantling. In particular, Airbus Helicopters has set itself the goal of reducing gas emissions (CO₂, NOX) beyond current standards⁴⁴ and working on noise emissions through the optimization of aerodynamics and engine performance⁴⁵ (keep the external noise - cumulative margin with regards to ICAO limits at least at [...] (category B).
- (96) Specific efforts will be made on hazardous materials and recycling policy. The selection of materials and manufacturing processes used will go beyond the latest REACH environmental regulations and also anticipate the list of chemical products drawn up by the European Chemicals Agency. Airbus Helicopters has defined its own list, "Airbus Helicopters Priority Declarable Substances List" (ECPDSL) which goes beyond the substances currently prohibited and identified substances that could be considered as dangerous in the future: radioactive, carcinogenic mutagens that are toxic for reproduction (CMR) and substances harmful to the ozone layer (ODS).
- (97) **Safety conditions:** the French and German authorities are supporting and promoting initiatives aiming at developing aircraft whose characteristics go beyond regulatory requirements in terms of flight safety. The innovations and major breakthroughs brought by the X6 will influence the evolution of the standards that are considered as guidelines for helicopter manufacturers and operators. These new standards are frequently discussed and considered by the International Association of Oil & Gas Producers⁴⁶, ensuring consistent approach to training, management and best practice for the oil and gas exploration and production industry. R&D works performed in the framework of the X6 project [...].

⁴⁴ [...]

⁴⁵ [...]

⁴⁶ Now IOGP and formerly known as OGP.

3.3.2.3. Knowledge spill-overs

- (98) The French and German authorities indicated that, as regards intellectual property rights, Airbus Helicopters' suppliers [...], including within the helicopter sector and even with Airbus' competitors. According to them, this freedom of use opens significant opportunities in terms of knowledge spill-overs in the helicopter sector and beyond. This should also allow Airbus Helicopters' competitors to benefit from the X6 major innovation.
- (99) In this regard, they indicated that Airbus Helicopters' suppliers and their sub-contractors will use the IP to [...].
- (100) Point 49 of the R&D&I Framework states that *"neither are all benefits of R&D&I activities externalities, nor does the presence of externalities alone automatically mean that state aid is compatible with the internal market. In general, consumers are willing to pay for the direct benefit of new products and services while firms can appropriate the benefits from their investment through other existing instruments, such as IPR"*.
- (101) The Commission takes note, on the basis of the examples provided by the French and German authorities, that some of the innovations developed in the framework of the X6 project might be reused within the helicopter sector, subject to some adaptations to customer's needs and technologies, but also in other sectors such as automotive, Internet of Things etc. However, the Commission is of the opinion that this diffusion of technologies, because they are protected by IPRs and suppliers will expect a return from investment, cannot justify in itself the existence of a market failure in the form of knowledge spill-overs in the meaning of the R&D&I Framework.

3.3.2.4. Conclusion on the market failure

- (102) The Commission considers that, due to imperfect and asymmetric information between the company and the financial markets, Airbus Helicopters has no satisfactory solution to finance the X6 project on the financial markets. Such a market failure has already been recognized by the Commission in the past in other aeronautical cases and in the present case⁴⁷, the particularity of the project (in terms of technological and commercial risks) confirms the existence imperfect and asymmetric information between the company and the financial markets.

3.3.3. Appropriateness of the aid measure

- (103) According to section 4.3 of the R&D&I Framework, the Commission evaluates the appropriateness of the aid measure among alternative policy instruments and among different aid instruments.
- (104) The French and German authorities are of the opinion that the notified State aid constitutes an appropriate instrument to allow the implementation of the X6 project and address the identified market failures. The repayable advances allow the risk inherent in R&D&I activities to be shared with the State, when the market is not ready to bear that risk. The mechanism also guarantees a financial return to the State in case of success.

⁴⁷ See cases SA.33467 and SA.33731, footnote 32 above.

- (105) The French and German authorities consider that no other means of intervention would achieve the same result without causing a larger distortion of competition and effect on trade. According to them, the adoption of specific regulations encouraging the development of innovations would not be realistic due to the technological uncertainties that weigh on R&D activities. Similarly, a fiscal measure of general scope in favour of R&D would only partially meet the objective: it would certainly encourage R&D in companies, but is ineffective in respect of risk-sharing, which is, however, a key element in inducing industrialists to agree quickly to undertake an intense R&D effort.
- (106) In addition, a loan given by the States, not combined with other instruments, would also not constitute an appropriate instrument insofar as it would not in any way reduce the risk to which Airbus Helicopters is exposed in the context of the project implementation.
- (107) The Commission is also of the opinion that repayable advances constitute an appropriate instrument to finance large R&D project considering the large amount of the initial investment, the high risks and the long period for amortization⁴⁸. Moreover, this type of instrument does not provide excessive advantage to the company in case of success because the State will be fully reimbursed, with interest, and will in addition receive royalties once the advance is repaid.
- (108) In light of the above, the Commission considers that State aid is an appropriate policy instruments to achieve the objective of common interest. Moreover, the choice of repayable advances is an appropriate aid instrument in order to incentivise Airbus Helicopters to perform the X6 project.

3.3.4. Incentive effect

- (109) In order to enable the Commission to assess the compatibility of an aid, the Member State(s) must provide evidence demonstrating that the aid has an incentive effect, i.e. the aid must change the behaviour of the beneficiary in such a way that it engages in additional activities, which it would not carry out without the aid or would carry out in a restricted or different manner⁴⁹. For notifiable individual aid as in this case, the Member States must demonstrate that the aid has an incentive effect and therefore, they need to provide clear evidence that the aid has a positive impact on the decision of the undertaking to pursue R&D&I activities which would otherwise not have been pursued⁵⁰.

3.3.4.1. Start of works

- (110) As a general rule, the Commission considers that an aid has no incentive effect if the works on the relevant R&D&I activity had already started prior to the aid application by the beneficiary to the national authorities (point 63 of the R&D&I Framework).
- (111) As indicated in section 2.3 above, Airbus Helicopters SAS and Airbus Helicopters Deutschland GmbH applied for aid before starting the works on the

⁴⁸ Point 61 of the R&D&I Framework states that "*where it is also necessary to provide the firm with a certain degree of risk sharing, a repayable advance should normally be the aid instrument of choice*".

⁴⁹ See point 62 of the R&D&I Framework.

⁵⁰ See point 66 of the R&D&I Framework.

project. Therefore, the formal criteria of the incentive effect, as set out in point 63 of the R&D&I Framework, is respected.

3.3.4.2. Counterfactual analysis

- (112) The French and German and German authorities indicated that Airbus Helicopters has not considered any concrete alternative project in the context of its internal decision-making process. They indicated that, in the absence of State support the alternatives available to Airbus Helicopters [...] would be: (i) launch an additional upgrade [...] or (ii) develop a significantly downgraded version of the X6 [...].
- (113) They indicated that, in practice, the launch of an additional upgrade would be unattractive for the company: [...]. In addition, the sales prospects of the "downgraded X6", [...] would be limited [...].
- (114) Therefore, in the absence of aid, the counterfactual scenario would be that the project would not be carried out altogether as Airbus Helicopters did not face a clear and concrete choice between carrying out the aided X6 project or an alternative one without aid.
- (115) The Commission considers that the counterfactual analysis provided by the French and German authorities is not informative about the incentive effect of the aid measure. A specific counterfactual project can only be considered if it is clearly proven that the aid recipient considered the counterfactual project as a mutually exclusive credible alternative investment for the aided project. As the French and German authorities explain this was not the case here: *"The alternative project [...] has been established by the French and German authorities [...] and that it cannot be considered as a counterfactual scenario within the meaning of the RDI Framework. The NRCs and subsequent cash flows of the alternative project [...] are not the direct results of the calculations made by Airbus Helicopters"*⁵¹.
- (116) The Commission therefore assessed whether the incentive effect of the aid measure by comparing the estimated WACC of the project with the estimated IRR of project, with and without aid. In doing so, the very particular circumstances of the X6 project were taken into consideration (high number of very innovative work-streams each involving specific risks, particularly high upfront expenses and specificities associated with the commercial risks due to the demand segment targeted by the project).

3.3.4.3. Analysis of the incentive effect

- (117) The French and German authorities argue in their submission that in 2014-2015, Airbus Group used an internal hurdle rate of up to [...] % [...] ⁵². They add furthermore that for the last helicopter project of Airbus Helicopters, the H160, the hurdle rate used in the decision of launching the project in 2011 was [...] % ⁵³. Finally, the French and German authorities add that in light of estimated hurdle

⁵¹ Reply to Request for Information of 11 April 2017, Question 2, 20 April 2017.

⁵² [...]

⁵³ Reply to Request for Information of 21 December 2016 (Set #2) 1 March 2017, Response to Question 40.

rates in the helicopters sector and recent interest rate developments, "*hurdle rates of [...] % is considered reasonable by the French and German authorities considering the characteristics of the X6 Project*"⁵⁴.

- (118) The Commission considers that in this particular case the internal hurdle rate of the beneficiary as provided by the French and German authorities is not sufficiently informative for the assessment of the incentive effect. An internal document advising the various entities of the group to pursue projects with hurdle rates ranging from the company WACC up to a certain level (in this case, [...]%) cannot be used as evidence that high hurdle rates are the norm in a given firm. [...] ⁵⁵.
- (119) Furthermore, the [...] % hurdle rate was applied to Airbus Group as a whole and not to individual divisions or helicopter projects. [...] ⁵⁶.
- (120) Absent a clearly defined counterfactual project (see Section 3.3.4.2 above) that the aid recipient would demonstrably consider carrying out absent the aid, the incentive effect of an aid measure can be assessed by comparing the WACC with the expected IRR of the aided project, with and without aid.
- (121) For the assessment of the incentive effect, the company WACC is the right benchmark to compare the aided project's IRR against, only if the aided project is exposed to the same risks as the company as whole ⁵⁷. However, for reasons explained above in recitals (72) to (77) above, the Commission considers that the X6 project is highly atypical for Airbus Helicopters and Airbus as a whole.
- (122) The cost of capital (WACC) is normally higher for projects with higher risk. The German and the French authorities explain that the X6 project is not a typical project for Airbus Group due to the especially high risks it involves. The commercial risk of the X6 project, which has a strong non-diversifiable component, seems to be particularly high. The project seems to be strongly dependent on the overall economic growth and the general business cycle in view of the specific segment of demand (oil and gas) that it mostly targets ⁵⁸.
- (123) Usually, the measure for non-diversifiable risk is the stock beta ⁵⁹. However, quantifying the stock beta for Airbus Helicopters or for the X6 project itself is

⁵⁴ Notification memorandum, recital 307.

⁵⁵ [...].

⁵⁶ The consistent application of an internal hurdle rate could for example be evidenced by demonstrating that relevant projects that would have yielded a rate of return below but close to the alleged hurdle rate had been seriously considered and rejected by the undertaking.

⁵⁷ Brealey, Myers, Allen (2010): Principles of Corporate Finance - Global Edition, McGraw-Hill Irwin, p. 241, Chapter 9.

⁵⁸ Non-diversifiable risk is also referred to in the finance literature as "*systemic risk*" or "*market risk*", see supra note 38. These are risks that apply widely to large parts of the economy and that are carried in an entire class of assets and/or liabilities. The volatility of general economic growth is such a risk, as is the volatility in the oil and gas industry as these products are recognized as a key driver of macroeconomic variables such as inflation and general economic growth. For an overview of literature on the macroeconomic effects of oil prices, see for example Blanchard, Olivier J., and Marianna Raggi. "*Why are the 2000s so different from the 1970s? A structural interpretation of changes in the macroeconomic effects of oil prices.*" *Journal of the European Economic Association* 11.5 (2013): 1032-1052.

⁵⁹ The beta is a measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole. The beta is used in the capital asset pricing model (CAPM) to calculate the expected return of an asset based on its beta and expected market returns.

difficult as there are no listed stand-alone helicopter producers from which to take the underlying data.

- (124) While Airbus Group, for pragmatic reasons, uses a single cost of capital of around [...] % pre-tax across its different business lines, it seems reasonable in this case, for this particular project, to assume that [...]. The higher risk profile of Airbus Helicopters is further determined by the following features: (i) a significantly more limited backlog (below 2 years of production compared to 10 years typically for commercial aircraft) and therefore a much lower ability to ride out business cycles; (ii) a much higher exposure of annual order numbers to short / medium term fluctuations in the economic cycle; (iii) the absence of launch customers in helicopters (i.e. customers accepting to order products even before the launch of the program, hence de-risking the latter), while such customers exist in commercial aircraft.
- (125) The non – diversifiable part of the risk⁶⁰ (captured in the beta) would lead investors to ask for a higher risk premium and therefore increases the WACC. The Commission considers that a WACC of around [...] % can be seen a reasonable proxy for the cost of capital of the X6 project. In the Capital Asset Pricing Model (the standard finance model used widely to determine the rate of return on an asset) the non-diversifiable risk is captured by the Beta parameter. The project's WACC of around [...] % would be consistent with a beta of approximately [...] under pure equity finance⁶¹. Such high betas seem to be typical for the oil and gas production, distribution and equipment industries in Europe⁶². These industries carry particular relevance for the X6 project, as evidenced by the strong correlation between oil prices and demand for large and super medium helicopters, as shown in Figure 1⁶³. Estimates for betas are not available for the helicopter industry and given the specific risk of the project, it is very likely that an aggregate industry beta would not be representative for this project in any case.

⁶⁰ See footnote 38.

⁶¹ The calculation is based on market data used by Airbus Group in internal board documents – Annex 19. The CAPM formula for the cost of equity is: [...].

⁶² The source is a database provided by Prof. Damodaran for 2015 industry betas for Western Europe, available at <http://pages.stern.nyu.edu/~adamodar/> (downloaded on 2 June 2017).

⁶³ This correlation is driven by the fact that the oil and gas industry is a key customer for large and super medium helicopters.

Oil Prices And Large/Super Medium Helicopter Deliveries

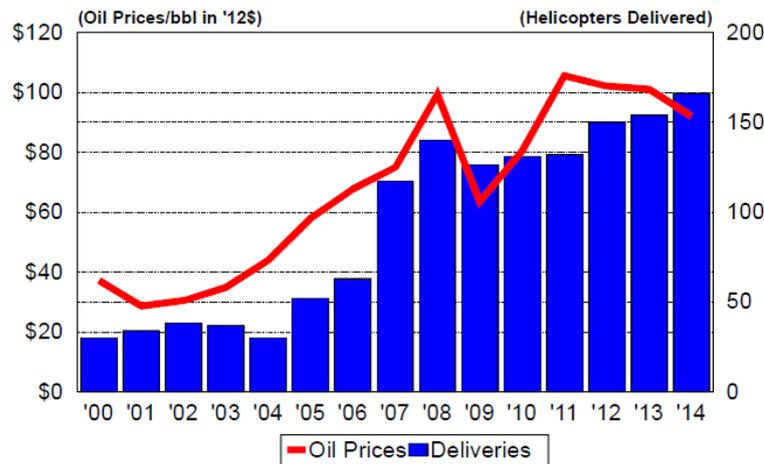


Figure 1: Oil prices and demand for heavy helicopters. Source: Notification, page.13 of Annex 23, [...]⁶⁴.

(126) The German and the French authorities demonstrated by means of business plans that the repayable advance of EUR 377 million increases the internal rate of return of the X6 project from [...] % (probability weighted) to [...] % (probability weighted). The return of [...] % is only slightly higher than the presumed [...] % cost of capital of the project. Therefore the Commission considers that the aid provides the required incentive effect.

3.3.5. Proportionality of the aid

(127) Point 72 of the R&D&I Framework indicates that « for any R&D&I aid to be considered proportional, its amount must be limited to the minimum needed for carrying out the aided activity ». The Commission therefore verifies that research categories and eligible costs and maximal aid intensities are respected.

(128) As indicated in recital (27) above, the activities performed during the project qualify as "industrial research" and "experimental development" in the meaning of point 15 (q) and (j) of the R&D&I Framework.

(129) Pursuant to the R&D&I Framework, these two research categories can benefit from aid intensity up to a maximum of 50% and 25% respectively for a large company such as Airbus Helicopters. As indicated in section 2.5.3 above, Airbus Helicopters will receive EUR 82 million of aid for industrial research activities, i.e. an aid intensity of 35 % and EUR 248 million of aid for experimental development activities, i.e. an aid intensity of 23% which does not exceed the maximum limit allowed by the R&D&I Framework.

(130) The Commission notes that, in line with point 80 of the R&D&I Framework⁶⁵, as the main part of the aid is granted in the form of a repayable advance, Airbus

⁶⁴ [...]. Annex 23 to the notification.

⁶⁵ Point 80 of the R&D&I Framework states the "in all other cases, the repayable advance is expressed as a percentage of the eligible costs and may exceed the applicable maximum aid intensities by 10 percentage points providing that (some) conditions are fulfilled".

Helicopters could have benefitted from additional 10 percentage points of aid intensity.

- (131) The Commission notes that the French and German authorities committed to grant the aid to Airbus Helicopters in successive tranches against the successful delivery of the project milestones. The risk of the French and German authorities funding not being matched is excluded, in principle, as the release of these funds will be on an incremental basis, and only after each milestone has been achieved.
- (132) Therefore, the Commission notes that aid will allow Airbus Helicopters to implement the project by providing the company with necessary financial resources while significantly reducing its maximum financial exposure. At the same time, the Commission concludes that the aid will be limited to the minimum necessary as the aid intensities provided for in the R&D&I Framework will be respected.

3.3.6. *Avoidance of undue negative effects on competition and trade*

- (133) The next step in the detailed assessment of individual aid as expressed in the R&D&I Framework (section 4.6) concerns the analysis of the impact of the aid on the market.

3.3.6.1. The markets

- (134) In its previous decisions relating to mergers in the helicopter sector⁶⁶, the Commission concluded that it was appropriate to distinguish between the military helicopter market and the civil helicopter market. The two types of aircraft do not meet the same needs and do not have the same characteristics. The structures and operations of their respective markets present substantial differences. The present decision will analyse the impact of the aid for the development of the civil version of the X6 helicopter. The military version of the X6, if and when developed will not be publicly financed..
- (135) However, the Commission considered not necessary to further delineate the relevant product markets for civil helicopters by reference for instance to technical criteria, such as mission type or maximum take-off weight. This line was followed in State aid decisions relating to this sector⁶⁷.
- (136) The criterion of maximum take-off weight was nevertheless considered a relevant criterion to establish a possible segmentation that is as close to market realities as possible. The Commission, in its latest State aid decisions concerning the helicopter industry⁶⁸, considered the following segmentation: light helicopters (<4T), medium-light helicopters (4-6 T), medium-heavy helicopters (6-8 T), heavy helicopters (8-17 T), but it left open the question as to whether these segments constituted separate relevant product markets.

⁶⁶ COMP/M.017 – Aérospatiale/MBB of 25.02.1991, COMP/M1745 – EADS of 11.05.2000.

⁶⁷ Case SA.33467 (2011/N) – France – Avance remboursable pour le développement de l'hélicoptère X4, Decision of 07.03.2012, OJ C 2006 of 13.07.2012 and case SA.33731 (2011/N) – Italy – Aiuto alla RSI ad AgustaWestland SpA – Nuovo modello elicottero da transport light intermediate AW 169, Decision of 07.03.2012, OJ C 135 of 09.05.2012.

⁶⁸ Case SA.37137, [...].

- (137) In the present case, the French and German authorities are proposing a narrower definition of the civil helicopter market. In their view, in order to be as close to market realities as possible, the criterion of the maximum take-off weight should be combined with two other indicators to which customers (the market) are increasingly attaching importance, i.e. the number of passengers and the radius of action.

Category	Maximum mass at take-off (in tonnes)	Number of passengers	Maximum range (in nautical miles)
Light	≤ 4	1-10	300-450 NM
Medium	4-8	10	450 NM
Super-medium	8-10	10-18	500 NM
Heavy	11-15	19-24	600 NM
Very heavy	≥ 15	≥ 24	> 700 NM

Table 9: The structure of the civil helicopter market (Source: Airbus Helicopters)

- (138) The French and German authorities indicated that super-medium helicopters ("*medium-heavy*" or "*super medium*") are relatively new in the range between the historical mediums and heavies; also versatile, despite more expensive operating cost, they are fully capable of Search and Rescue ("SAR") and Oil and Gas ("O&G") missions, offering large cabin volume and significant capacity of optional equipment. They also explained that the heavy helicopters perform the same types of mission as the medium & super medium helicopters, but with much higher performance (larger number of seats, useful load or range), particularly the transport of heavy loads in the cabin or with a sling (greater than 3.5 tonnes), the commercial transport of large numbers of passengers (particularly in the O&G industry), long-distance transport (greater than 200 NM), rescue, police, fire-fighting.
- (139) Therefore, far from arguing for a definitive segmentation of the market, the substitutability observed at the margin of each segment leads to considering the civil helicopter market as a continuum.
- (140) In addition, the civil helicopter market is characterized by a strong substitutability on the supply-side, the main helicopter producers being in a position to produce light, medium or heavy aircraft. Indeed, helicopter manufacturers, similar to car manufacturers, do not position themselves on a single model but on a whole range, proposing their customers several models catering for different needs and uses. The market is therefore characterised by a strong supply-side substitutability, constant evolution⁶⁹ with frontiers especially between adjacent segments being far from clear.
- (141) As the different segments within the civil helicopter market constitute a continuum due to a chain of substitutions at the margin of each segment the Commission therefore considers that the presentation of the civil helicopter market should not be modified.
- (142) Geographically, the Commission considered in its previous case practice the civil helicopter market as being worldwide. Indeed, even though helicopter operators seem to operate in bounded geographical areas (Europe, Brazil, North America,

⁶⁹ The development of the X4 by Airbus and AW169 by AgustaWestland starting from 2011 showed the convergence of the "medium" model.

Asia...)⁷⁰, they do not purchase their aircrafts on local basis⁷¹. This appreciation remains valid in the present case.

3.3.6.2. Functioning of the relevant markets

(a) The worldwide civil helicopter market

- (143) The French and German authorities indicated that after several years of stable sales of around 500 aircraft per year, the global market for civil and parapublic helicopters took off in 2005, due particularly (i) to the increase in oil / gas operations and exploration, (ii) the equipping of emerging countries (Asia, Latin America) and (iii) the renewal of ageing fleets in Europe and North America. In 2008, 970 aircraft, representing a value of EUR 5.2 billion, were delivered across the world outside of the military market. The economic crisis of 2008 strongly impacted the civil and parapublic turbine helicopter market, interrupting this growth. Between 2008 and 2012, deliveries fell by 12.5% in value. Major demand for oil-related operations and an extremely dynamic Asian market allowed global deliveries to rise again in 2013.
- (144) On the supply side, there are five main worldwide helicopter manufacturers: two European (Airbus Helicopters and Leonardo⁷²), two American (Bell and Sikorsky) and one Russian (Russian Helicopters). There are also manufacturers from emerging countries (the Indian HAL, the Chinese Avicopter, the Korean KAI).
- (145) The market shares in the civil helicopters worldwide market for the period 2011-2015 (all helicopter categories) were the following (in %):

	2011	2012	2013	2014	2015	Average market shares
Leonardo	[15-20]%	[15-20]%	[15-20]%	[15-20]%	[15-20]%	[15-20]%
Airbus	[40-45]%	[35-40]%	[30-35]%	[35-40]%	[35-40]%	[35-40]%
Bell	[15-20]%	[15-20]%	[15-20]%	[15-20]%	[15-20]%	[15-20]%
Robinson	[5-10]%	[15-20]%	[20-25]%	[10-15]%	[15-20]%	[10-20]%
Russian Helicopters	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%
Sikorsky	[5-10]%	[0-5]%	[0-5]%	[5-10]%	[5-10]%	[5-10]%
Others	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Total	100 %					

Table 10: Civil helicopters worldwide market shares 2011-2015 (in %)
(Source: Internal Airbus database)

⁷⁰ Only few helicopters operators are of worldwide dimension (Bristow group and Babcock MCS Offshore who are based both in Europe and North America).

⁷¹ The Commission noted however that the Russian heavy helicopters are mainly sold in Russia (Gavpromavia) and Asia (Hevilift in Singapore and TAS Co in Thailand).

⁷² Leonardo absorbed AgustaWestland.

- (146) According to the French and German authorities, market forecasts⁷³ show that the demand for helicopters will continue to grow in a significant way in future years, representing EUR [...] over the next 10 years. This growth is explained by the equipping of emerging countries, the renewal of ageing fleets in mature countries, the increase in oil operations activities and the further stimulation of demand through the arrival of new models.

2016	2017	2018	2019	2020	2021	2022	2023	2024
[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]

Table 11: Civil helicopter market forecasts 2016-2024 in units ([...])

- (147) The French and German authorities believe that super-medium and heavy helicopters are to represent the greatest value in this market. As the long term trends show that the oil demand as well as transport demand for long range missions will continue to grow, they consider that the O&G industry will remain the main growth of the civil heavy-duty helicopter market.

2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]

Table 12: Civil heavy helicopter market forecasts 2016-2025 in units ([...])

(b) The worldwide heavy-duty civil helicopter segment

- (148) In the heavy-duty helicopter segment, Airbus' main competitors are Sikorsky (with its helicopter S92) and Russian Helicopters (with its helicopter Mi17).
- (149) Airbus has been active in the "heavy-duty helicopter segment" of the market since the 60's, the most recent variant of its heavy helicopter being the H225, i.e. the Super Puma. Sikorsky was a pioneer in this market since 1961 with the S-61, but only returned in this market in 1992 with the S-92 as there were no follow-on models to the S-61. The Russian Helicopters Mi-8/Mi-17 series, primarily designed as a military transport helicopter (1977), has been built in numbers for civil use and has long been the dominant model for oil and gas exploitation in Russia and Central Asia (from 1981). The market shares of Airbus and its competitors (in value) in the worldwide heavy civil helicopter segment over 2010-2014 have been the following:

	2010	2011	2012	2013	2014	Total
Airbus	[10-20] %	[10-20] %	[10-20] %	[10-20] %	[10-20] %	[10-20] %
Sikorsky	[20-30] %	[20-30] %	[10-20] %	[35-45] %	[30-40] %	[20-30] %
Russian Helicopter	[55-65] %	[55-65] %	[60-70] %	[40-50] %	[40-50] %	[50-60] %
Total	100 %					

Table 13: Heavy Civil Helicopters worldwide market shares (in %)
(Source: Internal Airbus Helicopters database)

- (150) The French and German authorities indicated [...] that the Super Puma [...] has not faced competition from EU helicopter manufacturer in the past ([...]). They also indicated that after all Super Pumas were grounded by the European Aviation Safety Agency (EASA) following the crash off the coast of Norway on 29 April

⁷³ [...]. Annex 23 to the notification.

2016, customers (end-users and operators) had to replace their grounded aircraft, which they did with heavy helicopters, primarily the S92.

- (151) The French and German authorities indicated that new versions of the S-92 and Mi-17 are under development:
- (a) In May 2014, Sikorsky was awarded a \$1.24 billion contract to build a variant of the S-92 for transport of the U.S. President (the VH-92). Six of the variant, designated VH-92A, have been ordered by the U.S. Navy for delivery in 2017. Production of a further 17 aircrafts is planned to begin in 2020;
 - (b) Russian Helicopters developed an updated version of the Mi-8/17 series, the Mi-171A2 that performed its first flight test in November 2014. In June 2012, Russian Helicopters also presented a mock-up version of the Russian Advances Commercial Helicopter (RACHEL), which is being developed under the high-speed rotorcraft programme. RACHEL is planned as a 10-12 tonnes commercial utility helicopter capable of carrying 21 to 24 passengers. This new aircraft is seen as an eventual replacement for the Mi-8/17 series.
- (152) The Commission notes that Leonardo has in its models range a super heavy aircraft, the AW 101. Having entered into service in 1999, it has a maximum take-off weight of 15.6 tonnes, can embark up to 30 passengers and has a maximum range of 735 nautical miles. It is equipped with 3 engines. It was developed for military and governments' use, but in 2009 AgustaWestland developed a civil "VIP/parapublic mission" version of this helicopter. The French and German authorities claimed that the AW101 cannot be considered as a substitute or a competitor for the X6. They indicated that, as of today, the AW101 currently manufactured would not be any more certified for civil use⁷⁴ and that AgustaWestland would have to redevelop significantly major parts of the aircraft, incur significant costs and need to re-seek an EASA approval. The Commission is not aware of concrete plans of Leonardo to enter the civil heavy helicopter market⁷⁵.
- (153) In addition, it should be recalled that the French and German authorities have indicated that X6 has been positioned to extend the spectrum of the Super Puma's missions, notably in the oil and gas environment. The Commission notes that the customers in the O&G market (O&G companies, operators having O&G companies as customers and lessors) will likely not be compartmentalized in the choice of a single type of model. Helicopter operators generally operate a mixed fleet of aircraft (ranging from light to medium-heavy and heavy⁷⁶). They even categorize their fleets in a broader manner and their "large" or "heavy" fleet cover

⁷⁴ According to the French and German authorities, two aircrafts of the 500 & 510 series' civil utility variant were built: one used by Tokyo Metropolitan Police agency and one used to support US101 bid (governmental VIP for US President). Nevertheless, AgustaWestland is still proposing this model on its website.

⁷⁵ The single source that mentions a future follow-up version of the AW 1001 is the IABG Study "*Bewertung des Marktsegments für zivile Hubschrauber der Startgewichtsklasse von 9t bis 15t Auftrag Nr. K-2550/50003440 Sachverständigenauftrag Projekt Nr. 98/15*". The study however merely assumes that in the future a version of the AW101 could be launched by Leonardo.

⁷⁶ See for instance Bristow Group in the UK <http://bristowgroup.com/about-bristow/helicopter-fleet/> or ERA Helicopters in the USA <http://www.erahelicopters.com/fleet>

both super-medium and heavy aircraft according to the segmentation provided by the French and German authorities.

- (154) Based on the available information, the Commission is of the opinion that such customers will continue to choose between the closest substitutes that can meet their needs in adjacent segments and that the X6 does not compete closely with Leonardo models since the two target different customers' demand.
- (155) **Expected market shares in the future:** the French and German authorities indicated that *"based on growth forecasts, Airbus Helicopters hopes to reach [in the heavy-duty civil helicopter segment] a [15-35]% market share in the period up to 2024"*.

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024
Airbus	[20-30] %	[20-30] %	[20-30] %	[15-35] %	[15-35] %	[15-35] %	[15-35] %	[15-35] %	[15-35] %	[15-35] %
Sikorsky	[20-30] %	[20-30] %	[20-30] %	[15-35] %	[15-35] %	[15-35] %	[15-35] %	[15-35] %	[15-35] %	[15-35] %
Russian Helicopters	[40-50] %	[40-50] %	[40-50] %	[35-60] %	[35-60] %	[35-60] %	[35-60] %	[35-60] %	[35-60] %	[35-60] %
Total	100%									

Table 14: Civil heavy helicopter market forecasts 2016-2025 (in %)
(Source : [...])⁷⁷

- (156) The French and German authorities indicated that the X6 should achieve a [...] % market share (compared to [...] % over the past 10 years), i.e. [...] helicopters out of approximately [...] heavy-duty helicopters sold over the next 20 years⁷⁸.
- (157) They explained that, out of the civil and parapublic X6 sales forecast (which represent [50-80] % of the whole X6 sales forecast), more than [30-70] % is expected to come from customers demand in the oil and gas industry. On the basis of Airbus internal projections, this reflects a potential [30-75] % market share for the X6 in this specific area (the S-92 successor is forecasted to capture approximately [25-70] % of the market over the same period. Russian Helicopters have historically had a very low market share in the offshore oil and gas segment). The remaining [30-70] % of the X6 sales should mainly come from commercial and public services' needs (approx. [...] units over 20 years). The X6 is estimated to take less than [5-35] % of this specific market segment. Russian Helicopters is expected, along with Sikorsky, to be the key players in this sector, as it has been in the past.

3.3.6.3. Impact of aid on the markets

- (158) According to section 4.6.3 of the R&D&I Framework, R&D&I aid can potentially distort competition by (a) distorting dynamic incentives, (b) creating or maintaining market power and (c) maintaining inefficient market structures.

⁷⁷ France and Germany indicated that this table has been elaborated on the basis of the figures provided in the above mentioned [...]. However, as Russian helicopters' sales are also not taken into account, the French and German authorities have added them on the basis of approximately [...] per year on average (they estimated that Russian Helicopters have delivered approximately [...] helicopters per year on average over the past 10 years with both Mi17 and Ka-27/32 models).

⁷⁸ It should be noted that the sales forecast, on which the business plan has been built, foresee the sale of [...].

(a) Distorting dynamic incentives

- (159) The main concern raised by R&D&I aid is the risk of the "crowding out effect". The Commission have therefore analysed the main indicators listed in point 112 of the R&D&I Framework to ensure that the notified aid does not distort the dynamic incentives of competing companies to invest in innovation.
- (160) **Aid amount:** with respect to the French support, as indicated in section 2.5.2.1 above, the repayable advance will be repaid in annual tranches over a period of [...] years. If the project is successful, this advance will be repaid in full (principal and interest), and beyond that, the French government will receive a proportional share of the profits to the degree that the project is successful. With respect to the German support, as indicated in section 2.5.2.2 above, the repayable advance will be repaid linearly in accordance with the amount of shipsets delivered. In view of the overall amount of R&D expenditures and of the high level of technological intensity in the aviation industry, the amounts of aid in question are not liable to discourage competing companies from continuing their R&D efforts.
- (161) **Market growth:** as indicated in recitals (146) and (147) above, the market for civil helicopters and especially the "heavy-duty helicopter segment" is expected to grow in the next decade. This leaves opportunities for competitors to develop a profitable business. As the X6 is expected to achieve a [15-35]% market share, the Commission considers that there will remain ample opportunities for competitors to develop their business.
- (162) **Exit barriers:** the Commission⁷⁹ acknowledged in its previous case practice that the obstacles to leaving the aviation industry are very high, due to the high intensity of capital in this industry, which requires very large upfront investments in R&D projects and requires highly specialised technical engineering equipment. Airbus Helicopters, as well as its current and potential competitors, should they decide to leave the market, would thus be confronted with very large barriers, considering the initial level of the investments required and the irrecoverable costs of the high-technology equipment required for the activity. The Commission concludes that the notified State aid is not of such a nature as to dissuade market players from continuing to innovate.
- (163) **Incentives to compete for a future market:** the X6 project concerns the development of a new civil heavy-duty helicopter. [...]. The civil and para-public helicopter market is expected to grow in the next decade. According to the French and German authorities, in the heavy-duty helicopter segment of that market, the annual production should increase from an average of about [...], with an annual value of EUR [...]. [...].
- (164) In case of success, Airbus Helicopters targets a [...] % market share for the X6 on the civil and parapublic market, i.e. approximately [...] aircraft sold between [...] and [...]. The French and German authorities indicated that, given the important developments that Airbus Helicopters' competitors have already undertaken on

⁷⁹ Decision of the Commission dated 27 October 2009, State aid N 654/08 – United Kingdom – Aid for Bombardier, JO C 298 dated 8 December 2009, p. 2 ; European Commission, 7 March 2012, State aid SA.33467 (2011/N) – France – Repayable advance for the development of the X4 helicopter, JOCE/C/206/2012 dated 13 July 2012.

the targeted market, they will have no incentive to reduce their R&D because of the aid. The future Sikorsky and Russian Helicopters models (S92A+ and Mi-171A2 and V-37) are already funded by their respective governments and will be available in the market [...], and with potential new entrants (e.g. Chinese, Indian), should therefore be able to compete effectively in the heavy helicopter market. The Commission therefore considers that this should allow sufficient growth opportunities for other market operators in this segment. Incentives for competitors to invest and compete on this market, which is characterized by high growth prospects, should therefore not be affected.

- (165) **Product differentiation and intensity of competition:** the aid will allow Airbus Helicopters to develop a new helicopter and thus to bring innovation and dynamism to the heavy-duty helicopter segment of the market, [...]. This project will also motivate other competitors to innovate in R&D. As explained above, far from resulting in a "crowding-out" effect, the aid will enable Airbus Helicopters to innovate significantly, to participate in the competitiveness of the sector while proposing a higher performance model, which will have a lower environmental footprint and improved safety standards. The French and German authorities recalled here that the main competitors of Airbus Helicopters (particularly Sikorsky and Russian Helicopters) will offer new models in the same market in the near future. Consumers will have more choice with the expansion of the range of helicopters offered. The Commission therefore concludes that the aid allows for product differentiation without having dissuasive effects on the competitors.

(b) Creating or maintaining market power

- (166) The Commission has analysed the most relevant indicators of point 114 of the R&D&I Framework in order to verify whether the aid could strengthen the market power of Airbus (capacity to influence prices, production, variety or quality of goods) to the detriment of consumers.
- (167) **Market power:** the heavy-duty helicopter segment of the market appears, as only a few players are active, to be oligopolistic. As described in recital (150) above, Airbus' market shares in the heavy-duty helicopter segment of the market are expected to remain around [...]%. This forecast might be counter-balanced by the future Sikorsky and Russian Helicopters heavy aircraft that will be on the market [...]. Airbus will continue to face intense competition from well-established players which are already developing comparable aircraft, and possibly later from other manufacturers from emerging countries. Therefore, the Commission considers that the aid is not likely to weaken the competitive constraint that actual and potential competitors can exert on Airbus as innovation is crucial for the development of these companies which will continue to invest in R&D&I.
- (168) **Level of entry barriers:** an undertaking launching the development and production of a heavy civil helicopter *ex-nihilo* must present high guarantees about its capacity to meet the technological challenges, about possessing the necessary know-how to coordinate the value chain, and about its capability to ensure a minimum degree of quality and reliability in relation to the competition. The purchase of a new model of helicopter implies a long-term relationship between the customer and the manufacturer, flight safety and usage costs of the aircraft constituting one of the real issues for users. Consequently, customer confidence and trust is only acquired after several years of presence on the market, and in view of the experience acquired on previous models. The

Commission recognized in the past⁸⁰ that, in the civil helicopter market, the barriers to entry (technological, financial and regulatory) are very large: massive investments are required to master complex technologies, conduct R&D activities, ensure maintenance and improvements of these aircrafts, have high-performance industrial tools, capability to obtain certifications (of the design and production processes, and of the aircrafts themselves), and benefit from a global sales and after-sales network.

- (169) The Commission has also recognised that in the aviation industry in general, and the civil helicopter market in particular, subsidies or military contracts constitute an instrument currently used by certain countries to support the development of new models ("launch aid"), which are handicapped by the scale of the costs (several billion euros), the development time required (from 5 to 10 years), the return on investment period (several decades), and the level of technological and commercial risks assumed by the manufacturers. With reference to helicopters, this analysis is confirmed by multiple public sources of information and numerous articles in the specialised press⁸¹.
- (170) **Buyer power:** in addition, in order to be able to seize opportunities, helicopter manufacturers must anticipate the needs of their customers that are large, sophisticated companies, with buyer power. Therefore, they need to perform R&D activities in advance, in order to demonstrate the performance of their aircraft as far upstream as possible. Customers are not generally inclined to accept an aircraft where development would not be risk-free and one of the major challenges faced by helicopter manufacturers is to offer a product that meets the requirements of the market and the needs of operators in a timeframe that is compatible with the timescale to launch a new aircraft. This "time to market" constraint and delay requires a high level of anticipation from helicopter manufacturers, especially due to relatively long development phases (five years at least). The Commission recognizes here that the presence of strong buyers, combined with development constraints on the helicopter manufacturers side is of such nature as to preserve sufficient competition in the market.
- (171) Considering Airbus' actual market share, its evolution over the past five years, the presence of two strong competitors, the growth of the civil helicopter market, and the heavy-duty helicopter segment in particular, the Commission considers that the aid granted to Airbus Helicopters for the X6 project will not strengthen its market power in a way that would enable the company to distort competition on the market of the civil helicopters and its segment for heavy-duty helicopters.

(c) Maintaining inefficient market structures

- (172) According to point 115 of the R&D&I Framework, *"in its analysis of market structures, the Commission will consider whether the aid is awarded in markets featuring overcapacity or in declining industries"*.
- (173) In the present case, the market of civil helicopters is, according to independent expert analysis⁸², expected to experience strong expansion in the coming years. This market is not suffering from overcapacity or constitutes an industry in

⁸⁰ [...]

⁸¹ See decision in case SA.33467.

⁸² [...]. Annex 23 to the notification.

decline. Airbus Helicopters is neither an undertaking in difficulty nor operating below efficiency level. The Commission verified, to the extent that it has been established that the X6 project was risky, that Airbus Helicopters' ambitious objectives would not be excessive or economically irrational. The Commission notes that the aid instrument chosen does not bring about a total transfer of the risks incurred by the company to the State, but a reasonable sharing of these risks. This mechanism places responsibility strongly on the helicopter manufacturer, which will, if its project fails, bear a substantial share of the losses experienced. In view of the above, the Commission concludes that the risk of supporting a non-performing company or creating an inefficient market structure can be excluded.

3.3.6.4. Conclusion

(174) It follows from the foregoing that, the Commission considers the aid unlikely to distort competition to an extent contrary to the common interest.

3.4. Transparency

(175) The Commission takes note that the French and German authorities commit to comply with the transparency requirements set out in point 4.7 of the R&D&I Framework.

3.5. Conclusion

(176) Following the in-depth assessment performed in accordance with section 4 of the R&D&I Framework, the Commission considers that:

- (a) The aid contributes to a well-defined objective of common interest;
- (b) The aid remedies an identified market failure;
- (c) The aid instrument is appropriate;
- (d) The aid has an incentive effect;
- (e) The aid is proportionate;
- (f) The aid is unlikely to distort competition to an extent contrary to the common interest;
- (g) The aid meets the transparency requirements.

(177) In view of the above, the Commission considers that the aid to the X6 project meets the common assessment principles.

4. DECISION

(178) The Commission decides not to raise objections to the aid measure, considering it is compatible with the internal market, pursuant to Article 107(3)(c) TFEU.

(179) The Commission reminds the French and German authorities that, in accordance with point 124 of the R&D&I Framework, they shall provide an annual report on the implementation of the measure as well as notify any modification to this aid measure.

If this letter contains confidential information which should not be disclosed to third parties, please inform the Commission within fifteen working days of the date of receipt.

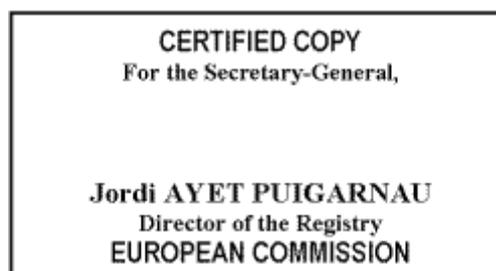
If the Commission does not receive a reasoned request by that deadline, you will be deemed to agree to the disclosure to third parties and to the publication of the full text of the letter in the authentic language on the Internet site:

<http://ec.europa.eu/competition/elojade/isef/index.cfm>.

Your request should be sent electronically to the following address:

European Commission,
Directorate-General Competition
State Aid Registry
B-1049 Brussels
Stateaidgreffe@ec.europa.eu

For the Commission
Margrethe VESTAGER
Member of the Commission



Annexe 1

1.	PROCEDURE	1
2.	DESCRIPTION OF THE MEASURE	2
2.1.	Objective of the measure	2
2.2.	The beneficiary	2
2.3.	Granting decisions	3
2.4.	Description of the project	3
2.4.1.	R&D&I activities and innovative content of the X6 project	3
2.4.2.	Specific works on Key Enabling technologies (KETs)	5
2.4.3.	Rules on Intellectual Property Rights (IPRs)	5
2.5.	Description of the aid measure	6
2.5.1.	Eligible costs	6
2.5.2.	The aid instrument	7
2.5.3.	Aid intensities	9
3.	ASSESSMENT	9
3.1.	Existence of aid	9
3.2.	Legality of the aid – standstill clause	10
3.3.	Compatibility	11
3.3.1.	Contribution to a well-defined objective of common interest	11
3.3.2.	Need for State intervention	12
3.3.3.	Appropriateness of the aid measure	18
3.3.4.	Incentive effect	19
3.3.5.	Proportionality of the aid	23
3.3.6.	Avoidance of undue negative effects on competition and trade	24
3.4.	Transparency	33
3.5.	Conclusion	33
4.	DECISION	33