

CASE M.7724 – ASL / ARIANESPACE

(Only the English text is authentic)

**MERGER PROCEDURE
REGULATION (EC) 139/2004**

Article 8(2) Regulation (EC) 139/2004

Date: 20/07/2016

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COMMISSION DECISION

of 20.7.2016

**declaring a concentration to be compatible with the internal market and the EEA
Agreement (Case M.7724 - ASL / ARIANESPACE)**

(Only the English text is authentic)

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COMMISSION DECISION

of 20.7.2016

declaring a concentration to be compatible with the internal market and the EEA Agreement (Case M.7724 - ASL / ARIANESPACE)

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THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to the Agreement on the European Economic Area, and in particular Article 57 thereof,

Having regard to Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings¹, and in particular Article 8(2) thereof,

Having regard to the Commission's decision of 26 February 2016 to initiate proceedings in this case,

Having regard to the opinion of the Advisory Committee on Concentrations²,

Having regard to the final report of the Hearing Officer in this case³,

Whereas:

1. Introduction

- (1) On 8 January 2016, the Commission received notification of a proposed concentration pursuant to Article 4 of Regulation (EC) No 139/2004 ("Merger Regulation") by which the undertaking Airbus Safran Launchers ("ASL") based in France, a joint venture jointly controlled by Airbus Group S.E. ("Airbus"), based in the Netherlands, and Safran S.A. ("Safran"), based in France, intends to acquire sole control over Arianespace Participation S.A. and Arianespace S.A. (together, "Arianespace"), based in France, within the meaning of Article 3(1)(b) of the Merger Regulation by way of a purchase of the entire shareholding currently held by Centre National d'Etudes Spatiales ("CNES") in Arianespace ("the transaction")⁴. Airbus, Safran and ASL, are collectively referred to as "the Parties".
- (2) Based on the results of the Phase I investigation, the Commission raised serious doubts as to the compatibility of the transaction with the internal market and adopted a decision to initiate proceedings pursuant to Article 6(1)(c) of the Merger Regulation on 26 February 2016 ("the Article 6(1)(c) Decision").

¹ OJ L 24, 29.1.2004, p. 1. With effect from 1 December 2009, the Treaty on the Functioning of the European Union ("TFEU") has introduced certain changes, such as the replacement of "Community" by "Union" and "common market" by "internal market". The terminology of the TFEU will be used throughout this Decision.

² OJ C200. , p....

³ OJ C200. , p....

⁴ Publication in the Official Journal of the European Union No C 12, 15.1.2016, p. 5.

- (3) The Parties submitted their written comments to the Article 6(1)(c) Decision on 11 March 2016 ("response to Article 6(1)(c) Decision").
- (4) On 1 April 2016, the Commission adopted a decision on the basis of the third sentence of the second subparagraph of Article 10(3) of the Merger Regulation, extending the Phase II proceedings by a total of 10 working days.
- (5) On 27 April 2016, the Commission adopted a second decision on the basis of the third sentence of the second subparagraph of Article 10(3) of the Merger Regulation, extending the Phase II proceedings for a second time by a total of 10 working days.
- (6) During the Phase II investigation, the Commission sent several requests for information to the Parties and to third party market participants. Information was also provided to the Commission at several meetings and conference calls with the Parties and with third parties. The Commission also analysed internal documents of the Parties and data from the Parties and some third parties⁵.
- (7) On 4 May 2016, the Parties proposed formal commitments to eliminate the Commission's serious doubts that the transaction would give rise to a significant impediment to effective competition. The Commission launched the market test for the commitments on 4 May 2016.
- (8) Taking into account the Commission's comments and the feedback from the market test, the Parties subsequently submitted a final set of commitments on 20 May 2016.

2. The Parties

- (9) Arianespace is a company founded in 1980 by CNES, acting as the main shareholder, and the satellite industry participating in the Ariane programme, namely Airbus, Safran and eleven other European companies representing the 10 European countries financing, through their participation in the European Space Agency ("ESA"), the development of the Ariane launcher. This initial shareholding structure has remained mostly unchanged up until now⁶. Arianespace performs launches of satellites and other spacecraft for commercial and institutional clients from the Guiana Space Centre ("CSG") located in Kourou, France. For that purpose, it has been entrusted by ESA with the exclusive right to commercialise the ESA-developed launchers Ariane and Vega. Pursuant to agreements signed between Russia, France and ESA, Arianespace also has the exclusive right to operate launch services from the CSG for commercial missions using the Russian Soyuz launcher.
- (10) ASL is a company incorporated under French law and jointly controlled by Airbus and Safran (50%/50%), which combines the activities of its parent companies in the civil and military launchers sector and in satellites subsystems and equipment. The

⁵ Namely from the main satellite manufacturers: Boeing, Lockheed Martin, OHB, SSL and TAS.

⁶ The shareholding structure of Arianespace Participation is the following: ASL with 39.133%, CNES with 34.808%, MTA with 8.290%, Airbus with 3.988%, RUAG with 3.493%, AVIO with 3.393%, SABCA with 2.713%, Air Liquide with 1.892%, GKN with 1.636%, TAS with 0.335%, Safran with 0.317%, Christian Rovsing with 0.001%. As regards Arianespace SA the shareholding structure is the following: Arianespace Participation with 99.62%, ASL with 0.024%, CNES with 0.002%, MTA with 0.002%, Airbus with 0.110%, RUAG with 0.008%, AVIO with 0.002%, SABCA with 0.002%, Air Liquide with 0.002%, GKN with 0.002%, Safran with 0.002%, Kongsberg with 0.106%, Clemessy with 0.106%, Cie Deutsch 0.008%, Christian Rovsing with 0.002%.

creation of the ASL group was notified to the Commission on 8 October 2014 under Case M.7353 and authorised, subject to conditions, on 26 November 2014⁷.

- (11) Airbus is a company incorporated under Dutch law active in aeronautics, space and defence⁸. It is currently listed on the stock exchanges of Frankfurt, Madrid and Paris. Airbus comprises three main divisions: (i) Airbus Division focusing on the manufacturing of commercial aircraft (68.4% of the total group's revenue in 2014), (ii) Airbus Helicopters (9.8% of the total group's revenue); and (iii) Airbus Defence and Space ("Airbus DS") bringing together a wide portfolio of products in the field of defence, security and secure space-based applications (20.9% of the total group revenue), including subsystems for launchers through its Spanish subsidiary Airbus Defence and Space SAU ("Airbus DS SAU") and satellites. Airbus DS is also active as a satellite operator for telecommunications and Earth-observation satellites.
- (12) Safran is a French-based company listed on the Paris stock exchange focusing on three main areas: (i) aerospace propulsion (53% of the group's total revenues); (ii) aircraft equipment (29% of the group's total revenues), and (iii) defence and security (18% of the group's total revenues)⁹.

3. The Concentration

- (13) The transaction consists of the acquisition of control over Arianespace by ASL, within the meaning of Article 3(1) of the Merger Regulation, by way of purchase of shares.
- (14) ASL would acquire the entire shareholding currently held by CNES in Arianespace Participation SA (34.8%) and Arianespace SA (0.002%). ASL, which is already the largest minority shareholder of Arianespace with a 39.1% share, would post-transaction hold around 73.9% of the share capital and voting rights in Arianespace Participation SA. Taking into account the remaining voting rights which Airbus and Safran would continue to hold separately but are likely to exercise jointly, Airbus and Safran would together hold 78.22% of Arianespace Participation SA's voting rights.
- (15) The transaction thus consists of the acquisition of sole control by ASL of the whole of Arianespace and constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

4. Union Dimension

- (16) The undertakings concerned have a combined aggregate worldwide turnover of more than EUR 5 000 million [Airbus: EUR 60 713 million; Safran: 15 355 million; Arianespace: EUR 1 399 million]¹⁰. Each of them has an aggregate Union-wide turnover in excess of EUR 250 million [Airbus: EUR [...]; Safran: [...]; Arianespace: EUR [...], but they do not achieve more than two-thirds of their aggregate Union-wide turnover within one and the same Member State. The

⁷ Commission Decision 2015/C 210/01 in Case No M.7353 – Airbus/Safran/JV, OJ C 210, 26.6.2015, p. 1.

⁸ The current shareholding structure of Airbus Group is the following: SOGEP (French State) with 10.94%, GZBV (German State) with 10.92%, SEPI (Spanish State) with 4.12% and public shareholders with 73.97%.

⁹ The current shareholding structure of Safran is the following: French State with 15.4%, current and former employees with 13.5%, public shareholders with 70.9% and treasury shares with 0.2%.

¹⁰ Turnover calculated in accordance with Article 5 of the Merger Regulation.

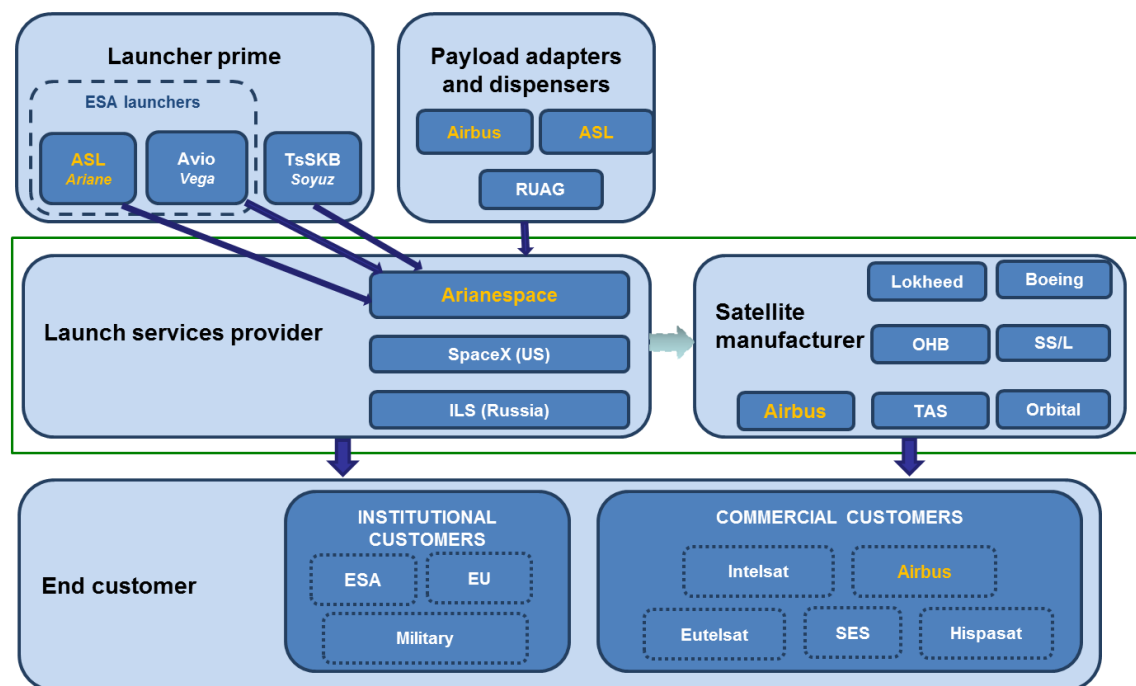
transaction therefore has an Union dimension within the meaning of Article 1(2) of the Merger Regulation.

5. Relevant Markets

5.1. Description of the space industry

- (17) The space industry encompasses the following main players: launch vehicle ("launcher") prime contractors, manufacturers of subsystems for launchers (in this Decision, payload adapters and dispensers), launch services providers, manufacturers of subsystems for satellites and satellite prime contractors ("satellite primes" or "satellite manufacturers")¹¹. Figure 1 gives a simplified overview of the industry.

Figure 1: Overview of the European space industry



Source: Commission's own elaboration.

- (18) One of the main actors in [Europe] is ESA, which is an intergovernmental organisation comprising 22 Member States (20 Union Member States, Switzerland and Norway) [...]. ESA has a Member States-funded budget through which it funds various research and development programmes conducted by all the European space industry participants, including the Parties.

5.1.1. Launchers and launch services

- (19) Space launchers are vehicles based on rocket engines that deliver space systems (satellites and space infrastructure elements) into orbit. Depending on their category, launchers can deliver satellites of up to 10 tonnes to orbits varying from 160 to 2 000 km from Earth (low earth orbit or "LEO"), from 5 000 to 20 000 km from

¹¹ A prime contractor is the main contractor which is the responsible for building the launcher/satellite. This is defined to distinguish from the subcontractors which produce the different subsystems and equipment.

Earth (medium earth orbits or "MEO") and 36 000 km from Earth (geostationary transfer orbits or "GTO")¹².

- (20) In Europe, space launchers are developed with ESA funding. The development programmes essentially consist of (i) a *development phase* followed by (ii) an *exploitation phase*.
- (21) The *development phase* consists of any preliminary R&D and feasibility studies as well as the development of a launch system according to the requirements specified by ESA, as the procuring entity. The *development phase* is concluded when the launch system development has been successfully completed and the launch system acceptance has been declared by ESA for the launch system development. The *development phase* usually also includes the manufacturing, integration and operation of a maiden flight.
- (22) The *exploitation phase* follows the launch system development phase during which a launch system is exploited by the launch services provider Arianespace in order to meet its customers' needs. The *exploitation phase* includes the relevant launcher manufacturing, launcher integration, launch operations and commercialisation activities.
- (23) ESA is the sole legal entity in Europe for which a given launch system is developed. ESA specifies in particular the launch system (launcher system and the related launch complex) requirements and concludes with the relevant prime contractors the contracts under which the system is to be developed. ESA is also an important European institutional customer of Arianespace.
- (24) The current fleet of launchers developed by ESA is comprised of Ariane 5 and Vega rockets. The configuration of and specifications for the launchers are decided by the *design authority*. ASL is the design authority for Ariane 5¹³. ELV spa ("ELV"), a joint venture between the Italian Space Agency ("ASI") and Avio, oversees this task for Vega. The manufacturing of the launchers Ariane 5 and Vega during the exploitation phase is entrusted to the *prime contractors*, ASL and ELV respectively.
- (25) Arianespace offers, using the fleet of launchers funded by ESA, commercial launch services to private and institutional satellite operators on the basis of the 2008 *Launchers Exploitation Agreement* ("LEA") signed with ESA. For that purpose, Arianespace procures the launchers which they have developed for ESA from ASL and ELV. In the context of the LEA, Arianespace also offers launch services with the Soyuz launcher, which is manufactured by the Russian company TsSKB¹⁴, although priority is given to the exploitation of ESA-developed launchers.
- (26) The current main launcher being exploited by Arianespace is Ariane 5, which was used for 25 launches over the period 2010-2014. In that same period, Arianespace performed 15 launches with Soyuz and four launches with Vega.
- (27) Arianespace is the legal entity (launch services provider) responsible for the execution of the launchers exploitation phase under the terms and conditions defined

¹² To reach the geostationary orbits ("GEO"), where satellites maintain their position above a specific point on Earth, launchers usually inject satellites into an intermediate GTO, from where the satellite reaches GEO through its own propulsion means. For the purposes of this Decision, the terms GEO and GTO will be used interchangeably.

¹³ Before the creation of the ASL group, Airbus was the design authority of Ariane 5.

¹⁴ TsSKB is a Russian "Federal State Unitary Enterprise" under the jurisdiction of Roscosmos, the Russian Federal Space Agency responsible for space science and aerospace research.

in specific arrangements concluded with ESA on the basis of a mandate given to ESA by the European governments party to a specific international treaty, currently the “*Declaration by certain European governments on the launchers exploitation phase of Ariane, Vega, and Soyuz from the Guiana Space Centre (CSG)*”, usually referred to as the Launchers Exploitation Declaration (“LED”), signed on 30 March 2007 by some ESA Member States. The LED’s objective is to “*guarantee [...] an available, reliable and independent access to space for Europe at affordable conditions*”¹⁵. Arianespace’s activities are strictly defined and constrained by the LED, which is in turn implemented through the LEA.

- (28) Traditionally, the main competitor of Arianespace for launch services for commercial satellites has been International Launch Services (“ILS”), controlled by the Russian Khrunichev, which commercialises the launcher Proton. In 2013, the US-based SpaceX entered the open market performing its first commercial launch with the Falcon 9 launcher and gained a significant position in the commercial segment.
- (29) In context of this competitive environment, and with a view to securing a reliable and independent access to space for institutional and commercial European customers at affordable conditions, ESA is currently implementing a new framework for its Ariane and Vega programmes, which includes the development of the new launchers Ariane 6 and Vega C¹⁶. The first launch with Vega C is expected to occur in 2018, while the first launch of Ariane 6 is expected to occur in 2020.

5.1.2. Satellites

- (30) Satellites are space systems orbiting or revolving around celestial objects. Satellites are delivered into orbit by space launchers.
- (31) There are different types of satellites depending on the type of mission and customer:
- (a) *Commercial satellites* are purchased by private satellite operators and are used in the field of telecommunications and for television broadcasting.
 - (b) *Institutional satellites* are procured for the benefit of ESA, national governments, public entities, agencies and undertakings which are part of the administration of ESA or Union Member States, the Union and other European international organisations other than ESA. Those satellites are used to carry out specific missions such as Earth-observation, scientific, navigational or telecommunications missions.
 - (c) *Military satellites* are purchased by Ministries of Defence (“MoD”) or multinational defence organisations such as NATO. Those satellites are used for telecommunications, for radar and optical observation.
- (32) Constellations are composed of a large number of very small satellites (between 10 and several hundred or even thousand) working in concert. A constellation comprises a number of satellites with coordinated ground coverage, operating together under shared control, synchronised so that they overlap well in coverage. Constellations are generally placed in a non-GTO orbit, and may be used for telecommunications or navigation.

¹⁵ Article I(2) of LED.

¹⁶ The development of Ariane 6 and Vega C was decided by participating states at the occasion of the ESA Council meeting at ministerial level in December 2014 and industrial activities as well as launch complex and launch range developments are on-going, following the signature of the development contracts with the launcher prime contractors in August 2015.

(33) Satellites are built by satellite prime contractors, which design, develop, manufacture and commercialise satellites. Three satellite manufacturers are active in Europe: Airbus, the French manufacturer Thales Alenia Space ("TAS") and the German manufacturer OHB System AG ("OHB"). Outside the Union, the main satellite manufacturers are Boeing, Orbital, Space Systems/Loral ("SSL")¹⁷ and Lockheed Martin.

5.1.3. Procurement of launch services and satellites

(34) The customers of launch services and satellites are the satellite operators.

(35) Satellite operators which purchase both launch services and satellites include the following categories: (i) large commercial operators such as the "big four" (SES, Intelsat, Eutelsat and Telesat), which operate a whole fleet of GTO satellites for telecommunications; (ii) smaller commercial operators operating only a few satellites in the telecommunications, Earth-observation, science, or navigation sectors; (iii) national space agencies, intergovernmental organisations and MoD; (iv) new economy players such as Google, Amazon and Facebook.

(36) Depending on the type of satellite operated, satellite operators may either (i) lease transponders for transmissions (in the case of telecommunication satellites); or (ii) licence images or data collected by the satellite (in the case of Earth imaging satellites).

(37) Private satellite operators and sometimes governmental agencies procure launch services in the open market. However, a portion of the launch services for institutional and government applications (civil or military) are captive, that is to say that they are procured through specific procurement rules without a competitive process, due to legal constraints or their sensitivity in terms of security, and can only be attributed to a national or regional launch services provider.

5.1.4. Payload adapters and payload dispensers

(38) Payload adapters and payload dispensers are equipped structures on which a satellite is fixed under the launcher fairing. Payload adapters and payload dispensers allow for the separation of the satellite(s) from the launcher upon order from the launcher. Payload adapters are used for single or dual launches, while payload dispensers are only used for constellations (such as Galileo).

(39) Payload adapters and payload dispensers may either: (i) be developed internally by the launcher prime contractor, (ii) be purchased externally by the launcher prime contractor, which in turn sells the whole launcher (including the payload adapter/dispenser) to the launch services provider or (iii) be procured externally directly by the launch services provider.

5.2. Market for launchers exploited by Arianespace

5.2.1. Parties' activities

(40) Arianespace procures launchers from the launcher prime contractors (ASL for Ariane, ELV for Vega and TsSKB for Soyuz). ASL is active as the prime contractor for the Ariane launchers.

(41) Neither Safran nor Airbus are active as prime contractors for launchers outside ASL.

¹⁷ SSL is a subsidiary of the company MacDonald, Dettwiler and Associates Ltd., Canada ("MDA").

5.2.2. *Relevant product market definition*

- (42) The Commission has previously considered that the space industry could be split into (i) satellites, (ii) space infrastructure (mainly space stations), (iii) launch services, (iv) launchers and (v) ground systems¹⁸. In all of those sectors, a further distinction must be made between the prime contracting level¹⁹ and the equipment level. In *Airbus/Safran/JV*²⁰ the Commission analysed the prime contracting market for space launchers but the existence of such a relevant market, as well as its exact scope, was left open.
- (43) The Parties submit that the specificities of the selection of the prime contractor for European launchers, as described in the *Airbus/Safran/JV* decision, put forward that there is no open market for launcher prime contracting in Europe. This is because (i) ESA is the only customer with regards to the prime contracting of launchers development in Europe, (ii) the role of the prime contractor has always been attributed by ESA through bilateral negotiations to the companies of the main contributing Member State based on the *juste retour* principle²¹, (iii) ASL and ELV have already been selected as prime contractors for the Ariane and Vega launchers respectively, [...].
- (44) The Parties submit that, in any event, the product market definition may be left open given the absence of any impact of the transaction with regards to launcher prime contracting.
- (45) The Commission observes that after being selected by ESA, prime contractors are then involved in the manufacturing and marketing of launchers to Arianespace. The Commission's previous decisions have analysed and discussed the market relating to the initial competition to be selected as prime contractors by ESA. For the purposes of this Decision, the relevant market reality corresponds to a situation where prime contractors hypothetically compete for the marketing of their launchers to Arianespace²². Moreover, since Arianespace is under an obligation to source either ESA-developed launchers or Soyuz, the market for launchers exploited by Arianespace could be seen as encompassing Ariane, Vega and Soyuz.
- (46) For the purposes of this Decision, the Commission considers that the existence of a *market for launchers exploited by Arianespace*, as well as its exact scope, can be left open since the transaction would not significantly impede effective competition in the internal market under any of the alternative market definitions.

¹⁸ Commission Decision 2001/C 189/04 in Case No M.2437 – NEC/Toshiba, OJ C 189, 5.7.2001, p. 6, recital 12.

¹⁹ In the context of ESA launchers, a prime contractor is responsible for the design, R&D, engineering, manufacturing and assembly of the launcher in cooperation with ESA during the *development phase*. Once the development is over, the prime contractor is responsible for the manufacture and sale of launchers to the providing of launch services.

²⁰ Commission Decision 2015/C 210/01 in Case No M.7353 – Airbus/Safran/JV, OJ C 210, 26.6.2015, p. 1, recitals 67-74.

²¹ [...].

²² In case there is no overlap between the different platforms, prime contractors would not compete with each other, but Arianespace would select the mission-compatible launcher. This potential overlap is analysed in Section 8.2.1.1.

5.2.3. *Relevant geographic market definition*

- (47) The Commission considered in previous decisions²³ that competition for systems, subsystems and equipment for Ariane launchers takes place exclusively at an EEA level. This is due to the fact that the selection of suppliers of those products takes place during the development phase and is governed by the *juste retour* principles.
- (48) The Parties submit that, due to the *juste retour* principle enshrined in the ESA Convention, the relevant market for ESA launchers should be considered to be EEA-wide in scope.
- (49) The Parties submit that, in any case, the geographic definition of the market may be left open as the transaction does not have any significant impact in this regard, irrespective of the precise geographic scope.
- (50) As illustrated in recital (45), the Commission considers that since the selection of the ESA prime contractors has already taken place, the selected prime contractors may only compete in selling their launchers to Arianespace. Given that this single customer is European, the geographic scope of the market can be defined as being EEA-wide.
- (51) For the purposes of this Decision, the Commission thus considers that the market for launchers exploited by Arianespace is EEA in scope.

5.3. **Markets for launch services**

5.3.1. *Parties' activities*

- (52) Arianespace performs launches of satellites and other spacecraft for institutional and commercial customers. It performs launches to both GTO and non-GTO.
- (53) ASL is marginally active in the market of launch services through its joint venture Eurockot, which commercialises the Rockot launcher. The launcher is used for non-GTO launches for both commercial and institutional customers.
- (54) Neither Safran nor Airbus are active in the sector of launch services outside ASL.

5.3.2. *Relevant product market definition*

- (55) Space launch services consist of placing spacecraft (including satellites, manned or unmanned capsules or exploration modules) into orbit or, for exploration missions, sending them into deeper space. Launch services can be offered by vertically integrated industrial companies manufacturing launchers and providing launch services or by operators commercialising launchers procured from third parties.

5.3.2.1. Segmentation by the category of the launcher

- (56) In previous decisions²⁴, the Commission discussed possible segmentations of the market for launch services based either on (i) the size of the satellite launched/orbit destination²⁵, or (ii) the category of launcher, that is to say the GTO and non-GTO launchers.

²³ Commission Decision 2009/C 081/04 in Case No M.5426 – Dassault Aviation/TSA/Thalès, OJ C 81, 4.4.2009, p. 2, recital 11.

²⁴ Commission Decision 2004/195/EC in Case No M.1879 – Boeing/Hughes, OJ L 63, 28.2.2004, p. 53, recitals 51-55; Commission Decision 2005/C 236/6 in Case No M.3856 – Boeing/Lockheed Martin/United Launch Alliance, OJ C 236, 24.9.2015, p. 8, recitals 8-9.

²⁵ Commission Decision 2004/195/EC in Case No M.1879 – Boeing/Hughes, OJ L 63, 28.2.2004, p. 53, recitals 50-53.

- (57) The Parties propose a segmentation of the market for launch services between GTO and non-GTO missions. The Parties argue that a segmentation based on the size of the satellite launched would be equivalent to a segmentation based on the category of the launcher since larger GTO satellites can only be launched by heavy launchers, whereas smaller, non-GTO, satellites are normally launched by medium and small launchers. Therefore, since customers of launch services primarily select the launcher based on the characteristics of the satellite mission, in particular the destination orbit, the Parties propose to distinguish between GTO launch services and non-GTO launch services.
- (58) Within the markets for GTO launch services, the Parties do not support a hypothetical segmentation based on different satellite mass ranges given that any segmentation is rendered obsolete by (i) the constant changes in the offering of launch services, (ii) the development of new launchers and upgrade of existing launchers and (iii) the variations of satellite mass depending on the launcher.
- (59) Within the markets for non-GTO launch services, the Parties submit that further possible segmentations could be envisaged based on the type of the performed mission. First, a segmentation could be envisaged between (i) classic non-GTO missions and (ii) constellations. According to the Parties, the launch of non-GTO constellations is the only area where heavy, medium and small launchers could be in competition for the same mission. Satellite operators may decide to launch a limited number of satellites with a small or medium launcher, or a larger number of satellites with a heavy launcher. Second, a segmentation of the non-GTO launch market could be envisaged between (i) launches to MEO and (ii) launches to LEO. Launches to MEO differ from launches to other non-GTO orbits insofar as only medium and heavy launchers may reach MEO, whereas small launchers are only capable of reaching LEO. The Parties submit that, in any event, those possible market segmentations may be left open given the absence of any impact of the transaction with regard to launch services.
- (60) The Commission considers on the basis of the market investigation, that from a demand-side perspective, there is no substitutability between launches to GTO and to non-GTO. Indeed, the large majority of satellite operators stated that on almost all occasions they need to launch a satellite into a given orbit²⁶.
- (61) As regards supply side substitutability, the majority of market participants considered that, in general, not every launcher can perform both GTO and non-GTO launches competitively²⁷. According to a satellite manufacturer, *"most launch vehicles are optimized for one particular mission (e.g. GTO or LEO) and are mostly less effective for the other Missions"*²⁸. A launch services provider stated: *"Not every launch vehicle can perform competitively in both GTO and non-GTO due to launch vehicle design, capabilities, and geographic location, among other factors"*²⁹.
- (62) In light of recitals (56) to (61), the Commission considers (i) the market for GTO launch services and (ii) the market for non-GTO launch services to be distinct markets.

²⁶ Replies to question 9 of Questionnaire Q1 – questionnaire to satellite operators.

²⁷ Replies to question 11 of Questionnaire Q1 – questionnaire to satellite operators, question 9 of Questionnaire Q2 – questionnaire to satellite primes and question 7 of Questionnaire Q3 – questionnaire to launch services providers.

²⁸ Reply to question 9 of Questionnaire Q2 – questionnaire to satellite primes.

²⁹ Reply question 7 of Questionnaire Q3 – questionnaire to launch services providers.

- (63) In the course of the market investigation, the Commission also examined the relevance of a further market segmentation of the market for GTO launch services based on the mass or weight of the satellite.
- (64) First, the vast majority of market participants stated that there are possible subsegments of the market for GTO launch services for which competitive conditions may differ³⁰. Internal documents produced by Arianespace to analyse the market for GTO launch services distinguish [...] ³¹. The [...] threshold is approximately the threshold for the mass of the satellites that fit either the lower or the upper position on Ariane 5 and the [...] threshold corresponds to approximately the maximum capacity of SpaceX at the time.
- (65) Second, market participants confirmed that satellite operators have the flexibility to choose between satellite mass categories for a given commercial mission to GTO and that they take into account all costs of the mission³². This way, customers can indirectly implement some competition between launches of satellites of different sizes.
- (66) Third, launch services providers are constantly engaged in developing their launchers, improving their performance and capacity. This is in particular the case with SpaceX, which recently has increased its performance up to 6.45 tonnes with the Falcon 9 v.1.1 full throttle³³. After 2020, Arianespace will start performing launches with Ariane 6, which will not have the 3.5 tonnes mass restriction for satellites being launched in the lower position. Those developments justify why different respondents mentioned different thresholds for possible segmentations of the market for GTO launch services³⁴.
- (67) For the purposes of this Decision, the Commission considers that there are no self-evident clear boundaries of separate segments which would clearly suggest separate markets. Therefore the relevant market comprises the overall market for GTO launch services.
- (68) As regards a potential segmentation of the market for non-GTO launch services into launches to MEO and to LEO, all satellite operators confirmed that they are not able to choose between a mission to launch into LEO and a mission to launch into MEO³⁵. The majority of satellite manufacturers and launch services providers considered that, in general, each launcher cannot competitively perform both MEO and LEO launches³⁶. Satellite operators expressed the opposite opinion³⁷.

³⁰ Replies to question 12 of Questionnaire Q1 – questionnaire to satellite operators, question 10 of Questionnaire Q2 – questionnaire to satellite primes and question 8 of Questionnaire Q3 – questionnaire to launch services providers. Replies to question 5 of Questionnaire Q4 – questionnaire to satellite operators, question 5 of Questionnaire Q5 – questionnaire to satellite primes and question 5 of Questionnaire Q6 – questionnaire to launch services providers.

³¹ Form CO, Annex 5.4.8.f, "Strategic & Audit Committee Meeting, 25 September 2015", page 6.

³² Replies to question 4 of Questionnaire Q4 – questionnaire to satellite operators and question 4 of Questionnaire Q5 – questionnaire to satellite primes.

³³ ESA's submission "Comments to the Commission's Article 6(1)(c) Decision", 29.03.2016.

³⁴ Ariane 5 is normally operated in dual launch, namely the concomitant launch of a 3-ton satellite (occupying the lower position under the fairing) and a 6-ton satellite (upper position under the fairing).

³⁵ Replies to question 10 of Questionnaire Q1 – questionnaire to satellite operators.

³⁶ Replies to question 9.2 of Questionnaire Q2 – questionnaire to satellite primes and question 7.2 of Questionnaire Q3 – questionnaire to launch services providers.

³⁷ Replies to question 11.2 of Questionnaire Q1 – questionnaire to satellite operators.

Furthermore, the vast majority of market participants stated that constellations can be launched with the same type of launchers as for classic non-GTO missions³⁸.

- (69) For the purposes of this Decision, the issue whether the market for non-GTO launch services should be segmented by the type of mission performed (that is to say, LEO or MEO missions) can be left open as the transaction significantly impedes effective competition in the internal market under either of the alternative market definitions as regards the exchange of information between Arianespace and Airbus.

5.3.2.2. Segmentation by type of client

- (70) The Commission has considered in previous decisions a segmentation of the market for launch services based on the type of client³⁹.
- (71) The Parties concur with the findings of the Commission to segment the market by distinguishing between (i) the captive institutional and governmental markets, covering civil and military launches that are attributed to a national or regional launch services provider without competition, and (ii) the open commercial market (which would include all launches purchases by commercial customers, but also the limited portion of governmental or institutional demand that is purchased on the open market).
- (72) According to the Parties, although there is no rule that imposes an obligation on ESA and its Member States to use a European launch services provider for their governmental missions, ESA and the French government *de facto* procure all their launch services – whenever possible – from European launch services providers. As for ESA Member States other than France, the Parties argue that they do not have any national or regional preferences and procure launches globally. Moreover, according to the Parties, although they do not fully overlap, the distinction between open commercial launches and captive governmental launches broadly mirrors the distinction between GTO and non-GTO launches.
- (73) For the purposes of this Decision, the Commission considers the (i) captive market for launch services for institutional and government applications (civil or military) and (ii) open market for launch services for commercial applications, including the portion of governmental and institutional demand that is purchased on the open market, as distinct markets.

5.3.2.3. Conclusion

- (74) For the purposes of this Decision, the Commission considers that (i) GTO and (ii) non-GTO missions constitute different segments. Each of those segments can be further subsegmented into (i) open launches and (ii) captive launches (civil or military). This corresponds to the following distinct relevant markets: (i) *open market for GTO launch services*, (ii) *open market for non-GTO launch services*, (iii) *captive market for GTO launch services* and (iv) *captive market for non-GTO launch services*.
- (75) For the purposes of this Decision, the possible segmentation of markets for non-GTO launch services between LEO and MEO launches can be left open as the transaction

³⁸ Replies to question 14 of Questionnaire Q1 – questionnaire to satellite operators, question 12 of Questionnaire Q2 – questionnaire to satellite primes and question 10 of Questionnaire Q3 – questionnaire to launch services providers.

³⁹ Commission Decision 2005/C 236/6 in Case No M.3856 – Boeing/Lockheed Martin/United Launch Alliance, OJ C 236, 24.9.2015, p. 8, recital 8.

significantly impedes effective competition in the internal market under any of the alternative market definitions as regards the exchange of information between Arianespace and Airbus.

5.3.3. *Relevant geographic market definition*

- (76) In previous decisions⁴⁰, the Commission found that the open market for launch services is worldwide in scope. In contrast, the geographic markets for captive launches are typically national or regional in scope.
- (77) The Parties submit that the open markets for launch services should be considered worldwide in scope, irrespective of the public or private nature of the customer. As regards captive markets for launch services, the Parties argue that they should be considered national in scope – or EEA in scope in the case of launches procured by ESA or the Commission.
- (78) The Commission considers on the basis of the market investigation that, depending on the type of customer and its country, there may be strong geographical preferences⁴¹. In particular, commercial customers "*typically select launch services based on the launch vehicles mission success record, availability and price (geography is not a primary selection consideration)*" while "*a military customer for example is most likely to have a requirement for a national provider*"⁴² and "*For institutional satellites, preference is usually given to national launchers*"⁴³. Commercial satellite operators indicated that they do not have a preference for European launch services⁴⁴.
- (79) According to ESA, there is no single European institutional launch services procurement policy as a result of the absence, up until now, of a single cohesive executive authority at an ESA Member States level in this regard. In fact, the LEA has not been considered directly binding on ESA Member States to use ESA-developed launchers. This has led to varying practices, from France launching only from CSG to other Member States adopting a purely commercial approach⁴⁵. ESA used as examples the SARah or COSMO-SkyMed satellites of German and Italian MoDs, which have been launched or are to be launched with US launch vehicles despite existing launch capability on European launch vehicles.
- (80) Non-European launch services providers indicated that they have already received requests for quotes from European institutional customers and also from a European military customer⁴⁶. This was confirmed by institutional players in Europe, with the exception of the French MoD. According to one European MoD, "*regarding the launcher procurement, the security rules are more flexible and allowed to use both European and American launch service provider*". Another one stated that "*(...) has*

⁴⁰ Commission Decision 2004/195/EC in Case No M.1879 – Boeing/Hughes, OJ L 63, 28.2.2004, p. 53, recitals 56-57; Commission Decision 2005/C 236/6 in Case No M.3856 – Boeing/Lockheed Martin/United Launch Alliance, OJ C 236, 24.9.2015, p. 8, recital 10.

⁴¹ Replies to question 17 of Questionnaire Q2 – questionnaire to satellite primes and question 15 of Questionnaire Q3 – questionnaire to launch services providers.

⁴² Reply to question 15 of Questionnaire Q3 – questionnaire to launch services providers.

⁴³ Reply to question 17 of Questionnaire Q2 – questionnaire to satellite primes.

⁴⁴ Replies to question 19 of Questionnaire Q1 – questionnaire to satellite operators.

⁴⁵ ESA's submission "Comments to the Commission's Article 6(1)(c) Decision", 29.03.2016.

⁴⁶ Replies questions 7 and 8 of Questionnaire Q6 – questionnaire to launch services providers.

*no legal requirement to buy spacecraft or to launch from a specific company or geographical area*⁴⁷.

- (81) For the purposes of this Decision, Commission considers the open markets for launch services (both for GTO and non-GTO launches) to be worldwide in scope. As regards the captive markets for launch services (both for GTO and non-GTO launches), the Commission considers they are national in scope in the case of national institutions and EEA in scope in the case of European organisations.

5.4. Markets for satellites

5.4.1. Parties' activities

- (82) Airbus is active as a satellite manufacturer both in terms of commercial, institutional and military satellites as well as for constellation satellites.
- (83) Neither Safran, ASL or Arianespace are active as satellite manufacturers. Airbus, Safran and ASL manufacture and sell subsystems and equipment for commercial, institutional and military satellites.
- (84) Arianespace is not active in satellite manufacturing.

5.4.2. Relevant product market definition

- (85) Satellites are complex spacecraft orbiting or revolving around a celestial object. A satellite essentially consists of a platform and a payload. The platform is the basic frame of the satellite whose components allow it to function in space by ensuring its stability and thermal control, maintaining its orbit, and supplying power⁴⁸. The payload governs the main parameters of the platform and is designed to perform the particular tasks for which the satellite was put in orbit⁴⁹. Platforms are generally standardised, while payloads are always tailored to suit the precise needs of the customer, namely the satellite operator.

5.4.2.1. Segmentation by final application

- (86) In previous decisions⁵⁰, the Commission has defined different markets for satellites on the basis of the final applications. Specifically, the Commission distinguished satellites used for military applications from those used for civil applications. Military satellites encompass telecommunication, radar, optical observation and early warning satellites. They are procured by MoD or multinational defence organisations such as NATO.
- (87) As regards satellites for *civil* applications, the Commission further made a distinction between the market for (i) commercial satellites, which are used for telecommunications and television broadcasting, typically procured by private satellite operators, and that for (ii) institutional satellites, which are tailor-made

⁴⁷ Minutes of conference calls held with MoDs on 23.03.2016 and 16.03.2016.

⁴⁸ The platform consists of the following components: structure of the satellite, power, propulsion, stabilization and attitude control, thermal control, environmental control, telemetry, tracking and command.

⁴⁹ For instance, depending on the nature of the mission, the payload of a vehicle may include cargo, passengers, flight crew, munitions, scientific instruments or experiments, or other equipment.

⁵⁰ Commission Decision 2009/C 081/04 in Case No M.5426 – Dassault Aviation/TSA/Thalès, OJ C 81, 4.4.2009, p. 2, recital 21; Commission Decision 2005/C 139/14 in Case No M.3680 – Alcatel/Finmeccanica/Alcatel Alenia Space & Telespazio, OJ C 139, 8.6.2005, p. 37, recital 15; Commission Decision 2009/C 034/05 in Case No M.4403 – Thales/Finmeccanica/Alcatel Alenia Space & Telespazio, OJ C 34, 11.2.2009, p. 5, recitals 38-41.

satellites for Earth-observation, science, or navigation, typically procured by national civil space agencies or other governmental bodies, such as ESA and the European Commission.

- (88) Within the market for *institutional* satellites, the Commission has further considered three potential segments defined on the basis of the type of customer: (i) European captive market, namely the market for civil institutional satellites sold to European organisations, such as ESA, EUMETSAT and the Commission; (ii) national captive market, namely the market for institutional satellites sold to national space agencies in Europe and (iii) market for the export of institutional satellites sold to non-Union agencies and governments. The market for the export of institutional satellites includes the sales of satellites, typically to national governments and space agencies around the world, for which no national preferences or specific public procurement rules based on geography apply. That market essentially consists of the sale of Earth-observation satellites (satellites designed to allow the observation of the Earth from orbit, which are used for purposes such as mapmaking, meteorology and environmental monitoring).
- (89) The Parties agree with the Commission's practice of defining the market.
- (90) The findings of the Commission's investigation confirmed that institutional, military and commercial satellites serve different purposes and different customers and should be treated as separate markets⁵¹.
- (91) Telecommunication satellites are usually large GEO spacecraft, which are tailor-made for each customer. Telecommunication satellites are composed of a platform and a payload, the latter including transponders, antennas and switching systems. These satellites are fixed above one point of the equator and cover about one third of the globe.
- (92) Military communication satellites mainly differ from commercial spacecraft regarding the frequencies used; military satellites operate on restricted frequencies (mainly X-band), which are not accessible to commercial telecommunication satellites. They may also use more technically advanced solutions for the payload.
- (93) Earth-observation, science, or navigation satellites are also composed of a platform and payload specifically designed for each mission. In particular, the payload of that type of satellites may include optical or scientific instruments tailored to perform the specific mission of the satellite. Earth-observation, science, or navigation satellites differ much more in terms of mass, size, orbit of destination and other characteristics than telecommunication satellites⁵².
- (94) Therefore, in line with previous decisions and the results of the market investigation the markets for institutional, military and commercial satellites are considered to be separate markets. For the purposes of this Decision, in line with the precedent cases, the institutional market can be further subsegmented into (i) *European institutional satellites* (ESA, EUMETSAT and the Commission), (ii) *national institutional satellites* within the Union and (iii) *export of institutional satellites*, in light of the different dynamics of these segments and the different procurement rules and conditions.

⁵¹ Replies to question 4 of Questionnaire Q1 – questionnaire to satellite operators and question 4 of Q2 – questionnaire to satellite primes.

⁵² Parties' reply to the Commission's request for information n° 24, 11.03.2016, question 1.

5.4.2.2. Segmentation by type of orbit

- (95) In the course of the market investigation, in line with the analysis carried out for the markets for launch services, the Commission examined the relevance of a potential segmentation based on the type of orbit to which satellites are being launched.
- (96) According to the Parties, GTO and non-GTO satellites are similar in terms of design and technologies. Non-GTO satellites are smaller spacecraft (from about 125 kg to 650-700 kg, compared to 2.5 tonnes to 6 tonnes for GTO satellites) and are therefore cheaper. However, satellite operators need several non-GTO satellites to cover the same area as a GTO satellite, and non-GTO satellites have a shorter lifespan, which tends to put the price difference regarding a single satellite in perspective⁵³.
- (97) In this regard, the Parties note that the distinction between telecommunication satellites, on the one hand, and Earth-observation, science and navigation satellites, on the other hand, does not fundamentally differ from the segmentation retained in the Commission's precedents, and basically corresponds to the distinction between GTO and non-GTO satellites. Similarly, telecommunication satellites – with the exception of military telecommunication - are purchased by commercial customers whereas for Earth-observation, science, or navigation satellites, the distinction between commercial and government largely overlaps with the distinction between the “export” market and the European/national institutional markets.
- (98) In any event and given the absence of any significant impact of the transaction on competition, the Parties submit that the precise definition of the relevant product markets may be left open.
- (99) In the course of the market investigation, satellite operators agreed that telecommunications satellites nowadays practically always rely on GTO orbits⁵⁴. As explained by one major satellite manufacturer, *"as of today, other than certain limited exceptions, such as the non GTO constellations described below, the vast bulk of the global commercial communications satellite fleet is in GTO"*⁵⁵. Indeed, the only exceptions to GTO commercial satellites are the emerging constellations of micro-satellites, which are launched into LEO⁵⁶. Although constellations are expected to take off in telecommunication applications, at the moment no commercial constellation has yet been launched and only one contract has been signed so far (the Oneweb constellation). The Parties emphasise that constellations of microsatellites represent a recent development in the commercial segment, insofar they have been typically used for Earth-observation missions by institutional customers. Therefore, for the analysis of the market for commercial satellites, the distinction between GTO and non-GTO does not appear to be relevant since commercial satellites have so far been exclusively relying on GTO.
- (100) Market participants also indicated that although institutional satellites usually rely on non-GTO, in some instances, they might also be launched to GTO⁵⁷. As explained by a satellite operator, *"in GEO (and not GTO) there are also Earth Observation*

⁵³ Parties' reply to the Commission's request for information n° 24, 11.03.2016, question 5.

⁵⁴ Replies to question 5 of Questionnaire Q1 – questionnaire to satellite operators and question 4 of Questionnaire Q2 – questionnaire to satellite primes.

⁵⁵ Reply to question 5.1 of Questionnaire Q2 – questionnaire to satellite primes.

⁵⁶ Replies to questions 5 and 6 of Questionnaire Q1 – questionnaire to satellite operators and questions 5, 6 of Questionnaire Q2 - questionnaire to satellite primes.

⁵⁷ Replies to question 6 of Questionnaire Q1 – questionnaire to satellite operators and question 6 of Questionnaire Q2 - questionnaire to satellite primes.

satellites such as satellites for meteo monitoring and weather forecasting"⁵⁸. A European satellite manufacturer also confirmed that: "*GEO is not limited to satcom only: EUMETSAT satellites and EGNOS payload are good examples of (European) Earth*"⁵⁹. Although institutional launches to GTO appear to occur on a very exceptional basis (in the last three years, only one of the launches for the European captive market was to GTO and no new contract was signed in the same period), the distinction appears to be meaningful.

- (101) As regards the market for military satellites, the Parties explain that this encompasses either GTO telecommunication satellites, which operate on restricted frequencies, or non-GTO Earth-observation satellites, often based on advanced rather technologies. Therefore, the distinction between GTO and non-GTO is relevant.
- (102) To sum up, a distinction between GTO and non-GTO satellites appears to be warranted for the markets for institutional satellites and military satellites. As regards the market for commercial satellites, the distinction is not currently relevant but with a view to the possible future development of microsatellites for commercial purposes, it may become relevant in the future.
- (103) For the purposes of this Decision, the issue whether the GTO and non-GTO segments of the markets for military satellites and for institutional satellites should be considered to be separate markets can be left open as the transaction significantly impedes effective competition in the internal market under either of the alternative market definitions as regards the exchange of information between Arianespace and Airbus.

5.4.2.3. Segmentation by size

- (104) The Commission has also considered whether the market for satellites should be analysed on the basis of the size of satellites. Satellites can indeed significantly vary in terms of size/weight.
- (105) The size of commercial satellites can span from 2 tonnes to around 10 tonnes. Institutional satellites, which are typically launched to non-GTO, are much smaller than commercial ones and remain below 2 tonnes. Military satellites, as they usually encompass both Earth-observation and telecommunication satellites, can span the whole range of sizes. Therefore, the segmentation may be relevant in relation to the commercial and military satellites. In light of the relative homogeneity of the size of institutional satellites, the segmentation does not appear to be relevant for institutional satellites.
- (106) The Parties do not believe that the hypothetical segmentation based on mass ranges (small commercial satellites below 3.5 tonnes, medium ones between 3.5 and 5 tonnes, large ones above 5 tonnes) corresponds to the market reality because the constant changes in the offer of launch services, the development of new launchers and upgrade of existing launchers, and the variations of satellite mass depending on the launcher render any delimitation obsolete. The Parties submit that any market segmentation based on the mass of satellites does not appear relevant.
- (107) ESA submitted that the mass segmentation and satellite mass evolution in GTO is very much correlated to the launch services offer available in GTO launches, in particular as most satellite operators choose a design which will maintain

⁵⁸ Reply to question 6.1 of Questionnaire Q1 – questionnaire to satellite operators.

⁵⁹ Reply to question 6.1 of Questionnaire Q2 – questionnaire to satellite primes.

compatibility with the performance of more than one launcher. According to ESA, as a result of the competitive offer of SpaceX, a significant increase has already been observed in 2013-2014 in the number of payloads with a mass of 2.5 to 3.5 tonnes. More recently, the Falcon 9 has increased its performance to 5 tonnes or up to 6.45 tonnes with the Falcon 9 v.1.1 full throttle, and an increase in the number of satellites in that mass range is expected⁶⁰.

- (108) According to the findings of the market investigation, the segmentation by size is not reflective of different conditions of competition within the satellite markets.
- (109) On the one hand, a majority of market participants stated that there is no specific application for different sizes of satellites, therefore from a demand point of view satellites of different sizes are substitutable⁶¹. According to one satellite operator, "*In general terms it is not the end application which determines the size of the satellite. The size is determined (mainly depending on whether the satellite is opening a new orbital position or is a replacement) by the rights/spectrum available, the analysis of the market and the expansion capabilities*"⁶². Moreover, a majority of satellite operators assert that they have the flexibility to choose between satellite mass categories for a given commercial mission to GTO⁶³. This was confirmed also by satellite manufacturers⁶⁴.
- (110) On the other hand, a majority of satellite manufacturers and launch services providers consider that the competitive conditions in the satellites market are different for small, medium and large satellites⁶⁵. According to one satellite manufacturer, "*Some manufacturers compete in one segment while others compete in several which give them opportunities to better leverage unique capabilities in each segment*"⁶⁶. Satellite operators confirm indeed that some satellite manufacturers tend to be more focused on small size satellites, for instance Orbital, OHB and Melco⁶⁷. One satellite operator explained: "*There are maybe some satellite manufacturers which are more specialized on small satellites (OrbitalATK), but in terms of end use they are comparable*"⁶⁸. Nonetheless, according to satellite operators, the majority of satellite manufacturers appear to be present across the whole size range and have similar technical and technological capabilities⁶⁹. As a result, each satellite manufacturer can cover the whole range of satellites by end-application⁷⁰.
- (111) In conclusion, for the purposes of this Decision, in light of the observed substitutability from a demand and supply-side point of view and the fact that there are no self-evident clear boundaries of separate segments, the segmentation based on small, medium or large size satellites is not warranted.

⁶⁰ ESA's submission "Comments to the Commission's Article 6(1)(c) Decision", 29.03.2016.

⁶¹ Replies to questions 1 and 2 of Questionnaire Q4 – questionnaire to satellite operators and questions 1, 2 and 3 of Questionnaire Q5 – questionnaire to satellite primes.

⁶² Reply to question 1 of Questionnaire Q4 – questionnaire to satellite operators.

⁶³ Replies to question 4 of Questionnaire Q4 – questionnaire to satellite operators and question 4 of Questionnaire Q5 - questionnaire to satellite primes.

⁶⁴ Replies to question 5 of Questionnaire Q4 – questionnaire to satellite operators.

⁶⁵ Replies to question 6 of Questionnaire Q5 – questionnaire to satellite primes and question 5 of Questionnaire Q6 – questionnaire to launch services providers.

⁶⁶ Reply to question 6.1 of Questionnaire Q5 – questionnaire to satellite primes.

⁶⁷ Replies to question 17.2 of Questionnaire Q4 – questionnaire to satellite operators.

⁶⁸ Reply to question 17.1 of Questionnaire Q4 – questionnaire to satellite operators.

⁶⁹ Replies to question 17.3 of Questionnaire Q4 – questionnaire to satellite operators.

⁷⁰ Replies to questions 17.1 and 17.2 of Questionnaire Q4 – questionnaire to satellite operators.

- (112) Another possible segmentation taking into account satellite size makes a distinction between "constellation satellites" and "traditional" satellites.
- (113) Constellation satellites are the ones normally launched in a constellation configuration. Constellations are composed of a large number of very small or micro satellites (between 10 and several hundred or even thousand), weighing a few hundreds kilos and launched to non-GTO orbit. Constellations may be used for telecommunications (in particular to give broadband access to parts of the globe that are not yet covered) or navigation. Galileo is a Commission constellation that will provide navigation services. Constellation satellites are procured by both institutional and commercial customers.
- (114) The Parties consider that it is not necessary to conclude whether constellation satellites represent a distinct market.
- (115) In the course of the Commission's investigation, a majority of satellite operators stated that satellites and microsatellites cannot be regarded as substitutable from a demand point of view⁷¹. According to satellite operators "*Microsatellites used in constellation cannot provide broadcast services which require most of the time large coverages*" and "*there can be a good complementarity (but not replacement)*"⁷².
- (116) From a supply point of view, a majority of satellite primes stated that there is a substantial difference in the manufacturing techniques, machines and toolings associated with the production of constellation satellites compared to traditional satellites⁷³. Moreover, unlike the traditional satellite market, many new economy players have entered the constellation satellites segment in the last few years. This suggests that barriers to entry might be significantly lower than those for traditional satellites.
- (117) For the purposes of its analysis, the question as to whether constellation satellites should be considered a distinct market from "traditional" satellites markets can be left open as the transaction significantly impedes effective competition in the internal market as regards the exchange of information between Ariespace and Airbus regardless of the precise market definition.

5.4.2.4. Conclusion

- (118) For the purposes of this Decision, the Commission considers the following relevant markets: (i) *market for European institutional satellites*; (ii) *markets for national institutional satellites within the EU*; (iii) *market for the export of institutional satellites*; (iv) *market for commercial satellites* and (v) *market for military satellites*.
- (119) For the purposes of this Decision, the issue whether the market for satellites should be further segmented on the basis of the type of orbit (GTO/non-GTO), and whether constellation satellites form a distinct market can be left open as the transaction significantly impedes effective competition in the internal market as regards the exchange of information between Ariespace and Airbus regardless of the precise market definition.

⁷¹ Replies to questions 7 of Questionnaire Q4 – questionnaire to satellite operators.

⁷² Replies to questions 7 of Questionnaire Q4 – questionnaire to satellite operators.

⁷³ Replies to questions 9 of Questionnaire Q5 – questionnaire to satellite primes.

5.4.3. *Relevant geographic market definition*

- (120) The Commission found in previous decisions that the geographic dimension of the markets for satellites depends on the nature of the customers:
- (a) the market for commercial satellites has usually been defined as being worldwide in scope since commercial customers – including publicly owned telecommunication entities – purchase satellites at a worldwide level⁷⁴.
 - (b) the market for European institutional satellites has been defined as either EEA-wide or national, depending on the procurement authority.
 - (c) the market for the export of institutional satellites has been considered to be potentially national (on the basis of specific national preferences) or possibly worldwide⁷⁵.
 - (d) the market for military satellites has been defined as national (if a national supplier exists) and otherwise worldwide⁷⁶.
- (121) The Parties agree with the approach followed by the Commission in previous decisions, although they also submit that the geographic dimension of the relevant market for satellites may be left open.
- (122) The findings of the market investigation allowed the Commission to confirm the appropriateness of the described geographic market definition⁷⁷.
- (123) For the purposes of this Decision, the Commission considers that (i) the market for commercial satellites is worldwide in scope; (ii) the market for European institutional satellites is EEA-wide or national depending on the procuring authority; (iii) the market for the export of institutional satellites is worldwide in scope; (iv) the market for military satellites is national in scope (if a national supplier exists) and otherwise worldwide.

5.5. Markets for payload adapters and for payload dispensers

5.5.1. *Parties' activities*

- (124) ASL is active as a supplier of payload dispensers on Ariane 5 (for the Galileo constellation) and on Soyuz (for the Globalstar constellation).
- (125) Airbus DS SAU is active as a supplier of payload adapters on Ariane 5.
- (126) Safran and Arianespace are not active in payload adapters and payload dispensers.

⁷⁴ Commission Decision 2003/813/EC in Case No M.1636 – MMS/DASA/Astrium, OJ L 314, 28.11.04, p. 1, recitals 31-34; Commission Decision 2005/C 139/14 in Case No M.3680 – Alcatel/Finmeccanica/Alcatel Alenia Space & Telespazio, OJ C 139, 8.6.2005, p. 37, recital 51; Commission Decision 2009/C 034/05 in Case No M.4403 – Thales/Finmeccanica/Alcatel Alenia Space & Telespazio, OJ C 34, 11.2.2009, p. 5, recitals 96-97.

⁷⁵ Commission Decision 2009/C 031/03 in Case No M.5168 – EADS/SSTL, OJ C 31, 7.2.2009, p. 3, recitals 20-22.

⁷⁶ Commission Decision 2009/C 034/05 in Case No M.4403 – Thales/Finmeccanica/Alcatel Alenia Space & Telespazio, OJ C 34, 11.2.2009, p. 5, recital 100; Commission Decision 2005/C 139/14 in Case No M.3680 – Alcatel/Finmeccanica/Alcatel Alenia Space & Telespazio, OJ C 139, 8.6.2005, p. 37, recitals 78-79; Commission Decision 2003/813/EC in Case No M.1636 – MMS/DASA/Astrium, OJ L 314, 28.11.2004, p. 1, recitals 36-37.

⁷⁷ Replies to question 17 of Questionnaire Q1 – questionnaire to satellite operators and question 16 of Questionnaire Q2 – questionnaire to satellite primes.

5.5.2. *Relevant product market definition*

- (127) Payload adapters and payload dispensers are subsystems of a launcher. Subsystems designate complex parts of the launcher, whereas equipment consists of components used in systems and subsystems. Each subsystem and equipment is designed specifically for a given launcher and is intended to fulfil a specific mission. It is thus not interchangeable with other subsystems or equipment.
- (128) In previous decisions⁷⁸, the Commission examined whether there is a distinct market for each launcher component, but ultimately left the question open.
- (129) The Parties argue that from a demand perspective, payload adapters and payload dispensers are both normally procured directly by the launch services provider, through tenders. Although payload adapters and payload dispensers are normally designed for a specific launcher or even, in the case of payload dispensers, for a specific mission, the technologies used do not significantly vary from one launcher to another and companies active in the manufacture of payload adapters and payload dispensers provide those products for various launchers.
- (130) The Parties submit that a possible segmentation between payload adapters and payload dispensers may however be plausible. This is because payload adapters are basically off-the-shelf products, while payload dispensers are designed to suit the needs of each specific constellation and are selected with separate tenders for each new constellation launch services agreement signed.
- (131) The Parties consider that the market definition may be left open, as the transaction does not have any significant impact in this regard, irrespective of the precise product market definition.
- (132) According to the findings of the market investigation, payload dispensers are developed and produced specifically for each mission⁷⁹. According to a satellite manufacturer, "*the design of the dispenser is strongly linked to the satellite design and is unique for each Program*"⁸⁰. On the contrary, payload adapters are standard products⁸¹. One satellite manufacturer stated that "*adapters are typically developed as a standard configuration which is adopted to each mission*"⁸². According to ESA, "*payload dispensers can be considered rather part of the satellite and are mission-specific rather than launcher-specific*"⁸³.
- (133) For the purposes of this Decision, the Commission considers that (i) the *market for payload adapters* and (ii) the *market for payload dispensers* constitute separate product markets.

⁷⁸ Commission Decision 2003/813/EC in Case No M.1636 – MMS/DASA/Astrium, OJ L 314, 28.11.2004, p. 1, recital 122; Commission Decision 2000/C 307/04 in Case No M.1745 – EADS, OJ C 307, 26.10.2000, p. 4, recital 76, Commission Decision 2009/C 081/04 in Case No M.5426 – Dassault Aviation/TSA/Thalès, OJ C 81, 4.4.2009, p. 2, recital 93.

⁷⁹ Replies to question 13 of Questionnaire Q2 – questionnaire to satellite primes and question 11 of Questionnaire Q3 – questionnaire to launch services providers.

⁸⁰ Reply to question 13 of Questionnaire Q2 – questionnaire to satellite primes.

⁸¹ Replies to question 14 of Questionnaire Q2 – questionnaire to satellite primes and question 12 of Questionnaire Q3 – questionnaire to launch services providers.

⁸² Reply to question 14 of Questionnaire Q2 – questionnaire to satellite primes.

⁸³ ESA's submission "Comments to the Commission's Article 6(1)(c) Decision", 29.03.2016.

5.5.3. *Relevant geographic market definition*

- (134) In previous decisions⁸⁴, the Commission considered the markets for subsystems and equipment for launchers to be EEA-wide in scope [...].
- (135) On the one hand, the Parties submit that the market should be considered to be worldwide in scope given that (i) Arianespace does not have to abide by the *juste retour* principle but is free to select its suppliers based on open tenders and (ii) European companies, including ASL, Airbus DS SAU and RUAG, regularly bid to provide payload adapters and payload dispensers to non-European launchers, including US, Russian and Indian launchers.
- (136) [...] ⁸⁵.
- (137) For the purposes of this Decision, the Commission considers that the exact scope of the geographic markets for (i) payload adapters and (ii) payload dispensers can be left open as being EEA-wide or worldwide since the transaction would not significantly impede effective competition in the internal market under either of the alternative market definitions.

5.6. **Market for space insurance services**

5.6.1. *Parties' activities*

- (138) Arianespace provides insurance services to its customers through its fully-owned subsidiary "S3R". This is active in the plausible worldwide segment for space insurance but only offers such services for its own launches. In fact, in addition to the launch services, Arianespace proposes the Launch Risk Guarantee ("LRG"). The LRG provides for (i) a free re-flight for the launch of a replacement satellite in the event of a launch failure, or (ii) a cash payment in proportion to the loss suffered by the satellite in the event of partial failure.
- (139) Airbus, Safran and ASL are not active in the insurance sector.

5.6.2. *Relevant product market definition*

- (140) In previous decisions⁸⁶, the Commission segmented the insurance sector between life and non-life insurance. The Commission considered a further segmentation within the non-life insurance market between the different kinds of risks covered. In particular, the Commission considered a possible market for aerospace insurance but eventually left the exact market definition open.
- (141) The Parties agree with the Commission's previous findings that from the demand side, there may be as many different product markets as there are different kinds of risks to be covered. However, the Parties consider that Arianespace's customers remain free to (i) subscribe to Arianespace's LRG or (ii) choose a traditional space insurer like AXA, Allianz or Munich Re. Those competitors cover a large scope of risk that goes far beyond the space sector, thereby indicating that the main suppliers can cover the whole range of risks and, thus, a certain degree of supply-side substitutability.

⁸⁴ Commission Decision 2003/813/EC in Case No M.1636 – MMS/DASA/Astrium, OJ L 314, 28.11.2004, p. 1, recital 125; Commission Decision 2000/C 307/04 in Case No M.1745 – EADS, OJ C 307, 26.10.2000, p. 4, recital 78; Commission Decision 2009/C 081/04 in Case No M.5426 – Dassault Aviation/TSA/Thalès, OJ C 81, 4.4.2009, p. 2, recital 11.

⁸⁵ [...].

⁸⁶ Commission Decision 2008/C 219/03 in Case No M.5010 – Berkshire Hathaway/Munich RE/Gaum, OJ C 219, 28.8.2008, p. 2, recital 22.

(142) The Parties submit that the product market definition for launch insurance may be left open, as the transaction does not have any significant impact on the insurance sector, irrespectively of the precise product market definition.

(143) For the purposes of this Decision, the Commission considers that the exact scope of the product *market for the space insurance services* can be left open since the transaction would not significantly impede effective competition in the internal market under any of the alternative market definitions.

5.6.3. *Relevant geographic market definition*

(144) In previous decisions⁸⁷, the Commission found the possible segment for space insurance to be at least EEA-wide.

(145) The Parties argue that the insurance of space risks is closely related to the markets for the sale of commercial satellites and launch services, which are considered worldwide in scope. According to the Parties, customers may choose to procure their insurance from any insurance company worldwide, irrespective of the nationality of the satellite operator or the launch services provider, without any transportation costs or legal barriers.

(146) In any case, the Parties submit that the geographic definition of the market may be left open as the transaction does not have any significant impact on the insurance sector, irrespectively of the precise geographic scope.

(147) For the purposes of this Decision, the Commission considers that the exact scope of the geographic market for the space insurance services can be left open since the transaction would not significantly impede effective competition in the internal market under any of the alternative market definitions.

5.7. Market for satellite operation

5.7.1. *Parties' activities*

(148) Airbus is active as a satellite operator for (i) Earth observation satellites (in its own name and on behalf of European space agencies) through its Airbus DS Geo-Information Services division (formerly Spot Image and Infoterra) and (ii) military telecommunications (primarily on behalf of the United Kingdom MoD) through its UK subsidiary Paradigm.

(149) Safran, ASL and Arianespace are not active in the sector of satellite operation.

5.7.2. *Relevant product market definition*

(150) Satellite operators purchase, launch and operate satellites. Depending on the type of satellite operated, they may either (i) lease transponders for transmissions (in the case of telecommunication satellites) or (ii) licence images or data collected by the satellite (in the case of Earth imaging satellites).

(151) In previous decisions⁸⁸, the Commission considered that the market may be segmented between (i) the operation of telecom satellites and (ii) the operation of

⁸⁷ Commission Decision 2003/C 65/05 in Case No M.3035 – Berkshire Hathaway/Converium/Gaum/JV, OJ C 65, 19.3.2003, p. 22, recital 32; Commission Decision 2008/C 219/03 in Case No M.5010 – Berkshire Hathaway/Munich RE/Gaum, OJ C 219, 28.8.2008, p. 2, recitals 29-30.

⁸⁸ Commission Decision in Case No M.1439 – Telia/Telenor, OJ L 40, 9.2.2001, p. 1, recital 266; Commission Decision in Case No M.4709 – Apax Partners/Telenor Satellite Services, OJ C 230, 2.10.2007, p. 1, recitals 8-16; Commission Decision in Case No M.4477 – SES Astra/Eutelsat/JV, OJ C 296, 24.8.2007, p. 8, recital 34.

Earth imaging satellites, with a possible distinction, within telecommunication satellites, between the operation of broadcasting satellites and the operation of two-way communication satellites.

- (152) The Parties submit that the product market definition for satellite operation may be left open as the transaction does not have any significant impact on satellite and insurance operations, irrespectively of the precise product market definition.
- (153) For the purposes of this Decision, the Commission considers that the exact scope of the product *market for the satellite operation* can be left open since the transaction would not significantly impede effective competition in the internal market under any of the alternative market definitions.

5.7.3. *Relevant geographic market definition*

- (154) In previous decisions⁸⁹, the Commission considered the relevant market to be worldwide in scope given that (i) there are no significant transportation costs, duties, legal or technical hindrances that could create barriers for customers to buy internationally, (ii) prices for the services are homogenous worldwide and (iii) although not all satellite operators operate satellite fleets with a worldwide footprint, customers can procure airtime either from satellite operators with a global footprint or from several operators with complementary regional footprints.
- (155) The Parties argue that the main satellite telecommunication operators, including *inter alia* SES, Intelsat, Eutelsat, Telesat, as well as the main Earth imaging operators, such as Digital Globe and Blackbridge, are all active on a worldwide basis. They operate satellites that cover the whole globe or very large areas of it and they lease their transponders or licence the data to client worldwide.
- (156) The Parties therefore submit that the markets for satellite operation should be considered worldwide in scope.
- (157) For the purposes of this Decision, and given its previous decisions, the Commission considers that the markets for satellite operation are worldwide in scope.

6. Competitive Assessment: Market shares in the relevant affected markets

- (158) Airbus and ASL are active in markets that are vertically related or otherwise connected to the activities of Arianespace. In particular, there are links between the activities of Arianespace as a launch services provider and those of: (i) Airbus, as a satellite manufacturer; (ii) ASL, as the supplier of the Ariane launcher family to Arianespace; (iii) Airbus DS SAU and ASL, as suppliers of payload dispensers; (iv) Airbus DS SAU, as a supplier of payload adapters; and (v) Airbus as a satellite operator. There is one additional relationship created by the transaction, namely between Arianespace's insurance service provider activities and Airbus' activities as (i) satellite manufacturer and (ii) satellite operator.

6.1. Market for launchers exploited by Arianespace

- (159) In the market for launchers exploited by Arianespace, of the 12 launches performed by Arianespace in 2015, ASL had a market share of 50%, ELV had a market share of 25% and TsSKB had a market share of 25%.

⁸⁹ Commission Decision in Case No M.4709 – Apax Partners/Telenor Satellite Services, OJ C 230, 2.10.2007, p. 1, recitals 17-18.

6.2. Markets for launch services

- (160) As regards the worldwide open market for GTO launch services, and when taking into account the number of GTO launches performed, Arianespace has been the market leader in the last two years ([40-50]% in 2015, [50-60]% in 2014). ILS, which was Arianespace's main competitor, lost important market shares (from [40-50]% in 2013 to [10-20]% in 2015). SpaceX, a new entrant, performed its first commercial flight in 2013 and has already captured [10-20]% of the launches market in 2015, eroding both Arianespace and ILS' market shares. There are additionally a number of other launch services providers active in the worldwide open market for GTO launch services, but they have relatively limited positions.
- (161) When taking into account market shares calculated on the basis of the number of contracted launches – which, according to the Parties, are a better representation of current competitiveness in the market-, Arianespace's market share is lower. According to the Parties' calculations, Arianespace's market shares in the last two years have been below [40-50]% and were close to [30-40]% in 2015. Despite its recent entry, SpaceX has managed to equal the position of Arianespace thanks to its strong price competitiveness. As for ILS, although in a weaker position, it has recently managed to regain some traction, re-establishing itself as the number three launch services provider.
- (162) For the calculation of the 2015 market shares based on contracted launches, in line with Arianespace's methodology illustrated in its internal documents, the Commission considers a conservative scenario where the future launches awarded to ILS through long-term multi-launch agreements are excluded. However, as one launch was already performed in 2016, only seven out of the eight launches contracted through long-term multi-launch agreements by Intelsat and Eutelsat with ILS are excluded⁹⁰. This is illustrated in column "2015 (adjusted)" of Table 1 which differs from the Parties' estimates (column "2015" of Table 1) by excluding those seven launches booked with Proton ILS. In that case, Arianespace's market share in 2015 is in the range of [40-50]%.

⁹⁰ <http://spacenews.com/ils-proton-successfully-launches-eutelsat-9b-telecomdata-relay-satellite>.

Table 1: Market shares in the worldwide open market for GTO launch services

	% (by number of launches performed)			% (by number of launches contracted)			
	2013	2014	2015	2013	2014	2015	2015 (adjusted) ⁹¹
Arianespace	[30-40]%	[50-60]%	[40-50]%	[50-60]%	[30-40]%	[30-40]%	[40-50]%
Proton ILS	[40-50]%	[10-20]%	[10-20]%	[10-20]%	[0-5]%	[20-30]%	[5-10]
Proton not ILS	[0-5]%	[5-10]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
SpaceX	[5-10]%	[10-20]%	[10-20]%	[10-20]%	[30-40]%	[30-40]%	[40-50]%
Sea Launch	[10-20]%	[5-10]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
CGWIC	[5-10]%	[0-5]%	[5-10]%	[5-10]%	[5-10]%	[0-5]%	[0-5]%
LMCLS	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Antrix	[0-5]%	[5-10]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
MHI	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Size of the market	[...]	[...]	[...]	[...]	[...]	[...]	[...]

Source: Form CO, Parties' reply to the Commission's request for information n° 32, 21.04.2016, question 9, Response to Article 6(1)(c) Decision.

- (163) As regards the worldwide open market for non-GTO launch services, Arianespace is a weak competitor. In 2015, it did not perform any commercial launch to non-GTO, following the decreasing trend of the previous two years⁹². In 2015, in terms of the number of contracted launches, Arianespace has a market share of [30-40]% as a result of a multi-launch contract win (the OneWeb contract for the launch of a constellation).

⁹¹ The Chinese IOD project with Long March (where a Chinese customer contracted with Chinese satellite manufacturer) and the Angolan IOD institutional launch (where, according the Parties, the government of Angola only ask for quotations to the Russian provider Proton non-ILS and the Ukrainian Zenit) may or may not be taken into account as commercial GTO launches.

⁹² The segment of the open market for MEO launch services is insignificant, with only three launches performed in total in the last three years and no new contracted awarded. Thus, market shares for the LEO segment almost totally coincide with the market shares for the overall worldwide open market for non-GTO launch services.

Table 2: Market shares in the worldwide open market for classic non-GTO launch services

	% (by number of launches performed)			% (by number of launches contracted)		
	2013	2014	2015	2013	2014	2015
Arianespace	[30-40]%	[10-20]%	[0-5]%	[30-40]%	[5-10]%	[30-40]%
Antrix	[0-5]%	[5-10]%	[30-40]%	[0-5]%	[60-70]%	[0-5]%
CGWIC	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[5-10]%	[0-5]%
LMCLS/ULA	[0-5]%	[5-10]%	[10-20]%	[0-5]%	[5-10]%	[0-5]%
MHI	[0-5]%	[0-5]%	[5-10]%	[0-5]%	[0-5]%%	[0-5]%
Orbital	[0-5]%	[10-20]%	[0-5]%	[5-10]%	[5-10]%	[0-5]%
Russia	[50-60]%	[50-60]%	[5-10]%	[20-30]%	[0-5]%	[0-5]%
SpaceX	[10-20]%	[5-10]%	[30-40]%	[20-30]%	[0-5]%	[0-5]%
Virgin Galactic	-	-	-	-	-	[50-60]%
Rocket Lab	-	-	-	-	-	[0-5]%
Other	[0-5]%	[0-5]%	[0-5]%	[5-10]%	[0-5]%	[0-5]%
Size of the market	[...]	[...]	[...]	[...]	[...]	[...]

Source: Form CO and Parties' reply to the Commission's request for information n° 32, 21.04.2016, question 9.

- (164) In the European captive markets for (i) GTO launch services and (ii) non-GTO launch services (ESA, European Commission, EUMETSAT), Arianespace is the only available supplier as those European programmes need to be launched from European territory.
- (165) As regards national captive markets for (i) GTO launch services and (ii) non-GTO launch services, over the last three years governmental launches were only procured by the MoD of France. For security reasons, those satellites are to be launched within Europe, which makes Arianespace the sole supplier available.

6.3. Markets for satellites

- (166) In the worldwide market for commercial satellites (excluding constellation satellites), in 2015, Airbus had a market share of around [10-20]% in terms of volume and [20-30]% in terms of value. The main player has traditionally been SSL, which had a market share of around [20-30]% in 2015. TAS, Boeing, Lockheed Martin and Orbital were the other relevant players with around [10-20]% market share each.

Table 3: Market shares in the worldwide market for commercial satellites, excluding constellations satellites

	% (by volume)			% (by value)		
	2013	2014	2015	2013	2014	2015
Airbus DS	[10-20]%	[10-20]%	[10-20]%	[20-30]%	[20-30]%	[20-30]%
Boeing	[10-20]%	[0-5]%	[5-10]%	[30-40]%	[5-10]%	[10-20]%
CGWIC	[5-10]%	[0-5]%	[0-5]%	[5-10]%	[0-5]%	[0-5]%
Invap	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
ISRO	[5-10]%	[0-5]%	[5-10]%	[0-5]%	[0-5]%	[5-10]%
ISS-Reshetnev	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Lockheed Martin	[0-5]%	[0-5]%	[5-10]%	[0-5]%	[0-5]%	[10-20]%
Melco	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Orbital	[0-5]%	[10-20]%	[5-10]%	[0-5]%	[10-20]%	[5-10]%
RKK Energia	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[5-10]%	[0-5]%
SSL	[20-30]%	[30-40]%	[20-30]%	[20-30]%	[30-40]%	[10-20]%
TAS	[0-5]%	[10-20]%	[5-10]%	[5-10]%	[10-20]%	[5-10]%
Tubytak	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[5-10]%
Size of the market (#/US\$)	[...]	[...]	[...]	[...]	[...]	[...]

Source: Response to Article 6(1)(c) Decision.

- (167) In the worldwide market for commercial satellites, including constellation satellites, it only makes sense to look to market shares in terms of value given the large number of satellites in a constellation. In this case Airbus has a market share of [30-40]% in terms of value in 2015⁹³.
- (168) In the segment of constellation satellites, Airbus' market share was around [10-20]% over the last 10 years⁹⁴. TAS is the only other significant competitor for constellations with a market share of around [80-90]%. Given the reduced number of projects, it is evident that those market shares are an imperfect indication of market power.
- (169) In the European market for institutional satellites, Airbus' market share in terms of value ranged between [20-30]% and [50-60]% over the last three years⁹⁵. Airbus main competitors were TAS and OHB, who have comparable market shares over time. That reflects the efforts of institutional customers to maintain a diversified supplier base.

⁹³ In 2013 and 2014 the market shares do not differ from the data presented for the worldwide market for commercial satellites, excluding constellation satellites, since there were no constellation satellites sold.

⁹⁴ Parties' reply to the Commission's request for information n° 7, 18.01.2016, question 8.

⁹⁵ Regarding the segmentation of the European market for institutional satellites into GTO and non-GTO satellites, the market shares for non-GTO satellites do not significantly change from the data presented for the overall market since there was only one institutional GTO satellite launched in the last three years.

Table 4: Market shares in the European market for institutional satellites (by value)

	2012	2013	2014
Airbus DS	[20-30]%	[40-50]%	[50-60]%
TAS	[10-20]%	[40-50]%	[20-30]%
OHB	[40-50]%	[10-20]%	[10-20]%
Others	[5-10]%	[0-5]%	[0-5]%

Source: Form CO.

- (170) In the worldwide market for the export of institutional satellites, Airbus is an important market player, although its market share varies significantly from one year to another, as does the market share of competitors such as TAS, IAI, CAST and SSL⁹⁶.

Table 5: Market shares in the worldwide market for the export of institutional satellites

	% (by volume)			% (by value)		
	2012	2013	2014	2012	2013	2014
Airbus DS/SSTL	[0-5]%	[30-40]%	[60-70]%	[0-5]%	[10-20]%	[80-90]%
CAST (CGWIC)	[0-5]%	[0-5]%	[10-20]%	[0-5]%	[0-5]%	[5-10]%
IAI	[90-100]%	[0-5]%	[0-5]%	[90-100]%	[0-5]%	[0-5]%
Satrec-I	[0-5]%	[10-20]%	[0-5]%	[0-5]%	[5-10]%	[0-5]%
SSL	[0-5]%	[0-5]%	[10-20]%	[0-5]%	[0-5]%	[10-20]%
ST Electronics	[0-5]%	[10-20]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
TAS	[0-5]%	[30-40]%	[0-5]%	[0-5]%	[70-80]%	[0-5]%
Size of the market	[...]	[...]	[...]	[...]	[...]	[...]

Source: Form CO.

- (171) Lastly, in the national markets for military satellites, Airbus and OHB were selected by Germany and Airbus and TAS were selected by France, in line with the domestic supplier preference rule for military satellites. There were no other national markets within the Union for military services with sales in the last three years.

6.4. Markets for payload adapters and for payload dispensers

- (172) In the worldwide market for payload adapters RUAG was the market leader in 2014 with a value-based market share of [60-70]%. Airbus DS SAU is the main other alternative supplier in the market.

⁹⁶ Regarding the segmentation of the worldwide market for the export of institutional satellites into GTO and non-GTO satellites, the market shares for non-GTO satellites do not change from the data presented for the overall market since there was no export of GTO satellite launched in the last three years.

Table 6: Market shares in the worldwide market for payload adapters

	2012		2013		2014	
	Value	Volume	Value	Volume	Value	Volume
Airbus DS SAU	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
RUAG	[60-70]%	[70-80]%	[60-70]%	[70-80]%	[60-70]%	[60-70]%
Kawasaki Heavy Industries	[5-10]%	[0-5]%	[5-10]%	[0-5]%	[5-10]%	[0-5]%

Source: Form CO

- (173) In the EEA market, only Airbus DS SAU and RUAG are active and Arianespace is practically the only purchaser. Over the period 2012 to 2014, RUAG's market share was [50-60]% while Airbus DS SAU's market share was [40-50]%.
(174) In the worldwide market for payload dispensers, ASL was in 2014 the market leader with [70-80]% market share in terms of value, with RUAG being the only alternative in the market with a [20-30]% market share.

Table 7: Market shares in the worldwide market for payload dispensers

	2012		2013		2014	
	Value	Volume	Value	Volume	Value	Volume
Airbus DS SAU	[50-60]%	[50-60]%	[30-40]%	[30-40]%	[0-5]%	[0-5]%
ASL	[0-5]%	[0-5]%	[70-80]%	[60-70]%	[70-80]%	[60-70]%
RUAG	[40-50]%	[50-60]%	[0-5]%	[0-5]%	[20-30]%	[30-40]%

Source: Form CO

- (175) In the EEA market for payload dispensers, only ASL, Airbus DS SAU and RUAG are active and Arianespace is practically the only purchaser of payload dispensers. Over the period between 2012 and 2014, RUAG's market share was [20-30]%, Airbus DS SAU's market share was of [20-30]% and ASL's market share was of [50-60]%.
6.5. Market for space insurance services

- (176) In the market for space insurance services, considering all launches, the position of Arianespace was always below [5-10]% in the period 2013 to 2015. When considering the launches performed by Arianespace, Arianespace market share was around [20-30]%, as the majority of the insurance services were sold by third party players.

Table 8 : Market shares in the market for space insurance services⁹⁷

	2013			2014			2015		
	Worldwide	Arianespace		Worldwide	Arianespace		Worldwide	Arianespace	
	Volume	Volume	Value	Volume	Volume	Value	Volume	Volume	Value
Arianespace	[0-5]%	[20-30]%	[20-30]%	[0-5]%	[20-30]%	[20-30]%	[0-5]%	[20-30]%	[20-30]%
Size of the market (# launches/EUR million)	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]

Source: Form CO.

6.6. Market for satellite operation

- (177) In the hypothetical market for the sale of military telecommunication satellite capacities, which would be the narrowest market where Airbus is active, Airbus had a market of [10-20]% in 2014.

Table 9: Market shares in the worldwide market for the sale of military telecommunication satellite capacities

	2014
Xtar	[80-90]%
Airbus DS Ltd.	[10-20]%
Size of the market (MHz)	[...]

Source: Form CO.

- (178) In the market for the sale of military telecommunication satellite capacities, Airbus market shares have been consistently below [20-30]% in the period 2012 to 2014 for any of the possible segments.

Table 10: Market shares in the worldwide market for the sale/licencing of satellite imagery

	2012			2013			2014		
	Optical	Radar	Both	Optical	Radar	Both	Optical	Radar	Both
Airbus DS Geo	[5-10]%	[20-30]%	[10-20]%	[10-20]%	[20-30]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Size of the mrket (EUR million)	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]	[...]

Source: Form CO.

7. Competitive Assessment: Relationship between (i) Arianespace as a launch services provider and (ii) Airbus as satellite manufacturer

7.1. Introduction to the potential concerns

- (179) The transaction will combine, indirectly through ASL, the activities of Arianespace as a provider of launch services with the activities of Airbus as a manufacturer of satellites. The Commission has investigated whether this structural link between the

⁹⁷ Parties' reply to the Commission's request for information n° 10, 21.01.2016, question 2.

companies would have an impact on the Parties' commercial strategy vis-à-vis other satellites manufacturers and launch service providers.

- (180) Satellites and launch services are complementary: a satellite only has value to customers when it is combined with the launch services in a satellite-launch-services system. Satellite operators therefore always need to buy both.
- (181) Satellite operators can purchase the satellite and the launch services together directly from the satellite manufacturer, in the context of an in-orbit delivery (IOD) offer or, separately from the satellite manufacturer and the launch services provider, in the case of on-ground delivery (OGD) offer. In general, satellite operators ask for both IOD and OGD offers and consider them substitutable in the selection of their preferred system.
- (182) Firstly, the Commission analyses whether, post-transaction, there is a risk that the exchange of sensitive information between Arianespace and Airbus could harm other satellite manufacturers and other launch services providers. This is analysed in Section 7.2.
- (183) Secondly, the Commission analyses whether, post-transaction, the Parties might use Arianespace's position in the markets to foreclose Airbus' rivals by favouring launches of Airbus satellites. This is analysed in Sections 7.3 to 7.6.
- (184) Airbus's rivals buy from Arianespace directly only in relation to IOD projects, which comprise [...] % of the commercial satellites sold and [...] % of Arianespace's launches in the worldwide open market for GTO launch services. In those instances, the Parties might have the ability and the incentive to implement a hypothetical input foreclosure strategy by offering worse launch services conditions when dealing with Airbus' rivals.
- (185) As for OGD projects, which account for the vast majority of satellites and launches, Arianespace sells its services directly to satellite operators. In those instances, the Parties might also have the incentive and the ability to influence the costs of the satellite-launch-services systems that include Airbus's rival satellites by offering better launch services conditions to satellite operators that buy Airbus satellites (that is to say, that buy the bundle) compared to those buying a rival's satellite.
- (186) In light of the fact that IOD and OGD offers are substitutable, the input foreclosure and bundling strategies will be analysed together.
- (187) In that scenario, discrimination against Airbus' rivals could take various forms.
- (188) First, post-transaction, the Parties could implement hypothetical strategies on commercial terms (including price and launching slots) with foreclosure effects on Airbus' rivals.
- (189) A transaction which combines suppliers of complementary goods may provide the Parties with the incentive and ability to foreclose its rivals by means of bundling. One can distinguish between *pure bundling* and *mixed bundling*⁹⁸. In the case of *pure bundling*, the products - in this case Arianespace's launch services and Airbus satellites - are only sold jointly. With *mixed bundling*, the products are also available separately, but the sum of the prices of stand-alone products is higher than the bundled price.

⁹⁸ Paragraph 96 of the Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings.

- (190) In this particular case, the Parties could hypothetically offer a discount to customers purchasing Airbus satellites and Ariespace's launch services together, while increasing the prices for those two components when they are not purchased together. Moreover, as regards launching slots, the Parties could hypothetically grant preferential treatment to Airbus satellites when allocating slots (that is to say, if customers commit to buy the satellite from Airbus) and offer less favourable launch slots for non-Airbus satellites⁹⁹.
- (191) In the context of IOD offers, the Parties could hypothetically sell launch services directly to Airbus' rivals at a higher price or offer less favourable launch slots (*partial input foreclosure strategy*). In the extreme, the Parties could hypothetically refuse to supply launch services to Airbus' rivals (*full input foreclosure strategy*).
- (192) Second, besides differentiating on commercial terms, post-transaction the Parties could implement a hypothetical strategy of discriminating against Airbus' rivals on technical terms.
- (193) One hypothetical way to discriminate against Airbus' rivals based on technical conditions would be by withholding access to technical information about the launchers which would otherwise be shared by Ariespace with all satellite manufacturers. Airbus might hypothetically benefit from preferential access to information concerning incremental innovations within an existing launcher platform or the technical roadmap of Ariespace future launcher platforms (for example, Ariane 6). Although all the technical specifications of Ariespace launch vehicles are usually made available to the public through the publication of the "User's manual", the manual often needs to be updated and improved. In those cases, Airbus might have access to that information before its rivals, thus, gaining an advantage in adapting and optimising the design and functionalities of its satellites to the launcher.
- (194) Some market participants also expressed the concern that the developments of Ariespace's future launchers might hypothetically be designed to favour a technical optimisation with Airbus satellites. This would make it more expensive for other satellite manufacturers to combine their satellite for launches with Ariespace launchers.
- (195) According to the Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings¹⁰⁰ (hereafter "the Non-Horizontal Guidelines"), in assessing the likelihood of foreclosure effects¹⁰¹, the Commission examines, first, whether the Parties would, post-transaction, have the ability to foreclose its rivals, second, whether they would

⁹⁹ Although the offer of better slots for Airbus satellites and worse slots for non-Airbus satellites does not correspond directly to a bundle discount and increase in stand-alone price, respectively, the Commission considers them to be similar and interprets this slot allocation strategy as better commercial conditions for customers buying the bundle and worse commercial conditions for those buying stand-alone components.

¹⁰⁰ Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ C 265, 18.10.2008, p. 6.

¹⁰¹ According to paragraph 29 of the Non-Horizontal Guidelines, a non-horizontal merger is said to result in foreclosure when it causes the reduction of actual or potential rivals' "ability and/or incentive to compete. Such foreclosure may discourage entry or expansion of rivals or encourage their exit. Foreclosure thus can be found even if the foreclosed rivals are not forced to exit the market: It is sufficient that the rivals are disadvantaged and consequently led to compete less effectively. Such foreclosure is regarded as anti-competitive where the merging companies — and, possibly, some of its competitors as well — are as a result able to profitably increase the price charged to consumers".

have the incentive to do so, and third, whether such strategies would have a significant detrimental effect on competition.

- (196) In Sections 7.3 to 7.6, the Commission analyses those three factors, which are closely intertwined, for the different related markets for launch services and satellites, namely for the relationship between:
- (a) (i) the worldwide open market for GTO launch services and (ii) the worldwide market for commercial satellites (Sections 7.3 for discrimination based on commercial terms and 7.4 for discrimination based on technical terms);
 - (b) (i) the worldwide open market for non-GTO launch services and (ii) the worldwide market for the export of institutional satellites and the hypothetical worldwide market for constellation satellites (Section 7.5);
 - (c) (i) the European and national (within the Union) captive markets for launch services and (ii) the European market for institutional satellites and the national markets for military/institutional satellites (Section 7.6).

7.2. Exchange of sensitive information in relation to launch services and satellites

- (197) As regards the relationship between Arianespace as a launch services provider and Airbus as a satellite manufacturer, concerns were raised in the market investigation about the risk of sensitive information being exchanged between Arianespace and Airbus which could harm other satellite manufacturers and other launch services providers.
- (198) According to paragraph 78 of the Non-Horizontal Guidelines, "*the merged entity may, by vertically integrating, gain access to commercially sensitive information regarding the upstream or downstream activities of rivals. For instance, by becoming the supplier of a downstream competitor, a company may obtain critical information, which allows it to price less aggressively in the downstream market to the detriment of consumers. It may also put competitors at a competitive disadvantage, thereby dissuading them to enter or expand in the market*".
- (199) The Parties argue that there is no risk of competitively sensitive information exchanges taking place given that: (i) no highly sensitive information is shared with Arianespace as regards satellites and with Airbus as regards launch services providers; (ii) Arianespace, ASL and Airbus will remain independent entities; (iii) there are contractual provisions in Arianespace's contracts that prevent information being shared; and (iv) the information provided to Arianespace in the context of mission analysis is already pre-transaction being shared with ASL.

7.2.1. Commission's assessment on the exchange of information from Arianespace to Airbus

7.2.1.1. Arianespace has access to sensitive information about satellite manufacturers

- (200) Satellite manufacturers provide launch services providers with information of a technical nature, namely mass and schedule, the nature of the mission, centre of gravity and orbit requirements, the satellite architectures, etc.¹⁰². According to one satellite manufacturer, "*the characteristics of the satellite are provided to the launch service provider, including its mass, its mission, its centre of gravity, the volume it*

¹⁰² Replies to question 51.1 of Questionnaire Q1 – questionnaire to satellite operators, question 46.1 of Questionnaire Q2 – questionnaire to satellite primes and question 42.1 of Questionnaire Q3 – questionnaire to launch services providers.

occupies, and the mathematical model of the satellite"¹⁰³. Another satellite manufacturer explained that *"we provide launch services providers with detailed technical and programmatic information on satellite offerings, for example satellite relative mass and schedule, as well as what these parameters imply in terms of specific non-Arianespace and Arianespace launch vehicle compatibility and price, and what they communicate in terms of the satellite contract offering"*¹⁰⁴. Another satellite manufacturer stated that it *"provides the satellite design configuration information including stowage envelopes along with mass and mass distribution. [...] also provides information on configuration trade-offs that it is considering in its offer to the customer along with expected ship dates"*¹⁰⁵.

- (201) This information is often provided early in the sales cycle for the satellite. According to a satellite manufacturer *"There are different stages of interaction between (...) and Arianespace: 1) the pre-proposal marketing process where technology roadmap information is exchanged, 2) during the satellite program RFI (Request for Information) and proposal process, 3) during the satellite program before the launch vehicle is selected, and 4) during the post-launch vehicle selection through launch stage"*¹⁰⁶.
- (202) Launch services providers confirmed that they receive a large amount of sensitive technical information from satellite manufacturers¹⁰⁷. One of those market participants explained that *"we receive a large amount of information from a satellite manufacturer during a mission. We receive interface capability information which includes all physical, mechanical and electrical properties of a spacecraft"*¹⁰⁸. Another one stated that *"the information received from the satellite manufacturer can be extensive. Prior to contract signature, the data is typically vehicle mass, orbital requirements, lifetime requirements, and some other high level specifications to ensure compatibility. During the mission integration (the time from contract signature to launch) in depth technical information is exchanged including full spacecraft computer models for the parties to conduct compatibility analyses. Additionally, information regarding the final spacecraft processing and integration to the launch vehicle is exchanged"*¹⁰⁹.
- (203) In the case of IOD offers, satellite manufactures also provide commercial information that enables launch service providers *"to identify the [...]s prospects or the characteristics of the mission and of the satellite"* as well as *"price information of the satellite"*¹¹⁰. In some other cases, the information may even include *"characteristics of the new satellites being developed or of the evolutions planned on the existing satellite families"*¹¹¹.
- (204) On the basis of the market investigation, the Commission therefore considers that launch services providers, like Arianespace, have access to sensitive information about satellite manufacturers.

¹⁰³ Reply to question 46.1 of Questionnaire Q2 – questionnaire to satellite primes.

¹⁰⁴ Reply to question 46.1 of Questionnaire Q2 – questionnaire to satellite primes.

¹⁰⁵ Reply to question 46.1 of Questionnaire Q2 – questionnaire to satellite primes.

¹⁰⁶ Minutes of a conference call held with a satellite manufacturer on 07.04.2016.

¹⁰⁷ Replies to question 42 of Questionnaire Q3 – questionnaire to launch services providers.

¹⁰⁸ Reply to question 42 of Questionnaire Q3 – questionnaire to launch services providers.

¹⁰⁹ Reply to question 42 of Questionnaire Q3 – questionnaire to launch services providers.

¹¹⁰ Reply to question 46.1 of Questionnaire Q2 – questionnaire to satellite primes.

¹¹¹ Reply to question 46.1 of Questionnaire Q2 – questionnaire to satellite primes.

- 7.2.1.2. Ariespace would likely have the ability to share sensitive information about other satellite manufacturers with Airbus
- (205) According to satellite manufacturers, the current confidentiality clauses (for example non-disclosure provisions) included in contracts between them and Ariespace are not sufficient to prevent commercially sensitive information from being transmitted from Ariespace to Airbus¹¹². This is because these current clauses "*allow information to be shared with a parent or affiliate company*" and its "*practical implementation and the effectiveness of such measures is difficult to monitor*"¹¹³.
- (206) According to a satellite manufacturer, "*the likely consolidation of Ariespace and Airbus Satellite program management, and the likely consolidation of Ariespace and ASL support engineering organizations will remove the primary barriers (such as for ITAR¹¹⁴ controlled information) that exist at Ariespace that prevent the leaking of (...) technical information and competitive sensitive program information to Airbus Satellite*"¹¹⁵.
- (207) On the basis of the market investigation, the Commission therefore considers that post-transaction Ariespace would likely have the ability to share sensitive information about other satellite manufacturers with Airbus.
- 7.2.1.3. Ariespace would likely have the incentive to share sensitive information about other satellite manufacturers with Airbus
- (208) Satellite manufacturers consider that although Airbus is already a shareholder of Ariespace, post-transaction Ariespace would be more likely to pass on information about other satellite suppliers¹¹⁶. The main reason is related to the fact that "*Airbus will exert effective control of Ariespace, including through a reporting line that will include the CEO of Ariespace*"¹¹⁷.
- (209) The information provided by satellite manufacturers to Ariespace is of such nature that Airbus could gain an advantage over its rivals by having access to that information. In fact, if Airbus could have access to the physical satellite models provided by rivals and some related commercial information, it would potentially have the ability to use those design ideas or adjust its pricing policy, thereby neutralising any competitive advantages its rivals may have¹¹⁸.
- (210) According to satellite manufacturers, Ariespace currently does not have a commercial incentive to share the details it receives from other satellite manufacturers with Airbus, as it is currently in Ariespace's interests (i) to obtain the most competitive offerings from satellite manufacturers and thus encourage uncertainty as regards the details of their bids and (ii) to protect the confidentiality of its satellite trading partners' commercially sensitive information so as not to jeopardise its business relationships with them¹¹⁹. However, once Ariespace is

¹¹² Replies to question 43 of Questionnaire Q5 – questionnaire to satellite primes.

¹¹³ Replies to question 43 of Questionnaire Q5 – questionnaire to satellite primes.

¹¹⁴ The term ITAR refers to the United States "International Traffic in Arms Regulations" and it imposes restrictions on the participation of US satellite manufacturers in prime competitions to supply satellites to operators in black-listed countries.

¹¹⁵ Minutes of a conference call held with a satellite manufacturer on 07.04.2016.

¹¹⁶ Replies to question 45 of Questionnaire Q5 – questionnaire to satellite primes.

¹¹⁷ Reply to question 45 of Questionnaire Q5 – questionnaire to satellite primes.

¹¹⁸ Competitor's reply to the Commission's request for information, 08.03.2016, question 5.

¹¹⁹ Competitor's reply to the Commission's request for information, 08.03.2016, question 6.

controlled by Airbus, it will be in the commercial interests of Airbus to obtain access to this information.

- (211) Some satellite manufacturers indicated that Arianespace is already sharing, to some extent, sensitive information with ASL in the context of mission preparation. However, they believe that Arianespace currently filters that technical information and would no longer have the incentive to continue doing so post-transaction¹²⁰. A satellite manufacturer stated that "*the detailed mission analysis is indeed performed by ASL, based on the inputs provided by Arianespace*". However "*it is Arianespace's practice to make sure that no sensitive information is transmitted to ASL*"¹²¹.
- (212) According to one satellite manufacturer, "*Arianespace today has no direct financial incentive to leak this proposal, Stage 2, information to Airbus Satellite and no reason to provide this information to ASL. After the merger, there will be financial drivers for Arianespace-Airbus to collaborate on competitions during the satellite procurement cycle. There could also be consolidations of the Arianespace and Airbus Satellite business development and engineering organizations, such that the normal business barriers between the two companies during procurements can be entirely removed. This will mean that (...) proposal and satellite trade information on mass and volume limitations can conceivably be fed to Airbus*"¹²².
- (213) On the basis of the market investigation, the Commission therefore considers that Arianespace would likely be incentivised to share sensitive information about other satellite manufacturers with Airbus.
- 7.2.1.4. The exchange of sensitive information from Arianespace to Airbus about other satellite manufacturers would likely have a significant detrimental effect on competition in the markets for satellites
- (214) Market participants consider that if the information provided by satellite manufacturers to Arianespace was made accessible to Airbus, it would provide Airbus with an advantage in a bidding process because it reveals its rivals' strategy to meet customer's requirements and even its future developments strategy. In fact, contrary to satellite operators, both satellite manufacturers and launch services providers believe that the exchange of information could harm the satellite manufacturers post-transaction¹²³. This would likely result in (i) less competitive tenders, since Airbus would adjust its strategy on the basis of the information about its rivals it has been given, and (ii) less innovation in the market, since rivals would be less inclined to innovate, or introduce innovations in a given segment¹²⁴, if Airbus could easily copy their innovations and thus reduce the gains derived from innovation.
- (215) One satellite manufacturer explained that "*all those information are sensitive because if known to ADS, they would create a clear benefit for ADS in the competition with [...]. For example, from the information of the mass of the satellite which is provided in order for Arianespace to perform the preliminary mission*

¹²⁰ Replies to question 46.2 of Questionnaire Q2 – questionnaire to satellite primes.

¹²¹ Competitor's reply to the Commission's request for information, 04.03.2016, question 9.

¹²² Minutes of a conference call held with a satellite manufacturer on 07.04.2016.

¹²³ Replies to question 52 of Questionnaire Q1 – questionnaire to satellite operators, question 47 of Questionnaire Q2 – questionnaire to satellite primes and question 43 of Questionnaire Q3 – questionnaire to launch services providers.

¹²⁴ For instance, innovations prompted by institutional or military projects would be less likely applied in the commercial segment if Airbus could have access to it through Arianespace.

analysis, it is easy to derive the price of the satellite that is offered. The flow-down of the terms and conditions also provides differentiating information in a bidding process, because it shows [...]’ strategy to answer to the customer’s requirements. Lastly, the information on the technical roadmap of [...] is critical in order to preserve the benefit of new technical features that can be put on the market before competition”¹²⁵. Another satellite manufacturer stated that “some of this information is sensitive, since it would allow a competitor to derive by reverse engineering specific sensitive characteristics of the satellite (e.g. fuel mass, wet mass to dry mass ratio, specific operational capabilities, used communication frequencies, which might be confidential for specific missions)”¹²⁶. Satellite manufacturers also mentioned that this information “could be used by a competitor (such as Airbus, if received from Arianespace) to formulate strategies to improve their chances of winning a contract”¹²⁷ and “can be used by Airbus in developing better positioned, customized solutions for customers”¹²⁸.

- (216) One launch services provider also stated that “it can include information about new designs and technologies used by the manufacturer. The information could provide an insight into their proposal strategy to capture the new business (i.e. model, volume, mass and propulsion methodology)”¹²⁹.
- (217) On the basis of the market investigation, the Commission therefore considers that the exchange of sensitive information from Arianespace to Airbus about other satellite manufacturers would likely have a significant detrimental effect on competition in the markets for satellites.

7.2.1.5. Conclusion on the exchange of information from Arianespace to Airbus

- (218) The Commission considers that Arianespace has access to sensitive information about satellite manufacturers and that post-transaction, Arianespace would have the ability and incentive to pass on that information to Airbus. This would likely have a significant detrimental effect on competition in the markets for satellites.

7.2.2. Commission's assessment on the exchange of information from Airbus to Arianespace

7.2.2.1. Airbus has access to sensitive information about launch services providers

- (219) Satellite manufacturers like Airbus have access to sensitive information about launch services providers which includes information about the availability of launch slots and pricing as well as new developments¹³⁰.
- (220) According to satellite manufacturers, “information provided by a launch service provider includes pricing, manifest availability, adapter innovations, etc. and could reveal highly confidential and competitively interesting mission specific information

¹²⁵ Reply to question 46.1.1 of Questionnaire Q2 – questionnaire to satellite primes.

¹²⁶ Reply to question 46.1.1 of Questionnaire Q2 – questionnaire to satellite primes.

¹²⁷ Reply to question 46.1.1 of Questionnaire Q2 – questionnaire to satellite primes.

¹²⁸ Reply to question 47.1 of Questionnaire Q2 – questionnaire to satellite primes.

¹²⁹ Reply to question 42.1.1 of Questionnaire Q3 – questionnaire to launch services providers.

¹³⁰ Replies to question 53 of Questionnaire Q1 – questionnaire to satellite operators, question 48 of Questionnaire Q2 – questionnaire to satellite primes and question 44 of Questionnaire Q3 – questionnaire to launch services providers.

about how a launch service provider conducts a mission"¹³¹ and "the financial terms are clearly competitively sensitive. Launch manifest is competitively sensitive"¹³².

(221) Launch services providers also explained that *"performance is public information, however optimized performance is sensitive to each opportunity. Commercial launch manifest and commercial/financial contractual terms are considered proprietary"¹³³. Another launch services provider explained that its "launch vehicle possesses unique technical capabilities (e.g. Centaur Upper Stage) which, if known by (...)’s competitors, could be used to (...)’s disadvantage. In addition, (...)’s ability to optimize trajectories to meet specific customer needs could be discerned if (...)’s proprietary launch vehicle capabilities data were shared with Arianespace"¹³⁴.*

(222) On the basis of the market investigation, the Commission considers that satellite manufacturers like Airbus have access to sensitive information about launch services providers.

7.2.2.2. Airbus would likely have the ability to share sensitive information about other launch services providers with Arianespace

(223) Launch services providers do not consider the current confidentiality clauses included in contracts with satellite manufacturers sufficient to prevent commercially sensitive information from being passed on to other launch services providers¹³⁵. As in the case of the exchange of information from Arianespace to Airbus, the confidentiality clauses do not exclude information from being shared with a parent or affiliate company. According to one satellite manufacturer, *"Airbus would (absent appropriate safeguards) have complete freedom -as well as more practical opportunities- to communicate with Arianespace in greater amounts and in greater detail, and much more regularly, the proprietary information of rival launch vehicle manufacturers in Airbus’s possession"¹³⁶.*

(224) On the basis of the market investigation, the Commission therefore considers that Arianespace would likely have the ability to share sensitive information about other satellite manufacturers with Airbus.

7.2.2.3. Airbus would likely have the incentive to share sensitive information about other launch services providers with Arianespace

(225) One launch services provider stated that *"we believe that the transaction would create commercial incentives for doing so, in particular given Arianespace’s high market share, and as such appropriate protections such as firewalls are warranted"¹³⁷. Another launch services provider explained that it "is also concerned in regards to the technical information or manifest information provided to Airbus about its launchers ability to perform a given mission, in particular with the possibility of this information being transmitted to Arianespace"¹³⁸. Another launch services provider stated that *"given the competitive nature of the launch and**

¹³¹ Reply to question 48 of Questionnaire Q2 – questionnaire to satellite primes.

¹³² Reply to question 48 of Questionnaire Q2 – questionnaire to satellite primes.

¹³³ Reply to question 44 of Questionnaire Q3 – questionnaire to launch services providers.

¹³⁴ Reply to question 43 of Questionnaire Q6 – questionnaire to launch services providers.

¹³⁵ Replies to question 40 of Questionnaire Q6 – questionnaire to launch services providers.

¹³⁶ Reply to question 44 of Questionnaire Q5 – questionnaire to satellite primes.

¹³⁷ Reply to question 45 of Questionnaire Q3 – questionnaire to launch services providers.

¹³⁸ Minutes of a conference call held with a launch services provider on 05.01.2016.

*spacecraft business, it would be in the company's overall best interest to be aligned on the details of the competition"*¹³⁹.

(226) Satellite manufacturers and launch services providers consider that although Airbus is already a shareholder of Arianespace, Airbus would be more likely inclined to pass on information about other launch services providers to Arianespace post-transaction¹⁴⁰. In fact, according to one satellite manufacturer, "*once operating as a single company, there will be increased pressure to collaborate within product areas and optimize solutions based on combined satellite and launch offerings. Without any firewall barriers, economic incentives will drive Airbus and Arianespace collaborate and share competitive intelligence that will enable them to offer combined offerings to operators at lower price and greater schedule assurance that individual satellite and launch vehicle service offerings"*¹⁴¹. One launch services provider stated that "*it is conceivable that an increase in ownership share could also increase the level of involvement, coordination and information sharing between these entities"*¹⁴².

(227) On the basis of the market investigation, the Commission therefore considers that Airbus would likely have the incentive to share sensitive information about other launch services providers with Arianespace.

7.2.2.4. The exchange of sensitive information from Airbus to Arianespace about other launch services providers would likely have a significant detrimental effect on competition in the markets for launch services

(228) According to market participants (except satellite operators), there would be a risk that confidential information may be exchanged between Arianespace, ASL and Airbus that could harm other launch services providers¹⁴³. In fact, Arianespace's access to technical and commercial information regarding other launch services providers may be used to neutralise any technical advantage and thus result in competitors having reduced incentives to innovate and compete. According to one launch services provider, the transaction would create an "*unfair competitive advantage between Airbus and Arianespace based on the partnership and information flow"*¹⁴⁴.

(229) On the basis of the market investigation, the Commission therefore considers that the exchange of sensitive information from Airbus to Arianespace about other launch services providers would likely have a significant detrimental effect on competition in the markets for launch services.

7.2.2.5. Conclusion on the exchange of information from Airbus to Arianespace

(230) The Commission considers that Airbus has access to sensitive information about competing launch services providers and would have the ability and incentive to provide to pass such information on to Arianespace post-transaction. This would

¹³⁹ Reply to question 41 of Questionnaire Q6 – questionnaire to launch services providers.

¹⁴⁰ Replies to question 44 of Questionnaire Q5 – questionnaire to satellite primes and question 41 of Questionnaire Q6 – questionnaire to launch services providers.

¹⁴¹ Reply to question 44 of Questionnaire Q5 – questionnaire to satellite primes.

¹⁴² Reply to question 41 of Questionnaire Q6 – questionnaire to launch services providers.

¹⁴³ Replies to question 54 of Questionnaire Q1 – questionnaire to satellite operators, question 49 of Questionnaire Q2 – questionnaire to satellite primes and question 45 of Questionnaire Q3 – questionnaire to launch services providers.

¹⁴⁴ Minutes of a conference call held with a launch services provider on 14.04.2016.

likely have a significant detrimental effect on competition in the markets for launch services.

7.2.3. *Conclusion on the exchange of sensitive information in relation to launch services and satellites*

- (231) In light of recitals (219) to (230), the Commission concludes that the transaction leads to a significant impediment to effective competition due to the relationship between the Parties' activities in the markets for launch services and the markets for satellites, as regards the exchange of sensitive information from (i) Arianespace to Airbus in relation to other satellite manufacturers and (ii) Airbus to Arianespace in relation to other launch services providers.

7.3. Foreclosure of satellite manufacturers through bundling and input foreclosure in the worldwide open market for GTO launch services

- (232) As explained in Section 7.1, besides the concern about the exchange of sensitive information stemming from the link created by the transaction between Arianespace' activities as launch services provider and Airbus' activities as satellite manufacturer, the Commission has also analysed a second type of concern. The latter regards the possibility of the Parties using Arianespace's position in the markets for launch services to favour sales of Airbus satellites in commercial (bundling and input foreclosure) or technical terms. For the reasons explained in Section 7.1, the potential effects of the hypothetical discrimination strategies will be jointly assessed and referred to as foreclosure effects.

- (233) In this section the Commission analyses the likelihood of foreclosure effects in the worldwide market for commercial satellites resulting from a bundling strategy (in the case of OGD satellites) and an input foreclosure strategy (in the case of IOD satellites)¹⁴⁵ in the worldwide open market for GTO launch services. The remaining related markets for satellites and launch services are analysed in the sections that follow.

- (234) The analysis performed in this section, as well as in the Sections 7.4 to 7.6 on foreclosure effects, will be structured according to the paragraph 94 of the Non-Horizontal Guidelines, indicating that "*In assessing the likelihood of such a scenario [foreclosure], the Commission examines, first, whether the merged firm would have the ability to foreclose its rivals, second, whether it would have the economic incentive to do so and, third, whether a foreclosure strategy would have a significant detrimental effect on competition, thus causing harm to consumers. In practice, these factors are often examined together as they are closely intertwined.*"

7.3.1. *Ability to foreclose*

- (235) The majority of Airbus' competitors regarding commercial satellites expressed strong concerns in relation to potential discrimination against them based on commercial terms¹⁴⁶. Some of them believe that (i) Arianespace has market power in the worldwide open market for GTO launch services and (ii) the worldwide market for

¹⁴⁵ See recitals (181) and (184) to (186) for an explanation of the distinction between IOD and OGD and why in the former case the Commission considers input foreclosure and in the latter bundling.

¹⁴⁶ Replies to question 41 of Questionnaire Q2 – questionnaire to satellite primes and question 39 of Questionnaire Q3 – questionnaire to launch services providers.

commercial satellites is highly competitive, thus enabling the Parties to effectively implement a hypothetical foreclosure strategy¹⁴⁷.

- (236) The Parties submit that they would not have the ability to foreclose Airbus' rivals because: (i) Arianespace's behaviour is monitored by ESA which can prevent any discriminatory behaviour (ii) Arianespace has no market power on the worldwide open market for GTO launch services, (iii) there are several alternatives to Arianespace available to satellite manufacturers, and (iv) ultimately satellite operators are the ones taking the decision from whom to buy.
- (237) Satellite operators agree with the Parties and they do not believe that Arianespace would have the ability to charge different prices for launches of Airbus satellites post-transaction as compared to launches of other satellites¹⁴⁸.
- (238) As illustrated in Sections 7.3.1.1 to 7.3.1.5, overall, the Commission reaches the conclusion that post-transaction the Parties would likely not have the ability to successfully foreclose Airbus' rivals in satellites by adopting a hypothetical bundling and input foreclosure strategy. This is because (i) although Arianespace is the current market leader, credible alternatives such as SpaceX and ILS exist; (ii) the worldwide open market for GTO launch services is a dynamic competitive environment, where entry happens and companies' positions quickly change over time; (iii) satellite operators may be able to partially countervail the Parties' ability to foreclose Airbus' commercial satellites rivals; (iv) the characteristics of satellite markets would likely prevent the foreclosure of Airbus' commercial satellites rivals at least in the short term; and (v) it is unlikely that commercial satellite manufacturers would be effectively foreclosed in the long term.

7.3.1.1. Although Arianespace is the current market leader, credible alternatives such as SpaceX and ILS exist

- (239) Some satellite manufacturers submit that Arianespace has a dominant position on the worldwide open market for GTO launch services, in light of its important market share in a relatively concentrated market. In addition, Arianespace market power is believed to be enhanced by the fact that it is the only launch services provider that has not experienced a recent failure. According to one satellite manufacturer this implies that its "*ability to provide access to space for its customers is highly dependent on the continued access to the Arianespace launch vehicle*"¹⁴⁹.
- (240) The Parties submit that Arianespace does not have market power on the worldwide open market for GTO launch services. Based on their calculation, in 2015, Arianespace only represented [30-40]% of the worldwide open market for GTO launch services (based on the number of new contracts). However, as explained in recital (162), based on the Commission's own calculation, Arianespace was the market leader in the worldwide open market for GTO launch services with a market share in the range of [40-50]% both in terms of number of launches and new contracts in 2015.
- (241) The Commission notes that Arianespace is currently the primary company providing GTO launch services to both commercial and European institutional customers with its Ariane 5, which can accommodate two satellites on the same launcher and, thus,

¹⁴⁷ Replies to questions 41 and 42 of Questionnaire Q2 – questionnaire to satellite primes. Competitors' replies to Commission's request for information, 08.03.2016, question 3.

¹⁴⁸ Replies to question 46 of Questionnaire Q1 – questionnaire to satellite operators.

¹⁴⁹ Competitor's reply to the Commission's request for information, 04.03.2016, question 8.

is the only launcher operated on a *dual launch* configuration. The lower position of Ariane 5 carries lighter satellites of up to 3.5 tonnes and a launch costs around EUR 60 million. The upper position is used for heavier, larger satellites up to 6.5 tonnes and the launch costs around EUR 90 million. Overall, the total payload capacity of Ariane 5 is about 10 tonnes and one of the highest in the market¹⁵⁰.

- (242) Furthermore, Arianespace appears to be the most reliable option available on the market. In fact, Arianespace is unmatched by its competitors when it comes to the reliability rate of launches. Since 2003, Arianespace has performed 61 successful launches and is the only operator with a 100% success rate. Market participants identified reliability and heritage¹⁵¹ as the main competitive advantage of Arianespace¹⁵².
- (243) Nonetheless, based on the findings of the market investigation, credible alternatives appear to be available on the market to the benefit of customers, including satellite manufacturers.
- (244) The Parties maintain that in the worldwide open market for GTO launch services there are currently many alternative launch services providers to Arianespace, as listed in Figure 2.

Figure 2: Alternative launch services providers

Service provider	Arianespace	SpaceX	ILS	Sea Launch	ULA (mainly US governmental missions)		MHI Launch Services	ISRO	CGWIC
Vehicle	Ariane 5	Falcon 9	Proton M	Zenit	Atlas V	Delta IV	H-II	GSLV	Long March-3
Manufacturer	ASL	SpaceX	Khrunichev	SDO Yuzhnoye & PO Yuzhmash	Lockheed Martin	Boeing	Mitsubishi	ISRO	CALT
Country/Region	Europe	United States	Russia	Russia/Ukraine	United States		Japan	India	China
Single/Dual launch capability	Single & dual	Single & dual (for small electric satellites)	Mostly single	Single	Single (dual in dvpt.)	Single	Single	Single	Single
GTO (kg)	10,000	4,850	6,500	6,100	8,900	14,000 (Delta IV Heavy)	5,600 (H-IIB)	2,300	5,500
Year of first launch	1996	2010	1965 (Proton) 2000 (Proton M)	1985 (Zenit) 1999 (Sea Launch)	2002	2002	2001	2001	1996
Launch reliability (2005-2015)	61/61 100 %	17/19* 89%	82/93** 88 %	30/32 94 %	50/51*** 98 %	26/26 100 %	23/23 100 %	2/6 33 %	48/49**** 98 %

Source: Form CO, Diagram 1, p.65.

- (245) Nonetheless, internal documents produced by Arianespace to analyse the markets for launch services in September 2015 show that Arianespace considers [...] ¹⁵³.
- (246) Some satellite operators suggest that US-based ULA and the Japanese MHI also have an excellent track record and could in principle be a good alternative to launching with Ariane 5. In particular, all satellite operators point to Atlas V and a majority of them to H-II as good alternatives to Ariane 5 ¹⁵⁴. However, market participants ¹⁵⁵

¹⁵⁰ According to the Parties, ULA' launchers Atlas V and Delta IV offer the highest payload capacity in the market, with 9 and 14 tonnes to GTO respectively.

¹⁵¹ Heritage is a term used in the industry to refer to the number of launches performed in the past by a specific launch vehicle.

¹⁵² Replies to questions 26 of Questionnaire Q4 – questionnaire to satellite operators, question 28 of Questionnaire Q5 – questionnaire to satellite primes and question 21 of Questionnaire Q6 – questionnaire to launch services providers.

¹⁵³ Form CO, Annex 5.4.8.j, "Strategic & Audit Committee Meeting, 25 September 2015", page 11.

¹⁵⁴ Replies to question 35 of Questionnaire Q1 - questionnaire to satellite operators

identify Atlas V's price as its main shortcoming, which makes it hard for commercial customers to afford it. As regards MHI, satellite operators and satellite manufacturers consider that its major weakness lies with its limited availability for commercial launches due to MHI's focus on institutional launches¹⁵⁶. Therefore, they up until now do not represent an alternative for commercial customers. As regards the other launch services providers listed by the Parties, satellite operators indicate that the Indian ISRO and the Chinese CGWIC are not real options: the former because of reliability issues and capacity constraints; the latter because of ITAR restrictions and other regulatory barriers. As regards Sea Launch, whose most recent contract was finalised in 2012 and the related launches in 2014¹⁵⁷, market participants indicated that it is no longer active in the market. As a result, market participants essentially agree in identifying SpaceX and ILS as the main alternatives to Arianespace in the worldwide open market for GTO launch services¹⁵⁸.

- (247) SpaceX is a launcher manufacturer and launch services provider active both in commercial and institutional launches. SpaceX performs institutional launches with its Falcon 9 vehicle since 2010 and commercial launches since 2013. The upgraded version of Falcon 9, the "Falcon 9 v1.2" increased the launcher's performance from 4.85 tonnes up to 6.45 tonnes to GTO¹⁵⁹.
- (248) SpaceX itself acknowledges that it is currently stronger in the segment for small and medium satellites, where it competes against Arianespace's lower position. SpaceX believes that the reason for its success is due to the fact that, in that segment, Arianespace's lower position is limited to 3.5 tonnes¹⁶⁰. This suggests that SpaceX has been able to position itself for customers whose satellites would not fit in the Ariane 5 lower position and for which flying in the Ariane 5 upper position would not be viable from an economic standpoint.
- (249) The main competitive advantage of SpaceX lies with its ability to offer launch services at the lowest price in the market. Despite a failed launch early in 2015, SpaceX also has the second best reliability rate in the industry (90%) and is largely perceived as a good alternative to Ariane 5. Although some satellite operators cast some doubts on the credibility of SpaceX as a reliable launch service provider by suggesting that its technology still needs to be proven¹⁶¹, all commercial satellite operators consider SpaceX's Falcon 9 to be a credible and reliable alternative to Ariane 5 for GTO launches¹⁶². ESA added that "*As of end December 2015, SpaceX had carried out 25 launches (5 Falcon 1, 5 Falcon 9v1.0, 14 Falcon 9 v1.1 and*

¹⁵⁵ Replies to question 30 of Questionnaire Q4 – questionnaire to satellite operators, question 31 of Questionnaire Q5 – questionnaire to satellite primes and question 24 of Questionnaire Q6 – questionnaire to launch service providers.

¹⁵⁶ Replies to question 30 of Questionnaire Q4 – questionnaire to satellite operators and question 31 of Questionnaire Q5 – questionnaire to satellite primes.

¹⁵⁷ Minutes of a conference call held with a launch services provider on 10.12.2015.

¹⁵⁸ Replies to question 35 of Questionnaire Q1 – questionnaire to satellite operators.

¹⁵⁹ ESA's submission "Comments to the Commission's Article 6(1)(c) Decision", 29.03.2016. This launcher has been commercialised and used for a first commercial launch already in December 2015. In its website, SpaceX indicates that the maximum capacity of this launcher for GTO launches is 8.3 tonnes (<http://www.spacex.com/about/capabilities>).

¹⁶⁰ Minutes of a conference call held with a launch services provider on 09.12.2015.

¹⁶¹ Competitor's reply to the Commission's request for information, 08.03.2016, question 3.

¹⁶² Replies to question 35 of Questionnaire Q1 – questionnaire to satellite operators

*1 Falcon 9 v1.2). (...). It would therefore seem that reliability of the launch vehicle should not necessarily be put in question"*¹⁶³.

(250) However, this recent launch failure caused the interruption of its operations for about six months. As a result, SpaceX is currently fully booked through the third quarter of 2017¹⁶⁴. The current capacity constraints faced by SpaceX are perceived as a potential problem by some market participants¹⁶⁵.

(251) Nonetheless, the fact that SpaceX's order book is full until 2017 does not reflect its current ability to compete on the market. In fact, as of December 2015,[...] ¹⁶⁶.

Figure 3: [...]

[...]

Source:[...]

(252) Launch services providers compete for launches that will take place about three years after the signature of the contract, as three years is about the time necessary for a satellite to be manufactured.

(253) Moreover, although only some satellite operators engaged with SpaceX in negotiations about new launch services contracts since its failure in 2015, the majority of those did not experience any schedule/slot availability issue¹⁶⁷.

(254) None of the satellite operators and only a minority of satellite manufacturers have pointed to capacity constraint/issues for SpaceX as regards commercial launches from 2017 onwards¹⁶⁸.

(255) As regards SpaceX, Arianespace remarks that[...] ¹⁶⁹. This shows that[...].

(256) Finally, the majority of satellite operators and manufacturers fear that SpaceX could suffer from additional capacity problems in light of the priority given to institutional launches over commercial ones¹⁷⁰. In fact, SpaceX's largest customer today is NASA, which also enjoys special priority rights for its institutional missions.

(257) However, other US-based launch services providers, which also have direct experience in working with NASA on institutional missions, explain that this pre-emption right has never been exercised by the US government and that the risk coming from the priority rule is not material¹⁷¹. Moreover, SpaceX itself submits that it has launched further expansion plans, which aim at increasing both its launch vehicle manufacturing and launching capacity¹⁷².

(258) In conclusion, despite its limited track record, SpaceX's recent failure and its full order book have not had any significant impact on customers' perception; they still consider SpaceX as the main credible alternative supplier to Arianespace.

¹⁶³ ESA's submission "Comments to the Commission's Article 6(1)(c) Decision", 29.03.2016.

¹⁶⁴ Minutes of a conference call held with a launch services provider on 09.12.2015.

¹⁶⁵ Minutes of a conference call held with a satellite manufacturer on 25.09.2015.

¹⁶⁶ Parties' reply to the Commission's request for information n° 3, 08.12.2015, question 6.

¹⁶⁷ Replies to question 33 of Q4 – questionnaire to satellite operators.

¹⁶⁸ Replies to question 34 of Questionnaire Q4 – questionnaire to satellite operators and question 35 of Questionnaire Q5 – questionnaire to satellite prime.

¹⁶⁹ Form CO, Annex 5.4.8.j, "Strategic & Audit Committee Meeting, 25 September 2015", page 11.

¹⁷⁰ Replies to question 35 of Questionnaire Q4 – questionnaire to satellite operators and question 36 of Questionnaire Q5 – questionnaire to satellite primes.

¹⁷¹ Replies to question 25 of Questionnaire Q6 – questionnaire to launch services provider.

¹⁷² Minutes of a conference call held with a launch services provider on 28.04.2016.

- (259) As regards ILS, it has historically been the most important alternative to Arianespace for launch services. ILS performs launches with its Proton vehicle, which has a maximum payload capacity of 6.5 tonnes. ILS is the main credible alternative to the Ariane 5 upper position for launching large commercial satellites above 5 tonnes into GTO. Although ILS could potentially also compete with the Ariane 5 lower position, it appears from the market investigation that from an economic point of view, it is not really an alternative in that segment¹⁷³.
- (260) Proton has suffered some performance issues over the last few years, having faced nine total failures and two partial failures since 2005. Its reliability rate currently reaches 89%. One satellite operator explained that "*Proton reliability has been severely hit further to repeated failures*"¹⁷⁴. Some satellite manufacturers pointed to the fact that as a consequence of its failures, ILS has become a less attractive option for customers in light of its higher insurance costs¹⁷⁵.
- (261) The results of the Commission's investigation showed that ILS's image has suffered from the technical issues faced in recent years. Although once recognised as a leading supplier and still considered to be a credible alternative to Ariane 5 for GTO launches by all the satellite operators¹⁷⁶, ILS is now perceived by satellite operators as a weaker player, which is trying to recover and re-establish itself on the market by focussing on a price-aggressive commercial policy¹⁷⁷. Although some satellite manufacturers cast doubts on ILS' current reliability, in general they appeared more optimistic about ILS' chances to recover mainly in light of its significant heritage and strong track record¹⁷⁸. Although launch services providers broadly share the opinions of the other market participants, they also consider that maintaining price competitiveness is likely to help ILS to restore its customers' base¹⁷⁹.
- (262) In March 2015, Arianespace described the situation in the market for launch services [...]. In fact, by commenting on the number of closed deals, Arianespace claimed that [...]¹⁸⁰. In September 2015, however, Arianespace observed that [...]¹⁸¹.
- (263) In fact, despite all its problems, ILS appears to have been recovering from its decline in recent years and has managed to capture some contracts in 2015¹⁸². Since August 2015, there have been eight consecutive successful Proton launches: four for ILS missions and four for Russian Federal customers¹⁸³.
- (264) This recovery was mainly enabled by the fact that ILS has implemented new measures to prevent future failures. As explained by one satellite operator, the problems faced by ILS were mainly linked to quality control issues, rather than to technical problems, and could thus easily be addressed in a shorter time frame and with a high success rate¹⁸⁴. This has positive effects on the insurance costs associated

¹⁷³ Reply to question 8.1 of Questionnaire Q2 – questionnaire to satellite primes.

¹⁷⁴ Reply to question 35 of Questionnaire Q1 – questionnaire to satellite operators.

¹⁷⁵ Competitor's reply to the Commission's request for information, 04.03.2016, question 8.

¹⁷⁶ Replies to question 35 of Questionnaire Q1 – questionnaire to satellite operators

¹⁷⁷ Replies to question 36 of Questionnaire Q4 – questionnaire to satellite operators.

¹⁷⁸ Replies to question 37 of Questionnaire Q5 – questionnaire to satellite primes.

¹⁷⁹ Replies to question 26 of Questionnaire Q6 – questionnaire to launch services provider.

¹⁸⁰ Form CO, Annex 5.4.8 f, "Strategic & Audit Committee Meeting, 13 March 2015", page 6.

¹⁸¹ Form CO, Annex 5.4.8.j, "Strategic & Audit Committee Meeting, 25 September 2015", page 11.

¹⁸² Minutes of a conference call held with a launch services provider on 14.04.2016.

¹⁸³ <http://www.ilslaunch.com/mission-control/proton-launch-archives>.

¹⁸⁴ Minutes of a conference call held with a satellite operator on 14.04.2016.

to launching with ILS. In addition, ILS has implemented a very aggressive pricing policy¹⁸⁵, which has significantly increased its attractiveness to customers.

- (265) As a consequence, two of the main global satellite operators, namely Intelsat and Eutelsat signed two firm multi-year agreements in 2015 with ILS. Those contracts cover multiple launches (five for Intelsat and at least three for Eutelsat) over the next seven years¹⁸⁶. One of these satellite operators submitted that its decision is aimed at preserving the presence of ILS in the market, thus guaranteeing the availability of multiple sourcing possibilities. *"The motivation to enter into such an agreement with ILS is related to the need of [...] to have more options in the launch services market. [...] thinks that currently there are not many options for the launch of larger satellites, since the only alternatives are Ariane 5 and Proton. [...]The Proton vehicle is already in the market for a long time (the longest in the industry). [...] believes that the failures were not caused by any problem in the design or system of the vehicle but by product/quality assurance issues. [...] understands that quality improvements are already being undertaken and if they solve these issues Proton becomes a valid competitor"*¹⁸⁷.
- (266) Along the same lines, the other satellite operator explained that *"one of the [...] motivations for such a contract, considering the high likelihood of failures, was the need to maintain three actors on the market (avoiding ILS to be pushed out of the launching business). In fact, there was the risk that Khrunichev would leave the commercial market after the consecutive failures and the loss of confidence from the market, leaving [...] with only 2 real systematic options, Arianespace and SpaceX"*¹⁸⁸. According to this satellite operator, ILS is likely to succeed in recovering its position in the worldwide open market for GTO launch services. Indeed, ILS is supported by the Russian Federal State (with the governmental, as well as the commercial business, from Russian satellite operators, allocated to the Proton launcher). Thus, ILS is considered to be in a more secure and stable position than Sea Launch was and has a serious chance of remaining on the market for the next years¹⁸⁹.
- (267) The signing of those contracts has been read by the market as a promising element for ILS' future performance. In fact, satellite operators are on average quite positive as regards ILS's viability and business prospects in the next three to five years¹⁹⁰. Satellite manufacturers expect that if ILS continues to perform successfully, it shall be able to restore its position¹⁹¹. Launch services providers point to the multiple agreements signed by ILS, which should guarantee some cash flow for the future and help rebuild customers' confidence¹⁹². ESA confirmed that *"While the conclusion drawn held true a year ago, the prospects of ILS may no longer be considered as bleak with launch service contracts starting to have been resigned over the second half of 2015"*¹⁹³.

¹⁸⁵ Minutes of a conference call held with a satellite operator on 14.04.2016.

¹⁸⁶ Form CO, paragraph 194.

¹⁸⁷ Minutes of a conference call held with a satellite operator on 14.04.2016.

¹⁸⁸ Minutes of a conference call held with a satellite operator on 14.04.2016.

¹⁸⁹ Minutes of a conference call held with a satellite operator on 14.04.2016.

¹⁹⁰ Replies to question 37 of Questionnaire Q4 – questionnaire to satellite operators.

¹⁹¹ Replies to question 38 of Questionnaire Q5 – questionnaire to satellite primes.

¹⁹² Replies to question 27 of Questionnaire Q6 – questionnaire to launch services provider.

¹⁹³ ESA's submission "Comments to the Commission's Article 6(1)(c) Decision", 29.03.2016.

- (268) One launch services provider submitted: *"We expect ILS to remain competitive in the marketplace. ILS has stated that it has increased its focus on quality embedded in their processes to ensure mission success"*¹⁹⁴.
- (269) One satellite operator submitted that *"if Proton confirms the very recent string of successful launches it will be clearly coming back in the arena. All parameters taken into account, Proton is a very good launcher considering the combination of price, lift-off mass and orbit injection parameters. If Proton solves the reliability issue (and therefore also a more credible time-to-launch), and they seem now on the right track, they will be again a player. Also, they have given clear indication that they will adopt a more flexible and commercial approach in the future"*¹⁹⁵.
- (270) Finally, ESA stated that *"Proton reliability considerations have to be seen both in the light of recent successes (e.g. ExoMars launch) as well as in the serious reform projects undertaken in Russia which include both a relocation of launch vehicle production (separating Angara/Proton elements) and an industrial concentration under Roscosmos SC which also includes projects linked to quality increase and modernisation"*¹⁹⁶.
- (271) In conclusion, despite its problems, ILS seems to have entered a recovery path and is still perceived by satellite operators as one of the major alternatives to Arianespace.
- (272) It follows that although Arianespace is the current market leader, credible alternatives such as SpaceX and ILS exist.
- 7.3.1.2. Launch services market is a dynamic competitive environment, where entry happens and companies' market positions change quickly over time
- (273) In the recent years, and unlike in the past, the launch services sector has proven to be a highly dynamic market.
- (274) The traditional cost models of Arianespace and other launch services providers have been severely challenged by the entry of SpaceX on the open market, which has led to a drastic drop in launch prices. Thanks to its innovative vertically integrated model, whereby SpaceX also controls the production of its own launcher Falcon 9, SpaceX has been able to offer extremely competitive prices for commercial launches of medium-weighted satellites. SpaceX proposes a single launch at around USD 60 million, whereas the average launch price on Ariane 5 is around EUR 150 million (approximately USD 200 million at the 2014 exchange rate) for a dual launch. As a result, SpaceX, which performed its first commercial launch in 2013, accounted for more than 40% of the new contracts signed in 2015 already.
- (275) Since SpaceX's entry in the worldwide open market for GTO launch services, Arianespace's market share by number of new contracts has been consistently lower than its market share by number of launches. That suggests that Arianespace's competitiveness has been challenged and its market presence is declining. In fact, since its entry, SpaceX has been eroding Arianespace's market shares by managing to acquire several new contracts at Arianespace's expense.
- (276) Therefore, SpaceX is a good example of the reactivity of the market as it shows the readiness of customers to embrace new suppliers in the market as long as there is an attractive business proposition.

¹⁹⁴ Reply to question 27 of Questionnaire Q6 – questionnaire to launch services provider.

¹⁹⁵ Reply to question 37 of Questionnaire Q4 – questionnaire to satellite operators.

¹⁹⁶ ESA's submission "Comments to the Commission's Article 6(1)(c) Decision", 29.03.2016.

- (277) ILS provides another example of how quickly the market responds to changes. ILS is the operator with the highest technological heritage on the market. In fact, Proton's maiden flight was performed in 1965 and since then it has carried out over 390 flights for commercial and institutional customers. Despite all of this, due to quality control issues resulting in failed launches between 2013-2015, ILS' market share went from [40-50]% in 2013 to [10-20]% in 2015 (by number of launches). However, as a result of positive signals given to the market as regards its technical capabilities to handle and fix those issues, ILS managed to go from zero new contracts in 2014 to two important multi-launch contracts in 2015.
- (278) In addition, in line with recent trends also observed in the worldwide market for commercial satellites, the launch services industry has witnessed the entry of many new small operators, mainly coming from the new economy and trying to secure independent access to space. The business model of those new players is based on widening the customer base and reducing costs. To do that, operators such as Blue Origin and Virgin Galactic, as well as SpaceX itself, are exploring the concept of re-usable launch systems. The commercialisation of a re-usable launch vehicle is expected to further increase the competitive pressure on existing players in light of the exceptional savings this technological breakthrough could deliver.
- (279) Moreover, the Parties argue that the worldwide open market for GTO launches is in the process of expanding further and that the number of alternatives available to commercial customers is likely to grow in the coming years. This is also the opinion of ESA, which indicated: "*Arianespace can be considered a major player in the GTO market, together with other launch service providers. Furthermore, the number of launch service providers/competitors is expected to increase in the near future even beyond the number of alternatives today already available. Other alternatives should become available in the near future, supported also by satellite operators that are willing to take the risk of launching their payloads on launch vehicle maiden flights in order to support the appearance and establishment on the market of alternative launch service options so as to increase competitive pressure*"¹⁹⁷.
- (280) First, according to the Parties, SpaceX will continue to expand its product portfolio after the successful first launch of its Falcon 9's new upgraded version in December 2015. Moreover, SpaceX has recently developed a new larger vehicle, the Falcon Heavy, which is expected to have a capacity of over 20 tonnes. Although not yet available, SpaceX has already contracted six customers for this launcher in 2015, which will compete with the Ariane 5 upper position¹⁹⁸.
- (281) Despite the scepticism expressed by the majority of satellite manufacturers¹⁹⁹, the vast majority of satellite operators believe that Falcon Heavy can become a credible alternative to Ariane 5 in the next two to three years²⁰⁰.
- (282) Second, SpaceX confirmed that it expects to be able to increase its production capacity to 40 cores²⁰¹ per year in 2017²⁰². Since each Falcon 9 uses one core and each Falcon Heavy will use three cores, the increased capacity will result in a production capacity of up to 40 Falcon 9s per year. Launch pads are not a restriction

¹⁹⁷ ESA's submission "Comments to the Commission's Article 6(1)(c) Decision", 29.03.2016.

¹⁹⁸ Minutes of a conference call held with a launch services provider on 09.12.2015.

¹⁹⁹ Replies to question 33 of Questionnaire Q5 – questionnaire to satellite primes.

²⁰⁰ Replies to question 32 of Questionnaire Q4 – questionnaire to satellite operators.

²⁰¹ The "core" is the first stage of SpaceX's launchers and each core includes nine Merlin engines.

²⁰² Minutes of a conference call held with a launch services provider on 09.12.2015.

to SpaceX since with each of the current available launch pads SpaceX can already perform two launches per month. This implies a capacity of 72 launches per year in the three active launch pads. SpaceX has also a fourth launch pad which is still not in use²⁰³.

- (283) Third, the Parties also submit that ULA, which so far has focused on performing launches for US institutional customers, is seeking to expand its position in the open market with a new launcher, called Vulcan. The Parties indicated that the Vulcan is likely to be commercialised by 2019 and priced at less than USD 100 million, as confirmed by information in the public domain²⁰⁴. ULA itself confirmed that the release of the Vulcan, which is able to accommodate payloads in the range of the Ariane launchers, is expected to take place by 2019 with an initial launch commercial capacity of 15 launches per year²⁰⁵.
- (284) Fourth, despite its recent difficulties caused by several failures, ILS is developing its new Angara 5 launcher, which should be commercialised in the open market for GTO launch services in the future²⁰⁶. Moreover, ILS recognises that it would be able to satisfy higher production with Proton: "*A growing demand would drive an increase of the launch vehicle production*"²⁰⁷.
- (285) In conclusion, the worldwide open market of GTO launch services is a dynamic competitive environment, where entry happens and companies' market positions change quickly over time. This market is likely to continue evolving and reshaping in the next few years. In such context, given the high contestability of the market, and in light of existing expansion plans, the leading position of Arianespace should not be taken as a given factor and could likely change in the future.

7.3.1.3. Satellite operators may be able to partially countervail the Parties' ability to foreclose Airbus' commercial satellites rivals

- (286) In a large majority of cases ([80-90]% of the commercial launch services and [90-100]% of Arianespace's launches in the worldwide open market for GTO launch services), Arianespace sells its services directly to satellite operators.
- (287) In contrast with the view of the majority of satellite manufacturers and launch services providers, satellite operators do not expect to increase the percentage of IOD satellites contracted in the future, given that they have a preference for OGD contracts²⁰⁸. The majority of the contracts in the next years should thus continue to be for OGD satellites. However, some exceptions may occur due to the fact that "*new actors are emerging, not coming from the traditional space environment, and therefore not willing to take the overall system risk. They wish to leave the prime contractor to define the launch needs and to take the responsibility of choosing the appropriate launcher with regard to the mission, and optimise satellite/launcher adequation. It is also the case for emerging institutional customers*"²⁰⁹.

²⁰³ Minutes of a conference call held with a launch services provider on 28.04.2016.

²⁰⁴ <http://www.reuters.com/article/lockheed-boeing-rockets-idUSL2N0XA2DE20150414>.

²⁰⁵ Reply to question 17 of Questionnaire Q6 – questionnaire to launch services provider.

²⁰⁶ Minutes of a conference call held with a launch services provider on 14.04.2016.

²⁰⁷ Minutes of a conference call held with a launch services provider on 14.04.2016.

²⁰⁸ Replies to question 32 of Questionnaire Q1 – questionnaire to satellite operators, question 26 of Questionnaire Q2 – questionnaire to satellite primes and question 26 of Questionnaire Q3 – questionnaire to launch services providers.

²⁰⁹ Reply to question 26 of Questionnaire Q2 – questionnaire to satellite primes.

- (288) Moreover, the majority of satellite operators confirmed that they also contact the launch services provider to negotiate the terms and conditions in the context of an IOD contract²¹⁰. The majority of launch services providers confirmed this²¹¹.
- (289) This implies that for most of the contracts, including those for IOD satellites, the satellite operator will be the one ultimately taking the procurement decision concerning both the satellite manufacturer and the launch services provider.
- (290) This also implies that the Parties would not have the ability to foreclose rivals solely based on IOD contracts as only a very small percentage of satellites sold would be potentially affected. Only by simultaneously adopting a bundling strategy (for the OGD contracts) and an input foreclosure strategy (for the IOD contracts) would the Parties eventually be able to affect a significant number of satellite transactions.
- (291) In that regard, the Commission considers that satellite operators are sophisticated buyers that have a certain degree of countervailing buyer power that could help them to partially counterbalance a foreclosure strategy against Airbus' rivals in case they have a specific preference to buy from a satellite manufacturer that offers added value in terms of innovation and commercial conditions.
- (292) According to a study from Northern Sky Research ("2014 NSR study") submitted by the Parties, launch services providers and satellite manufacturers have to deal with strong and established satellite operators managing large fleets of satellites²¹².
- (293) The concentration of customers of the worldwide market for commercial satellites is relatively high, with the two main satellite operators (Intelsat and Eutelsat) representing 23% of the satellites ordered in the period 2009-2014. If the 10 biggest customers are taken into account (which corresponds to 20% of the total number of customers), the percentage of demand they represent increases to 56%.

Figure 4: Commercial GTO satellites order, 2009-2014 concentration of demand



Source: 2014 NSR study

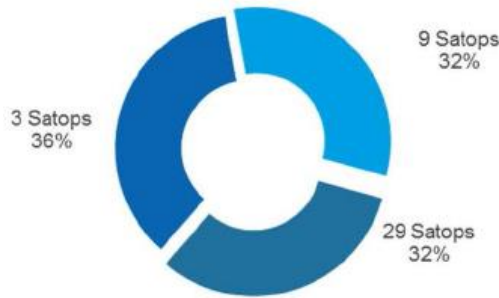
- (294) The concentration of customers in the worldwide open market for launches of satellites to GTO is also relatively high; the three main satellite operators (SES, Eutelsat and Intelsat, which corresponds to 7% of the total number of customers), account for 36% of the launches in the period 2009-2013. If the 12 biggest customers are considered (which corresponds to 29% of the total number of customers), the percentage of demand they represent increases to 68%.

²¹⁰ Replies to question 30 of Questionnaire Q1 – questionnaire to satellite operators.

²¹¹ Replies to question 24 of Questionnaire Q3 – questionnaire to launch services providers.

²¹² Parties' reply to the Commission's request for information n° 24, 21.03.2016, "2014 NSR study".

Figure 5: Commercial GTO satellites launch services, 2009-2013 concentration of demand



Source: 2014 NSR study.

- (295) Satellite operators generally select the satellite provider and the launch services provider through complex tender procedures which last three months. The requests for proposal ("RFP") are distributed to different potential vendors. After receiving their bids, satellite operators start iterating with the various suppliers and select a short list of two to four suppliers to start in-depth negotiations²¹³.
- (296) A large majority of satellite operators confirmed that they are able to get a better price in the context of those negotiations with launch services providers²¹⁴. Those discounts are mostly based on the quantity of launches they contract and their importance as a customer²¹⁵.
- (297) A large number of satellite operators confirmed that they already entered in multi-launch agreements with the objective of getting more favourable terms and conditions²¹⁶. A large majority of satellite operators also confirmed that they have already purchased from a launch services provider with the objective of keeping that provider viable and thus ensuring enough choice of launch services providers in the future²¹⁷. A satellite operator explained that *"in a context of limited number of players on the launch service market, (...) tries to mitigate the associated risk (failure or delays if not directly affected by the failure) by diversificating their launch service providers. As an example of such a policy, (...) was the 1st commercial customer of Ariane 3 in 1984, Delta 4, Atlas V in 2002. Other large satellite operators behaved likewise: (...) was a supporter of Sea Launch, and (...) was the first commercial customer of ILS and more recently of SpaceX and the 3rd after considering the institutional launches. (...) has experienced a similar situation with Sea Launch, with a multilaunch contract (4 launches), in order to support the launch services provider"*²¹⁸.
- (298) Finally, a majority of satellite operators believe that if Arianespace would offer better terms and conditions on launch services conditional to the selection of Airbus as the supplier of the satellite, they would have the bargaining power to extend those terms and conditions to other satellite choices²¹⁹.
- (299) Overall, the Commission considers that post-transaction the Parties would not have the ability to foreclose rivals solely based on an input foreclosure strategy given that for most cases the satellite operator is the one ultimately taking the decision about

²¹³ Replies to questions 21 and 26 of Questionnaire Q1 – questionnaire to satellite operators.

²¹⁴ Replies to question 38 of Questionnaire Q4 – questionnaire to satellite operators.

²¹⁵ Replies to question 40 of Questionnaire Q4 – questionnaire to satellite operators.

²¹⁶ Replies to question 39 of Questionnaire Q4 – questionnaire to satellite operators.

²¹⁷ Replies to question 43 of Questionnaire Q4 – questionnaire to satellite operators.

²¹⁸ Minutes of a conference call held with a satellite operator on 14.04.2016.

²¹⁹ Replies to question 42 of Questionnaire Q4 – questionnaire to satellite operators.

both the satellite manufacturer and the launch services provider. Moreover, in the cases where the satellite operator is the one ultimately taking the decision on the purchase of the launch services, the Commission considers that their countervailing buyer power could partially offset the ability of the Parties to foreclose Airbus' rivals post-transaction.

- 7.3.1.4. The characteristics of satellite markets would likely prevent the foreclosure of Airbus' commercial satellites rivals at least in the short term
- (300) Satellite manufacturers submitted that the worldwide market for commercial satellites is very competitive. According to one satellite manufacturer, "*for the most part the difference in prices between the winning bid and the nearest competing bid is quite small which demonstrates that the commercial communications satellite market is highly competitive and small differences in price can change a customer's decision*"²²⁰. Another satellite manufacturer stated that "*satellite manufacturers tend to submit compliant contract offers at very competitive prices*"²²¹.
- (301) Given the high level of competition and the low number of projects in the worldwide market for commercial satellites, some satellite manufacturers argued that there is the risk that as a consequence of the adoption of a bundling and input foreclosure strategy by the Parties, they would compete less effectively or eventually leave the market²²². One satellite manufacturer stated that "*Competitors other than Airbus will have less funding available for investment in new products and Airbus with its unique competitive advantages will have less need to offer new products and product variety*"²²³.
- (302) The Commission considers, however, that the characteristics of satellite markets would likely prevent the foreclosure of Airbus' commercial satellites rivals in the event that the Parties would adopt a bundling and input foreclosure strategy.
- (i) ***Almost all satellite manufacturers are heavily subsidised by public funding and innovation starts with military/institutional projects***
- (303) First, in line with the Parties' arguments, both in Europe and the US, R&D dedicated to satellites is not driven by the commercial segment. All R&D activities of every major satellite manufacturers are heavily subsidised by public funding and the major innovations both in terms of communication and optics are generally prompted by military and institutional contracts. The R&D results lead after some time to applications in the commercial segment.
- (304) In the particular case of the US, the Parties argue that a significant part of the innovations offered by US satellite manufacturers have been financed through military budget²²⁴ and this has allowed US satellite manufacturers to develop innovative communication solutions that have then been passed on to commercial telecommunication satellites. According to Euroconsult 2014 figures²²⁵, over the 2014 to 2023 period, the value of the worldwide market for commercial satellites will reach USD 56.3 billion (USD 46.6 billion for GTO satellites and USD 9.7 billion for non-GTO satellites), while the US captive market for satellites

²²⁰ Competitor's reply to the Commission's request for information, 04.03.2016, question 1.

²²¹ Reply to question 20.4 of Questionnaire Q5 – questionnaire to satellite primes.

²²² Replies to question 57 of Questionnaire Q2 – questionnaire to satellite primes.

²²³ Reply to question 60.1 of Questionnaire Q2 – questionnaire to satellite primes

²²⁴ According to the Parties, development funding from the US military satellites may reach USD 10-15 billion per year for programmes that are known.

²²⁵ Parties' submission "Note on satellite R&D".

alone will reach USD 73 billion. This means that even if US satellite manufacturers were denied access to the worldwide market for commercial satellites, they would still have access to a market that is 1.3 times as large as the worldwide market for commercial satellites²²⁶.

(305) [...] ²²⁷. [...].

(306) The Commission's investigation confirmed that innovations stemming from institutional and military satellites are applied to commercial satellites and that for most of the satellite manufacturers, a very relevant part of their R&D is financed by public funding or military and institutional revenues. With such financing, satellite manufacturers will continue to innovate, even if their order rates for commercial satellites are relatively low²²⁸.

(307) [...] ²²⁹. [...] ²³⁰. [...] ²³¹.

(308) As regards the US-based players, Orbital is mostly focused on institutional and military satellites which represent a large share of its turnover in satellites sales²³². Boeing has a similar profile, although with a higher exposure to the commercial segment as compared to Orbital. Lockheed Martin has traditionally been focused on institutional and military programmes, with only a small percentage of its revenues coming from the sale of commercial satellites. In fact, in the last years, Lockheed Martin was not even active in the commercial segment. Only recently Lockheed Martin *"has increasingly focused on the commercial field [...] because in the last few years the US military and institutional projects have been flat or declining due to the lack of funds"*²³³. In 2015, after having *"made significant R&D investments to develop its commercial satellite business and make this more competitive"*²³⁴, Lockheed Martin sold three commercial satellites. Despite this, *"even in 2015, revenues coming from the commercial business were still a small percentage of LMSSC's overall revenues"*²³⁵.

(309) Among the main players, the US-based SSL is the only one that is exclusively active in the market for commercial satellites²³⁶ and which does not receive any public funding for the development of satellites²³⁷. That player seems thus highly exposed to the volatility of the worldwide market for commercial satellites and could eventually be in a weaker position in the event that the Parties were to adopt a foreclosure strategy. According to that player, *"The communications satellite manufacturing market is highly competitive with six major competitors, has high fixed costs, and has a limited number of contract awards each year. Given the significant incremental financial benefit of each satellite contract in a high fixed cost*

²²⁶ This ratio corresponds to the division of the value of the US captive market for satellites (which is the one only accessible to US players) by the value of the worldwide market for commercial satellites (which is the one accessible to every player).

²²⁷ [...].

²²⁸ Replies to question 52 and 53 of Questionnaire Q5 – questionnaire to satellite primes.

²²⁹ [...].

²³⁰ [...].

²³¹ [...].

²³² Reply to question 48 of Questionnaire Q5 – questionnaire to satellite primes.

²³³ Minutes of a conference call held with a satellite manufacturer on 11.04.2016.

²³⁴ Minutes of a conference call held with a satellite manufacturer on 11.04.2016.

²³⁵ Minutes of a conference call held with a satellite manufacturer on 11.04.2016.

²³⁶ SSL also has sporadic sales in the market for the export of institutional satellites which is not a captive market.

²³⁷ Minutes of a conference call held with a satellite manufacturer on 07.04.2016.

*business, as the only vertically integrated company in the industry, a combined Arianespace/Airbus would see significant financial benefit in using its market position and profitability in the launch business to charge lower launch prices for Airbus satellites in order to win incremental satellite contracts*²³⁸. In addition, "if due to the vertical integration of Airbus, ASL and Arianespace the market structure is disrupted on a long-term permanent basis and therefore, the business outlook is negative, it would be difficult for MDA to justify providing additional financial support"²³⁹ and therefore "the impact would be less available funding for R&D work and increased difficulty for SSL to compete in the marketplace"²⁴⁰. Moreover, "SSL would not have the ability to enter the institutional/military satellite market without incurring significant costs"²⁴¹.

- (310) In light of recitals (303) to (309), the Commission considers that, even in the event of losing some projects to Airbus in the worldwide market for commercial satellites, all the main satellite manufacturers, with the only possible exception of SSL, would likely (i) find alternative sources of revenues that would ensure their viability and (ii) keep introducing innovations in the commercial segment.
- (ii) *Satellite manufacturers have a backlog of contracts which would allow them to remain active in the commercial segment with reduced sales for a period of at least three years***
- (311) Satellite operators start their procurement process for a satellite generally more than three years before delivery²⁴². According to one satellite operator, the timing for the procurement is the following: "L-3.5 years: Satellite operator starts the competitive process by issuing an RFP [request for proposal] to the industry. Several bids are received, and the operators enters into negotiations with one or several (typically two) manufacturers. L-3 years: The satellite manufacturer is selected, a contract is signed, and the satellite build is initiated"²⁴³.
- (312) This implies that, at a given moment in time, satellite manufacturers have already a backlog of contracts for the supply of satellites for at least the next three years. The larger the existing backlog, the longer the flow of assured revenues and thus the longer a satellite manufacturer is able to sustain its operations.
- (313) According to information provided by the Parties, most of the main satellite manufacturers already have in their order books a significant number of contracts for future delivery for which the launch services provider has already been selected. This is particularly the case for SSL with [...] such satellites for future delivery and Boeing with [...] satellites. This should ensure a stable flow of revenues to those manufacturers for at least the next three years.

²³⁸ Reply to question 41 of Questionnaire Q2 – questionnaire to satellite primes.

²³⁹ Competitor's reply to the Commission's request for information, 21.04.2016, question 2.

²⁴⁰ Competitor's reply to the Commission's request for information, 04.03.2016, question 21.

²⁴¹ Competitor's reply to the Commission's request for information, 21.04.2016, question 6

²⁴² Replies to question 21 of Questionnaire Q1 – questionnaire to satellite operators.

²⁴³ Reply to question 21 of Questionnaire Q1 – questionnaire to satellite operators.

Table 11: Number of contracts for future delivery satellites whose launch services provider has already been selected

	Number of contracts
Airbus	[...]
Boeing	[...]
Lockheed Martin	[...]
Orbital	[...]
SSL	[...]
TAS	[...]

Source: Parties' reply to the Commission's request for information n° 21, 09.03.2016, question 8.

- (314) The Commission therefore concludes that all the main satellite manufacturers, including SSL, have a backlog of contracts which would allow them to remain active in the commercial segment with reduced sales for a period of at least three years in the event of the adoption of a bundling and input foreclosure strategy post-transaction by the Parties.
- (iii) *Satellite manufacturers have the ability to adapt their capacity to a lower level of activity***
- (315) Finally, the Parties argue that several satellite manufacturers have the ability to adapt their capacity to a lower level of activity without jeopardising the viability of the commercial satellites business.
- (316) In that regard, the Commission notes that many satellite manufacturers remain active in the worldwide market for commercial satellites despite the large annual fluctuations in the number of commercial satellites sold. For many of those manufacturers the commercial segment complements the sales made in the markets for institutional and military satellites. Boeing, Orbital and TAS are good examples of those fluctuations with sales of commercial satellites fluctuating significantly in the last four years. This is also the case of several smaller satellite manufacturers that sporadically are able to sell one or two satellites in a year.

Table 12: Commercial Satellites sold in the period 2012-2015

	2012	2013	2014	2015
Airbus DS	[...]	[...]	[...]	[...]
Boeing	[...]	[...]	[...]	[...]
CGWIC	[...]	[...]	[...]	[...]
IAI	[...]	[...]	[...]	[...]
Invap	[...]	[...]	[...]	[...]
ISRO	[...]	[...]	[...]	[...]
ISS-Reshetnev	[...]	[...]	[...]	[...]
Lockheed Martin	[...]	[...]	[...]	[...]
Melco	[...]	[...]	[...]	[...]
OHB	[...]	[...]	[...]	[...]
Orbital	[...]	[...]	[...]	[...]
RKK Energia	[...]	[...]	[...]	[...]
SSL	[...]	[...]	[...]	[...]
TAS	[...]	[...]	[...]	[...]
Tubytak	[...]	[...]	[...]	[...]
Total	[...]	[...]	[...]	[...]

Source: Form CO and Response to Article 6(1)(c) Decision.

(317) In light of recitals (315) and (316), the Commission considers that satellite manufacturers, even in the event of losing some tenders in the worldwide market for commercial satellites, have the ability to adapt their capacity to a lower level of activity and therefore are able to continue exerting a competitive constraint in the market.

(iv) Conclusion

(318) Overall, the Commission acknowledges that, as also submitted by various market participants, the worldwide market for commercial satellites is a highly competitive environment. However, the Commission also considers that the characteristics of the satellite markets will likely prevent foreclosure of commercial satellite manufacturers, including SSL. This is because (i) almost all satellite manufacturers are heavily subsidised by public funding and innovation starts with military and institutional projects, (ii) satellite manufacturers have a backlog of contracts which would allow them to remain active in the commercial segment with reduced sales for a period of at least three years and (iii) satellite manufacturers have the ability to adapt their capacity to a lower level of activity.

7.3.1.5. It is unlikely that commercial satellite manufacturers would be effectively foreclosed in the long term

(319) The Court of Justice pointed out in *General Electric v Commission* that "conglomerate-type concentrations give rise to certain specific problems, in particular inasmuch as, first, the assessment of such a transaction may involve a prospective analysis covering a period of time stretching well into the future and, second, the specific conduct of the merged entity may determine to a great extent what effects the concentration has. Thus, the chains of cause and effect following a merger may be dimly discernible, uncertain and difficult to establish. That being so, the quality of the evidence produced by the Commission in order to form a sound basis for a decision declaring a concentration incompatible with the common market

is particularly important, since that evidence must support the Commission's conclusion that, if such a decision were not adopted, the economic changes envisaged by it would be plausible"²⁴⁴.

- (320) In that context, and in light of the factors already described in Sections 7.3.1.1 to 7.3.1.4, the Commission considers that it is unlikely that in the long term any satellite manufacturer, including SSL, would be effectively foreclosed in the event that the Parties were to adopt a bundling and input foreclosure strategy.
- (321) According to Section 7.3.1.3, in the event that the Parties were to adopt a bundling and input foreclosure strategy resulting in hypothetical additional sales for Airbus, all the main satellite manufacturers with the sole exception of SSL, would likely (i) find alternative sources of revenues that would ensure their viability and (ii) have the ability to keep introducing innovations in the commercial segment.
- (322) For satellite manufacturers which are entirely relying on the market for commercial satellites, such as SSL, Arianespace does not represent the only alternative for launches. Although Arianespace continues to represent a large share of the commercial satellite launches, actually for most of satellite manufacturers, including SSL, the majority of commercial satellites in the last five years were launched by other launch services providers. This will continue to be even more the case in the future, with SpaceX representing a significant and growing percentage of the commercial GTO launches²⁴⁵. As regards SSL's satellites, satellite operators also selected ILS for a significant number of past and future launches, as well as SpaceX and some other smaller launch services providers, although in fewer occasions.

Table 13: Percentage of each of the main players' satellites that were/will be launched by the three main launch services providers

	Arianespace		SpaceX		ILS		Others	
	2011-2015	Future	2011-2015	Future	2011-2015	Future	2011-2015	Future
Airbus	45%	[40-50]%	0%	[40-50]%	36%	[10-20]%	19%	[0-5]%
Boeing	0%	[30-40]%	20%	[50-60]%	50%	[5-10]%	30%	[0-5]%
Lockheed Martin	100%	[60-70]%	0%	[30-40]%	0%	[0-5]%	0%	[0-5]%
Orbital	62%	[50-60]%	15%	[50-60]%	15%	[0-5]%	8%	[0-5]%
SSL	46%	[40-50]%	8%	[30-40]%	[...]*%	[10-20]%	4%	[5-10]%
TAS	25%	[50-60]%	13%	[30-40]%	25%	[10-20]%	37%	[0-5]%

Source: Parties' reply to the Commission's request for information n° 21, 09.03.2016, question 8.

- (323) Moreover, given that satellite operators are sophisticated buyers with a certain degree of countervailing buyer power, it is reasonable to assume that they would be in a position to partially offset the ability of the Parties to foreclose Airbus' rivals via bundling and input foreclosure.

²⁴⁴ Case T-210/01, *General Electric v Commission*, EU:T:2005: 456 paragraph 66.

²⁴⁵ This result is based on the analysis of contracts already signed whose launch is pending.
* Should read 42%.

- (324) In addition, all the satellite manufacturers have a backlog of contracts which would likely allow them to remain active in the commercial satellites segment, even with reduced sales for a period of at least three years. This is particularly true for SSL, which has the largest backlog of satellites. Therefore, if the Parties would hypothetically adopt a bundling and input foreclosure strategy against Airbus' rivals, those players, including SSL, would likely be able to continue competing effectively for at least three years. Therefore satellite manufacturers are not likely to be foreclosed in at least the next three years.
- (325) As for the possibility to effectively foreclose rivals beyond the next three years, it is unlikely that the Parties would have the ability to do so, given that the worldwide open market for GTO launch services is a dynamic competitive environment, where entry happens and companies' market positions change quickly over time. That market is thus likely to continue evolving and reshaping in the next few years. In such a context, given the high contestability of the market, and in light of existing expansion plans, the leading position of Arianespace should not be taken as a given factor and could likely change in the future.

7.3.1.6. Conclusion on ability to foreclose

- (326) On the basis of the market investigation, and taking into account all other available evidence, the Commission concludes that post-transaction the Parties would likely not have the ability to successfully foreclose Airbus' rivals in satellites by adopting a hypothetical bundling and an input foreclosure strategy. This is because (i) although Arianespace is the current market leader, credible alternatives exist, such as SpaceX and ILS; (ii) the worldwide open market for GTO launch services is a dynamic competitive environment, where entry happens and companies' positions quickly change over time; (iii) satellite operators may be able to partially countervail the Parties' ability to foreclose rival satellite manufacturers; (iv) the characteristics of satellite markets would likely prevent the foreclosure of Airbus' commercial satellites rivals at least in the short term; and (v) it is unlikely that commercial satellite manufacturers would be effectively foreclosed in the long term.

7.3.2. *Incentives to foreclose*

- (327) The large majority of satellite manufacturers stated that post-transaction the Parties would have the incentive to discriminate against them on commercial and technical conditions with foreclosure effects²⁴⁶. In fact, some satellite manufacturers consider that "*The discount required to change a customer's decision would be far less than the financial benefit of an incremental satellite manufacturing contract*"²⁴⁷. Also some competitors in launch services stated the transaction would bring incentives to discriminate against them on commercial and technical conditions²⁴⁸.
- (328) The Parties argue that they would not have the incentive to foreclose Airbus' rivals given that: (i) Arianespace could not run the risk of losing launch services sales, (ii) Safran co-controls ASL, thus has no interest in satellites' sales and (iii) other integrated undertakings do not engage in bundling.
- (329) Satellite operators agreed with the Parties; the large majority of them stated, during the Commission's investigation that the Parties would not have the incentive to

²⁴⁶ Replies to question 41 and 42.2 of Questionnaire Q2 – questionnaire to satellite primes.

²⁴⁷ Reply to question 41.1 of Questionnaire Q2 – questionnaire to satellite primes.

²⁴⁸ Replies to question 39 and 40.2 of Questionnaire Q3 – questionnaire to launch services providers.

discriminate in favour of Airbus satellites on commercial and technical conditions²⁴⁹. According to them, Arianespace would charge similar prices to launch the different satellites given that "*this is likely not their interest to create discrepancy between satellites*" and "*commercial pressures may limit the chance of that happening*"²⁵⁰.

(330) On the basis of the Sections 7.3.2.1 to 7.3.2.3, overall, the Commission reaches the conclusion that post-transaction the Parties would not have the incentives to foreclose Airbus' rivals through a pure bundling and total input foreclosure strategy, which corresponds to a refusal to supply launch services as regards non-Airbus satellites, given the relatively small weight of Airbus on the market for commercial satellites and on Arianespace's launches.

(331) As regards the incentive to foreclose Airbus' rivals through a mixed bundling (in the case of OGD) and a partial input foreclosure strategy (in the case of IOD), which only implies a degradation of the supply terms as regards non-Airbus satellites, the analysis carried out by the Commission shows that although there are elements pointing to the existence of some incentives, there are also countervailing factors which may off-set such potential incentives. Therefore, given the likely absence of the ability to foreclose²⁵¹, the Commission reaches the conclusion that the issue as to whether post-transaction the Parties would likely have the incentive to foreclose Airbus' rivals in the worldwide market for commercial satellites through a mixed bundling and a partial foreclosure strategy can be left open.

7.3.2.1. The risks of foregoing sales of launch services would eliminate any incentive of the Parties to foreclose satellite rivals through a pure bundling and total input foreclosure strategy

(332) According to Table 14, Airbus represented 28% of Arianespace launches to GTO in the last five years. For future launches, Airbus represents only [10-20]% of Arianespace launches to GTO. This implies that a significant part of the business of Arianespace in the worldwide open market for GTO launch services (namely [80-90]% of the future launches) results from launches of satellites not produced by Airbus. In contrast, SSL represented around one third of the last five years and the future launches of Arianespace.

Table 14: Percentage of each main satellite manufacturer on Arianespace's launches

	2011-2015	Future launches
Airbus	28%	[10-20]%
Boeing	0%	[20-30]%
Lockheed Martin	8%	[5-10]%
Orbital	22%	[5-10]%
SSL	33%	[30-40]%
TAS	6%	[10-20]%

Source: Parties' reply to the Commission's request for information n° 21, 09.03.2016, question 8.

(333) In light of the relatively small position of Airbus (i) on the markets for satellites (less than [20-30]% of the worldwide market for commercial satellites by volume in 2015)

²⁴⁹ Replies to question 46 and 47.2 of Questionnaire Q1 – questionnaire to satellite operators.

²⁵⁰ Reply to question 46.1 of Questionnaire Q1 – questionnaire to satellite operators.

²⁵¹ According to paragraph 94 of the Non-Horizontal Guidelines, ability and incentives are closely intertwined factors for evaluating foreclosure effects in conglomerate mergers.

and (ii) on Arianespace's launches, the Commission considers that the Parties would not likely have the incentive to foreclose Airbus' rivals through pure bundling (in the case of OGD) or total input foreclosure (in case of IOD) strategy. This would imply a large sacrifice of revenues. Since non-Airbus satellites constitute the large majority of satellites launched by Arianespace, the potential gains in the worldwide market for commercial satellites would not compensate for the sacrifice.

(334) The majority of satellite operators and the majority of launch services providers do not believe a pure bundling or total input foreclosure to be plausible scenarios²⁵². According to one satellite operator, "*they do not see incentives from Airbus side. Arianespace would like to launch a number of satellites, of which the majority would not be manufactured by Airbus (Airbus wants 5-6 launches a year where Arianespace wants 12-13 launches). Therefore, Arianespace needs to supply other companies*"²⁵³. ESA also supported this view by stating that "*Arianespace could not survive uniquely on Airbus-manufactured satellites. (...)The launch of Airbus satellites alone would clearly not be sufficient to sustain the commercial Arianespace exploitation, in particular taking into account the dual launch constraints and even less so with the new governance of Ariane 6 and Vega C whereby inter alia the private sector shall bear all commercial market risks during exploitation without support from Member States*"²⁵⁴.

(335) On the other hand, in the cases of mixed bundling (for OGD satellites) and partial input foreclosure (for IOD satellites), Arianespace would benefit from a larger number of launches of Airbus satellites without losing all the sales from non-Airbus satellites. In fact, some satellite operators which would have chosen rival satellites, in the absence of the discount, would opt for Airbus to benefit from the better commercial conditions while others would still select Arianespace to launch non-Airbus satellites. In the economic model submitted by the Parties, the introduction of a bundle discount would indeed result in the increased joint profits of Airbus and Arianespace. Therefore, Arianespace's loss of launch services business is likely insufficient to remove the incentives for the Parties to foreclose rivals through mixed bundling strategy.

(336) Nevertheless, the Commission considers that there are some counterbalancing factors that may reduce the incentives to foreclose rivals through a mixed-bundling and partial input foreclosure strategy.

7.3.2.2. Ownership structure of ASL/Arianespace may partially countervailing the incentives to foreclose

(337) The Parties submit that they have no incentive to foreclose Airbus' rivals and risk to foregoing sales of launch services because Safran co-controls ASL and has no interest in satellites sales.

(338) According to paragraph 109 of the Non-Horizontal Guidelines, "*in its assessment of the likely incentives of the merged firm, the Commission may take into account other factors such as the ownership structure of the merged entity*" and "*For instance, in cases where two companies have joint control over a firm active in one market, and only one of them is active on the neighbouring market, the company without*

²⁵² Replies to question 48 of Questionnaire Q1 – questionnaire to satellite operators and question 41 of Questionnaire Q3 – questionnaire to launch services providers.

²⁵³ Minutes of a conference call held with a satellite operator on 15.10.2015.

²⁵⁴ ESA's submission "Comments to the Commission's Article 6(1)(c) Decision", 29.03.2016.

activities on the latter market may have little interest in foregoing sales in the former market". A similar reasoning is applied to vertical mergers according to paragraph 45 of the Non-Horizontal Guidelines.

(339) The fact that ASL is a joint venture between Safran and Airbus (rather than solely owned by Airbus) may partially reduce the incentive of the Parties to foreclose satellite rivals through a mixed bundling and partial input foreclosure strategy. Safran does not have a direct interest in helping Airbus sell more satellites at the expense of launch services and launcher revenues. However, [...], the Commission considers that Safran might nevertheless have some interest in favouring Airbus satellites, in particular, in competition against the US-based satellite manufacturers²⁵⁵. Therefore, on balance, the ownership structure of ASL/Arianespace may only partially counteract the Parties' incentives to foreclose.

7.3.2.3. The purchasing patterns of launch services and satellites may, in the case of OGD satellites, counteract the incentives to foreclose

(340) The Parties submit that customers usually source launch services separately from satellites and at different moments in time. Therefore, Arianespace would not have the ability to influence customers' choice of satellites since by the time launch services are contracted, customers have already made their choice for the satellite.

(341) A large number of satellite operators, although not the majority, confirmed that they negotiate the terms and conditions with their potential launch services providers after they have selected the satellite provider²⁵⁶. In those cases, Arianespace would have limited incentives to offer worse commercial conditions to launch non-Airbus satellites since it could not benefit from influencing the decision of the satellite operator in favour of an Airbus satellite and would incur the risk of losing the launch of that satellite to its rivals.

(342) A large number of satellite operators also confirmed that they already entered into multi-launch agreements with launch services providers with the objective of getting more favourable terms and conditions²⁵⁷. In this context, launches are most often contracted by satellite operators before the satellite is selected. In these cases, Arianespace would also have a limited incentive to offer worse commercial conditions, unless it could make those conditions dependent on the identity of the satellite manufacturer.

7.3.2.4. Conclusion on incentives to foreclose

(343) On the basis of the market investigation and taking into account all other available evidence, the Commission concludes that post-transaction the Parties are unlikely to have the incentive to foreclose Airbus' rivals through a pure bundling and total input foreclosure strategy, given the relatively small position of Airbus on the market for commercial satellites and on Arianespace's launches.

(344) As regards the incentive to foreclose satellite rivals through a mixed bundling (in the case of OGD) and a partial foreclosure (in the case of IOD) strategy, the analysis carried out by the Commission shows that, although there are elements pointing to the existence of some incentives, there are also countervailing factors which may offset such potential incentives. The existence of incentives to foreclose is one of the

²⁵⁵ Parties' reply to the Commission's request for information n° 28, 21.03.2016, questions 9 and 10.

²⁵⁶ Reply to question 34 of Questionnaire Q1 – questionnaire to satellite operators.

²⁵⁷ Replies to question 39 of Questionnaire Q4 – questionnaire to satellite operators.

three cumulative elements of the Commission's framework of analysis for the non-horizontal effects. Therefore, given the likely absence of ability to foreclose, even if the Commission were to conclude that the Parties would have such incentives, this would not imply that foreclosure effects would be likely. Consequently, the Commission concludes that the issue as to whether post-transaction the Parties would likely have the incentive to foreclose Airbus' rivals in the worldwide market for commercial satellites through a mixed bundling and a partial foreclosure strategy can be left open.

7.3.3. *Likely impact on competition*

- (345) The large majority of satellite manufacturers believe the transaction might ultimately increase satellite prices and negatively affect innovation in the worldwide market for commercial satellites²⁵⁸. One manufacturer submitted that "*Arianespace could potentially favour Airbus [by charging] lower prices for launches of Airbus satellites*" thus "*leading to an increase in [competitor's] production costs*"²⁵⁹. Satellite manufacturers also expect the transaction to have a negative impact on innovation and the prices of launch services²⁶⁰. Launch services providers are equally critical of the competitive effects of the transaction. A majority of them expects a negative impact of the transaction on prices and innovation both on the worldwide market for commercial satellites and on the worldwide open markets for launch services²⁶¹.
- (346) The Parties argue that the transaction would not have any significant detrimental effect on competition. In this context they submitted an economic study which shows "*that the implementation of a mixed-bundling strategy would in any event have a positive effect on competition*". The Commission considers that the models put forward in the economic study neither support nor disprove potential concerns associated to mixed-bundling (see Section 7.3.3.1).
- (347) The large majority of satellite operators supported the Parties' claim as they believe the transaction would have no impact or even would have a positive impact both on prices and innovation on the worldwide market for commercial satellites and on the worldwide open markets for launch services²⁶². According to one satellite operator, "*we expect that as a result of the transaction ASL will be closer to its customers, which is good: strategically to better anticipate market evolution, operationally to better answer to their needs. We also anticipate some additional synergies as this transaction would contribute to improve the situation compared to Ariane 5, ie (i) reduce the number of stakeholders and (ii) give industry a more central role for the design, manufacturing, and operations of a launcher better adapted to market needs*"²⁶³. Another satellite operator stated that the "*the commercial structure that Airbus/Safran could bring to Arianespace's operations would result in more efficiencies and better pricing, while still allowing Arianespace to maintain its reliability*"²⁶⁴.

²⁵⁸ Replies to question 58 and 59 of Questionnaire Q2 – questionnaire to satellite primes.

²⁵⁹ Reply to question 58 of Questionnaire Q2 – questionnaire to satellite primes.

²⁶⁰ Reply to question 61 and 62 of Questionnaire Q2 – questionnaire to satellite primes.

²⁶¹ Replies to questions 54, 55, 57 and 58 of Questionnaire Q3 – questionnaire to launch services providers.

²⁶² Replies to questions 61, 62 and 64 of Questionnaire Q1 – questionnaire to satellite operators.

²⁶³ Reply to question 45 of Questionnaire Q4 - questionnaire to satellite operators.

²⁶⁴ Reply to question 45 of Questionnaire Q4 - questionnaire to satellite operators.

- (348) In Section 7.3.1, the Commission already concluded that the Parties would likely not have the ability to foreclose Airbus' rivals, including SSL, from the worldwide market for commercial satellites via bundling and input foreclosure strategy. In Section 7.3.2, the Commission left open the issue whether the Parties could have incentives to foreclose rivals. As explained in paragraph 94 of the Non-Horizontal Guidelines, ability, incentives and likely impact are closely intertwined factors in the evaluation of foreclosure effects. Therefore, the effect of a bundling and input foreclosure strategy on competition would be unlikely to be significant because it is unlikely to result in the foreclosure of rivals.
- (349) Nevertheless, in Section 7.3.3.2, for the sake of completeness, the Commission analyses the impact on competition of the adoption of a bundling and input foreclosure strategy under the worst case scenario of the hypothetical foreclosure of one of Airbus' rival, such as SSL. In that scenario, which does not appear to be the most likely one, the Commission concludes that in any case the adoption of a bundling and input foreclosure strategy would be unlikely to have a significant detrimental effect on competition. This is because: (i) there are several other players also active in the commercial segment, (ii) in light of the existing spare capacity, satellite manufacturers can easily expand and (iii) satellite operators have some degree of countervailing buyer power.
- 7.3.3.1. The models put forward in the economic study neither support nor disprove potential concerns associated to mixed-bundling
- (350) The Parties have analysed the likely effects of mixed bundling on non-integrated rivals and customers in an economic study²⁶⁵. The study uses several versions of a stylised economic model. In all of the model versions, buyers demand partially substitutable satellite-launch services systems (including the launcher). The demand for satellite and launch services as individual components is derived from linear demand for systems and is observed by the sellers. In the baseline model, before the merger, two satellite manufacturers and two launch services providers independently and simultaneously set prices for complementary components. After the merger, three independent sellers remain in the market. The merged entity separately sets the price for its bundle and a pair of prices for its two stand-alone components. Simultaneously and independently, the two non-integrated rivals set their prices, one of them for satellites, the other for its launch services. Expanding on the baseline model, the economic study progressively incorporates additional features into the analysis.
- (351) In the modelling framework of the study, a merger incentivises the merged entity to engage in mixed bundling and tends to affect the profitability and sales of non-integrated rivals negatively: the bundle discount increases competitive pressure on all rival systems; simultaneously, higher prices for the merged entity's components sold outside the bundle reduce the demand for complementary components of non-integrated rivals. While mixed bundling tends to have a negative effect on a rival's profitability, it is not adopted strategically with anticompetitive intent and does not result in the exclusion of rivals. Accordingly, the merger may have - and indeed often would have - a positive effect on customers. Customers may benefit because

²⁶⁵ Form CO, Annex 7.5.a, "*Economic analysis of the competitive impact of the acquisition by ASL of the shares of Arianespace held by CNES*". All the model versions are based on a version set out by Choi, Jay Pil (2007), "*Antitrust Analysis of Tying Markets*", in *Recent Developments in Antitrust: Theory and Evidence*, MIT Press, Cambridge.

the merger eliminates inefficiency in independent pricing of complementary products present before the merger – the well-known Cournot effect.

- (352) According to the Parties, the results of their analysis suggest that in the relevant circumstances, even if post-transaction they engaged in mixed bundling, "*customers are likely to greatly benefit from the transaction in the aggregate*".
- (353) The Parties further argue that their modelling indicates that "*it is highly unlikely that the merger could lead to a reduction in profitability of a rival satellite contractor to Airbus*". In fact, the merger increases the profitability of the rival satellite manufacturer in the version of the model that the Parties put forward as best fitting the facts of the case.
- (354) In interpreting the results of the economic study, the Commission considered three caveats.
- (355) First, the modelling framework adopted in the study is useful for the identification of the various mechanisms through which the merger effects could materialise. At the same time, the framework does not represent the industry structure and customer preferences sufficiently well to be useful in making precise predictions of the actual merger effects²⁶⁶. It is also a static model - giving a stylised picture of the industry frozen in time - and therefore cannot account for the relevant dynamic aspects of the fluid space industry. Fixed costs, such as R&D investments, which could hypothetically give the merged entity an incentive to behave strategically with regards to foreclosure, are not accounted for.
- (356) In addition, to produce estimates of the likely effects in each of the model versions, the economic study sets ("calibrates") the values of variable costs of different components and parameters of the system of demand functions. The demand parameters are determined so that the Parties' preferred model version (in the scenario before the merger) generates equilibrium prices for launch services and Airbus satellites that are close to those observed. The study does not, however, attempt a full-scale calibration exercise; therefore, the calibrated model is unlikely to correctly reflect all the relevant industry features²⁶⁷. Moreover, the Commission notes that the calibrated parameters are highly sensitive to very small and reasonable changes in the actual prices as inputs to calibration.
- (357) Second, a version of the model that the economic study puts forward as fitting the relevant circumstances better attempts to account for a 39% ownership of Arianespace's shares by ASL before the merger and for the fact that ASL is a joint venture between Safran and Airbus, which will have different incentives with regards to mixed bundling. For that purpose, the economic study could take different approaches, each requiring its own set of assumptions and leading to a different

²⁶⁶ For example, the model incorporates strong restrictions on the structure of demand, which are unlikely to be satisfied. If these restrictions were relaxed, the conclusions could change in ways which are difficult to predict. Also, the framework only incorporates two launch services providers and two satellite manufacturers - when in fact there are more. This assumption is conservative in the sense that it results in an overestimation of the potential effect on non-integrated rival satellite manufacturers.

²⁶⁷ The economic study recognises that limitation when it states that "*this exercise is not a full scale calibration attempt (...) in our search for 'calibrated parameters' we do not try to match market shares for different providers. The model with the 'calibrated parameters' cannot be interpreted as reflecting the customers' preferences and suppliers' costs in the industry.*"

result. However, no single approach - including the approach adopted by the Parties - is entirely satisfactory²⁶⁸.

- (358) Third, the reason for the increase in profitability of rival satellite manufacturer in the Parties' preferred model version is the presence of a vertical pricing externality between ASL (as the launcher supplier) and Arianespace (as the buyer of the launcher) before the merger. This externality results in double marginalisation²⁶⁹. In the model, the merger removes double marginalisation and this is accompanied by a lower price for launch services relative to its level before the merger. As a result, the rival satellite manufacturers' profitability increases in the model.
- (359) The double marginalisation rests on the assumption that the per-unit price for ASL launchers is invariable to the launcher delivery rate. The evidence indicates, however, that the assumption is not justified²⁷⁰. The versions of the model which incorporate double marginalisation should therefore be disregarded.
- (360) To address the Commission's concern with double marginalisation, the Parties have also undertaken analysis without it. When double marginalisation is removed from the models, the merger has a negative effect on the profitability of rivals. In the Parties' preferred model, however, that effect is limited to below 5%. For the reasons set out in recital (356), all point-estimates of the effects - including the 5% estimate - have to be taken with caution.
- (361) In spite of the caveats identified in recitals (355) to (360), the Commission notes that the economic models in the economic study do not support strong concerns with regards to anticompetitive foreclosure.
- (362) First, besides SpaceX (as the leading alternative to Arianespace), ILS would also constrain the Parties from significantly raising the price for standalone launch services. The models analysed by the Parties and the Commission are likely conservative in the sense that they do not include a third launch services provider and only incorporate two satellite manufacturers.
- (363) Second, the economic modelling is also likely conservative in the sense that it does not account for the fact that satellites and launch services are typically purchased in bilateral negotiations. This allows for a degree of price discrimination between customers, based on their valuation of individual components of the launch-services-satellite system. Mixed bundling is less likely profitable in such circumstances and post-transaction the Parties might not engage in it in the first place.
- (364) In any event, while no single model put forward by the Parties can be considered conclusive on its own, overall the economic study indicates that the likely effect of mixed bundling - assuming that the merged entity does not engage in it with the

²⁶⁸ The challenge here is to translate the ownership structure into pricing decision given that no single entity controls both the price of the launcher and satellite. The economic study assumes that, when setting the satellite price, Airbus takes account of the impact on (weighted) profits from launcher sales. Similarly, when setting the launcher price, ASL takes account of (weighted) Airbus' profits from satellite sales. The results of the analysis depend on the weights chosen and that choice is to a significant extent subjective. A conservative approach would assume that a single entity controls both the satellite and launcher price.

²⁶⁹ This externality in pricing is related to the vertical relationship between ASL as the launcher supplier and Arianespace as the buyer of launchers and is different from the Cournot effect (also due to a pricing externality) discussed earlier - the latter is related to complementarity between Airbus satellites and ASL's launchers.

²⁷⁰ Indeed, the Parties themselves explain that[...].

strategic intent to exclude a rival satellite manufacturer - would not be sufficiently strong to raise serious foreclosure concerns. The Commission established that post-transaction the Parties would unlikely have the ability to foreclose rival satellite manufacturers, even if it had such an incentive, in Section 7.3.1.

(365) For these reasons, the Commission considers that the models put forward in the economic study overall neither support nor disprove potential concerns.

7.3.3.2. The hypothetical foreclosure of one Airbus' rival is unlikely to have a significant detrimental effect on competition

(366) According to paragraph 113 of the Non-Horizontal Guidelines as regards conglomerate mergers, "*it is only when a sufficiently large fraction of market output is affected by foreclosure resulting from the merger that the merger may significantly impede effective competition*". Likewise, in relation to vertical mergers, paragraph 48 of the Non-Horizontal Guidelines indicates that *significant harm to effective competition normally requires that the foreclosed firms play a sufficiently important role in the competitive process on the downstream market*".

(367) Despite having concluded that this is not the most likely scenario (see Section 7.3.1) the Commission analysed the likely impact of the hypothetical foreclosure of a player like SSL from the worldwide market for commercial satellites.

(368) SSL is the relatively speaking largest player of the worldwide market for commercial satellites with around [30-40]% market share and is considered by satellite operators as offering the lowest price in that segment²⁷¹.

(369) The Commission considers, however, that there are several factors that would countervail the impact of the hypothetical foreclosure of a player like SSL from the worldwide market for commercial satellites.

(i) *There are several other players also active in the commercial segment*

(370) First, according to paragraph 113 of the Non-Horizontal Guidelines, in the case of conglomerate mergers, "*If there remain effective single-product players in either market, competition is unlikely to deteriorate following a conglomerate merger*". Similarly for vertical mergers, paragraph 48 of the Non-Horizontal Guidelines indicates that "*If there remain sufficient credible downstream competitors whose costs are not likely to be raised, for example because they are themselves vertically integrated or they are capable of switching to adequate alternative inputs, competition from those firms may constitute a sufficient constraint on the merged entity and therefore prevent output prices from rising above pre-merger levels*".

(371) In this context the Commission considers there are several other players active in the commercial segment which would likely warrant that the worldwide market for commercial satellites continues to be competitive even in the unlikely worst case scenario of the hypothetical foreclosure of an Airbus' rival like SSL. These are Boeing, Lockheed Martin, TAS, Orbital, ISRO, Melco and OHB.

(372) According to the Commission's investigation, Boeing, Lockheed Martin, SSL and TAS are all close competitors of Airbus in the worldwide market for commercial satellites²⁷². The large majority of satellite operators consider that, in general, satellite manufacturers (i) cover all the ranges of satellite types in terms of end use

²⁷¹ Replies of satellite operators to the Commission's request for information, 22.04.2016.

²⁷² Replies to question 16 of Questionnaire Q4 – questionnaire to satellite operators.

and (ii) offer similar technical features; some of the satellite manufacturers may however not offer the whole range of satellites in terms of mass and sizes, like for instance Orbital, Melco and ISRO²⁷³. Satellite manufacturers presented a similar view during the market investigation²⁷⁴. One satellite manufacturer explained that *"in general all the major manufacturers, (...), all have the technical capability to design and build all the ranges of satellite types in terms of end use. There are relatively few instances of a manufacturer being cluded from a competition due to lack of technical capability to produce a satellite to the operator's specifications or where one manufacturer is technically far superior than the others. In almost all cases, operators will select specifications such that multiple if not all manufacturers can provide an acceptable technical solution"*²⁷⁵.

(373) In light of this, the large majority of satellite operators consider a large number of satellite manufacturers as alternatives for their procurement of satellites, namely Airbus, Boeing, Lockheed Martin, Orbital, SSL, and TAS as well as Melco and OHB²⁷⁶.

(374) In addition, in terms of innovation, all the main satellite manufacturers are perceived by the main satellite operators as equally innovative²⁷⁷.

(375) The Commission therefore concludes that in a market (i) with so many active players able to cover the whole range of different satellites and (ii) where no player emerges as particularly more innovative than the others, the unlikely worst case scenario of the hypothetical foreclosure of an Airbus' rival like SSL would not result in a significant detrimental effect on competition.

(ii) *In light of the existing spare capacity, satellite manufacturers can easily expand*

(376) Second, according to paragraph 113 of the Non-Horizontal Guidelines, competition is unlikely to deteriorate following a conglomerate merger *"when few single-product rivals remain, but these have the ability and incentive to expand output"*.

(377) According to information provided by satellite manufacturers, there is a high dispersion of the number of total satellites (including commercial, military and institutional) sold by each one of them²⁷⁸. Even considering each segment separately, fluctuations are still significant (as described in recitals (315) to (317)). According to the 2014 NSR study, the worldwide market for commercial satellites is in a permanent situation of oversupply given the available manufacturing capacity and the low demand and this should continue for a few years.

(378) This implies that in the event of foreclosure of one of satellite manufacturers, there are no capacity constraints that would prevent the remaining ones from increasing their output if the Parties would increase the price.

(iii) *Satellite operators have some degree of countervailing buyer power*

(379) Third, according to paragraphs 51 and 114 of the Non-Horizontal Guidelines, the effects on competition of a vertical and conglomerate merger should be *"assessed in light of countervailing factors such as the presence of countervailing buyer power"*.

²⁷³ Replies to question 17 of Questionnaire Q4 – questionnaire to satellite operators.

²⁷⁴ Replies to question 20 of Questionnaire Q5 – questionnaire to satellite primes.

²⁷⁵ Reply to question 20 of Questionnaire Q5 – questionnaire to satellite primes.

²⁷⁶ Replies to question 23 of Questionnaire Q1 – questionnaire to satellite operators.

²⁷⁷ Replies of satellite operators to the Commission's request for information, 22.04.2016.

²⁷⁸ Replies to question 11 of Questionnaire Q5 – questionnaire to satellite primes.

(380) As explained in Section 7.3.1.3, satellite operators are sophisticated customers who have some countervailing buyer power both in the worldwide market for commercial satellites and the worldwide open market for GTO launch services. Therefore, in the event of the hypothetical foreclosure of one satellite manufacturer, even if the Parties would try to increase the price charged to satellite operators, those operators could exert their buyer power to partially prevent this behaviour.

7.3.3.3. Conclusion on likely impact on competition

(381) To sum up, in Section 7.3.1, the Commission already concluded that post-transaction the Parties would likely not have the ability to foreclose Airbus' rivals, including SSL, from the worldwide market for commercial satellites via bundling and input foreclosure strategy. In Section 7.3.2, the Commission left open the issue whether the Parties could have the incentive to foreclose rivals. As explained in paragraph 94 of the Non-Horizontal Guidelines, ability, incentive and likely impact are closely intertwined factors in the evaluation of foreclosure effects. Therefore, the effect on competition of a bundling and input foreclosure strategy would unlikely be significant because it would not result in foreclosure of rivals.

(382) Nevertheless, for the sake of completeness, the Commission analysed the impact on competition of the adoption of a bundling and input foreclosure strategy under the unlikely worst case scenario of the hypothetical foreclosure of one Airbus' rival, such as SSL. In that scenario, which does not appear to be the most likely one, the Commission concludes anyway that the adoption of a bundling and input foreclosure strategy would be unlikely to have a significant detrimental effect on competition. This is because of (i) there are several other players also active in the commercial segment, (ii) in light of the existing spare capacity, satellite manufacturers can easily expand and (iii) satellite operators have some degree of countervailing buyer power.

7.3.4. *Conclusion on foreclosure of satellite manufacturers through bundling and input foreclosure in the worldwide open market for GTO launch services*

(383) The Commission considers that post-transaction the Parties would not likely have the ability to foreclose Airbus' rivals in the worldwide market for commercial satellites through bundling and input foreclosure strategy.

(384) As regards incentives, the Commission leaves it open whether post-transaction the Parties would have the incentives to foreclose Airbus' rivals through mixed bundling (in the case of OGD) and a partial input foreclosure (in the case of IOD) strategy in the worldwide open market for launch services to GTO.

(385) As a result of the inability to foreclose Airbus' rivals through bundling and input foreclosure strategy, the Commission considers that the effect on competition of a bundling and input foreclosure strategy would not be significant as it would be unlikely to result in foreclosure. In any event, the Commission considers that even in the worst case scenario of the hypothetical foreclosure of one of Airbus' rivals in the worldwide market for commercial satellites, the adoption of a bundling and input foreclosure strategy would not likely have a significant detrimental effect on competition.

(386) In view of recitals (383) to (385), the Commission concludes that the transaction does not lead to a significant impediment to effective competition due to the relationship between the Parties' activities in the worldwide open market for GTO launch services and the worldwide market for commercial satellites as regards foreclosure through bundling and input foreclosure.

7.4. Foreclosure of satellite manufacturers through technical discrimination in the worldwide open market for GTO launch services

- (387) As explained in Section 7.1, besides differentiating on commercial terms in the worldwide open market for GTO launch services, the Parties could foreclose satellite rivals by implementing a hypothetical discriminatory strategy based on technical terms. The hypothetical technical discrimination strategy would entail: (i) withholding access to technical information about the launchers otherwise shared by Ariespace with all satellite manufacturers or (ii) developing Ariespace's future launchers directed towards a technical optimisation with Airbus satellites.
- (388) In Section 7.4 the Commission analyses the likelihood of foreclosure effects in the worldwide market for commercial satellites resulting from technical discrimination in the worldwide open market for GTO launch services.

7.4.1. Ability to foreclose

- (389) The Commission considers that, as for the case of foreclosure resulting from the adoption of a bundling and input foreclosure strategy, post-transaction the Parties would be unlikely to have the ability to foreclose Airbus' satellite manufacturing rivals through a technical discrimination strategy. The reasons are the same as presented in Section 7.3.1, namely (i) although Ariespace is the current market leader, credible alternatives exist, such as SpaceX and ILS; (ii) the worldwide open market for GTO launch services is a dynamic competitive environment, where entry happens and companies' positions quickly change over time; (iii) satellite operators may be able to partially countervail the Parties' ability to foreclose rival satellite manufacturers; (iv) the characteristics of satellite markets would likely prevent the foreclosure of Airbus' commercial satellites rivals at least in the short term; and (v) it is unlikely that commercial satellite manufacturers would be effectively foreclosed in the long term.
- (390) In addition, the commitments put forward by the Parties and described in Section 13, although intended to address another area of concern, eliminate any risk of discrimination on access to information. In fact, the Parties commit (i) not to disclose any technical information about Ariespace's existing and future launchers to Airbus ahead of other satellite manufacturers, and (ii) to maintain regular exchanges of technical information with all satellite manufacturers.

7.4.2. Incentive to foreclose

- (391) Similarly to foreclosure resulting from the adoption of a bundling and input foreclosure strategy (see Section 7.3.2), given the likely absence of ability to foreclose and the fact that there are elements pointing to the existence of some incentives but also countervailing factors which may off-set such potential incentives, the Commission leaves open the question whether post-transaction the Parties would likely have the incentive to foreclose Airbus' rivals in the worldwide market for commercial satellites by withholding access to technical information about the launchers otherwise shared by Ariespace with all satellite manufacturers.
- (392) In contrast, as regards the developments of launchers explored by Ariespace, the Commission concludes that the transaction does not change the incentive to favour Airbus satellites.
- (393) Those developments are not done by Ariespace but by the respective launcher primes, namely ASL for Ariane, Avio for Vega and TsSKB for Soyuz. As regards ASL, the transaction does not change the ability and incentive to discriminate in favour of Airbus since pre-transaction that company was already co-controlled by

Airbus and could already have been promoting developments in favour of Airbus satellites. As regards Avio and TsSKB, they would not have an interest in promoting any developments favouring Airbus satellites. Therefore, the hypothetical concerns related to this strategy are not merger-specific.

- (394) In addition, in both cases, the developments of launchers are made under the requirements specified by ESA, as the Procuring Entity. Given ESA's objective of developing competitive launchers able to capture the maximum number of launches, ESA could exert its powers in preventing developments in the unique favour of Airbus satellites.

7.4.3. Likely impact on competition

- (395) The Commission considers that in the absence (i) of the ability to discriminate in technical terms and (ii) of any changes in the incentives to discriminate in developments of the Arianespace exploited launchers, the transaction would not result in a significant detrimental effect on competition through technical discrimination of Airbus' rivals.

- (396) Nevertheless, and as for the case of foreclosure resulting from the adoption of a bundling and input foreclosure strategy, even in the worst case scenario of the Parties actually having the ability and the incentive to foreclose a player like SSL, the Commission considers that the transaction would not have a significant detrimental effect on competition as a result of technical discrimination against Airbus' rivals. This is because: (i) there are several other players also active in the commercial segment, (ii) in light of the existing spare capacity, satellite manufacturers can easily expand and (iii) satellite operators have a degree of countervailing buyer power.

7.4.4. Conclusion on foreclosure satellite manufacturers through technical discrimination in the worldwide open market for GTO launch services

- (397) In light of recitals (389) to (396), the Commission concludes that the transaction does not lead to a significant impediment to effective competition due to the relationship between the Parties' activities in the worldwide open market for GTO launch services and the worldwide market for commercial satellites as regards foreclosure through technical discrimination.

7.5. Foreclosure of satellite manufacturers through discriminatory strategies in the worldwide open market for non-GTO launch services

- (398) In this section the Commission analyses the likelihood of foreclosure effects in the worldwide market for the export of institutional satellites and the hypothetical worldwide market for constellation satellites resulting from a discrimination strategy on commercial and/or technical terms in the worldwide open market for non-GTO launch services. The arguments presented in this section are valid for strategies based both on commercial and technical terms.

7.5.1. Ability to foreclose

- (399) As regards the worldwide open market for non-GTO launch services, Arianespace does not have a leading position. In 2015, Arianespace did not perform any commercial launch to non-GTO, in line with the trend of a decreasing number of launches in the previous two years. The main alternatives to Arianespace in this segment are Antrix and SpaceX which have captured more than [30-40]% of the market each. In terms of number of contracted launches, in 2015, Arianespace had a market share of [30-40]% as a result of winning the OneWeb contract for the launch of a constellation. That single contract represents a significant number of launches in the context of the non-GTO launches.

- (400) The number of alternatives to Arianespace in the case of non-GTO launches is high. According to Arianespace's internal documents as regards the non-GTO segment, there is[...] ²⁷⁹.
- (401) The Commission further considers, as for the case of the worldwide open market for GTO launch services, that customers may be able to partially countervail the Parties' ability to foreclose rival satellite manufacturers. In the particular case of the worldwide market for the export of institutional satellites, the choice of a satellite prime contractor and a launch services provider is very often based on geopolitical considerations. This reduces significantly any ability by the Parties to implement a strategy with foreclosure effects.
- (402) In addition, the commitments put forward by the Parties and described in Section 13, eliminate any risk of discrimination on access to information.
- (403) Finally, the characteristics of satellite markets described in Section 7.3.1.4 would likely prevent the foreclosure of Airbus' rivals.
- (404) In light of recitals (399) to (403), the Commission concludes that Arianespace would not likely have the ability to adopt a foreclosure strategy based on its position in the worldwide open market for non-GTO launch services against Airbus' rivals in the worldwide market for the export of institutional satellites and the hypothetical worldwide market for constellation satellites.

7.5.2. *Incentives to foreclose*

- (405) As regards incentives, given that Arianespace does not enjoy a significant position in the worldwide open market for non-GTO launch services, there is no purpose in analysing in detail the Parties' incentive to leverage Arianespace's position in launch services into the satellites markets. In fact, given the range of alternatives available in the market, any strategy with discriminatory effects would not likely produce any gains given that rivals' satellites can be launched by any of the present alternative launch services providers.
- (406) Moreover, as regards the developments of non-GTO launchers explored by Arianespace, and as explained in Section 7.4.2, the transaction does not change the incentive to favour Airbus satellites.
- (407) In addition, although Airbus has a significant position in the corresponding worldwide market for the export of institutional satellites (namely more than [70-80]% in 2014, although fluctuating significantly in the last years), this market represents a very small fraction of the launches performed by Arianespace's competitors, which would not likely be affected by any strategy with foreclosure effects.

7.5.3. *Likely impact on competition*

- (408) The Commission considers that in the absence of ability and incentives to foreclose, the transaction would not result in a significant detrimental effect on competition related to the relationship between (i) the worldwide open market for non-GTO launch services and (ii) the worldwide market for the export of institutional satellites and the hypothetical worldwide market for constellation satellites as result of foreclosure.

²⁷⁹ Parties' reply to the Commission's request for information n° 29, 07.04.2016, question 3, "Strategic and Audit Committee Meeting, 1 February 2016".

7.5.4. *Conclusion on foreclosure of satellite manufacturers through discriminatory strategies in the worldwide open market for non-GTO launch services*

(409) In view of recitals (399) to (408), the Commission concludes that the transaction does not lead to a significant impediment to effective competition due to the relationship between the Parties' activities in (i) the worldwide open market for non-GTO launch services and (ii) the worldwide market for the export of institutional satellites and the hypothetical worldwide market for constellation satellites as regards foreclosure.

7.6. Foreclosure of satellite manufacturers through discriminatory strategies in the European and national (within the EU) captive markets for launch services

(410) In this section, the Commission analyses the likelihood of a foreclosure effects in the European market for institutional satellites and the national markets for military/institutional satellites resulting from a discrimination strategy on commercial and technical terms in the European and national (within the EU) captive markets for launch services. The arguments presented in this section are valid for strategies based on both commercial and technical terms.

7.6.1. *Ability to foreclose*

(411) Arianespace has a de facto monopoly in the European and the French captive market for launch services, both for the GTO and the non-GTO segments.

(412) However, the Commission considers that there are some countervailing factors that would limit the ability of the Parties to adopt a foreclosure strategy.

7.6.1.1. *Countervailing factors in the European captive markets for launch services*

(413) As regards the European captive markets for (i) GTO launch services and (ii) non-GTO launch services, the Parties argue that ESA could prevent any form of discrimination given that it is a well-informed and very sophisticated buyer able to prevent any attempt to raise launch costs. In relation to Ariane 6 and Vega C launch services, ESA plans to [...].

(414) The Commission considers that post-transaction the Parties would not have the ability to foreclose Airbus' rivals by adopting a discriminatory strategy as regards ESA's missions.

(415) ESA confirmed that "*For Ariane 6 and Vega C launch services, ESA plans to [...]*"²⁸⁰. Moreover, ESA stated that it "*acts preventively [...]*"²⁸¹.

(416) This would prevent the Parties from setting a higher price for launch services of non-Airbus satellites. Given ESA's visibility on Arianespace activities this also prevents the case where the Parties would offer a high launcher price to compensate for a reduced price for an Airbus satellite, as claimed by one satellite manufacturer²⁸².

(417) In contrast, ESA also stated that it does not negotiate the price for European institutional customers, except in the cases where it has been mandated to do so (for example for the EU in Galileo FOC, Copernicus series A and B). By ESA's own admission, under the current legal scheme in exploitation, ESA has no means of

²⁸⁰ ESA's submission "Comments to the Commission's Article 6(1)(c) Decision", 29.03.2016.

²⁸¹ ESA's reply to the Commission's request for information, 22.12.2015.

²⁸² Competitor's reply to the Commission's request for information, 04.03.2016, question 13.

preventing differentiations in prices offered to other Arianespace institutional customers²⁸³. Nevertheless ESA also stated that "*if European institutional customers would use [...], they could be shielded against that risk*". [...].

- (418) Therefore, post-transaction the Parties would have a limited ability to foreclose Airbus' rivals by adopting a discriminatory strategy as regards non-ESA's missions (for example for EU and EUMETSAT).
- (419) In addition, the commitments put forward by the Parties and described in Section 13, eliminate any risk of discrimination on access to information.
- (420) In light of recitals (413) to (419), the Commission concludes that post-transaction the Parties would likely have a limited, if any, ability to implement a foreclosure strategy in relation to the European captive markets for launch services.

7.6.1.2. Countervailing factors in the national captive market for launch services

- (421) As regards the national captive markets, the only affected markets are those of France and Germany. The customers of these markets are, respectively, (i) the French MoD and CNES and (ii) the German MoD. The satellite manufacturers active in the related markets for satellites are Airbus and TAS for the French markets for (i) military satellites and (ii) institutional satellites, and Airbus and OHB, for the German market for military satellites.
- (422) The Parties argue that they would not have the ability to foreclose an Airbus' rival on the markets for military satellites given that: (i) the MoDs' purchasing policy is to split their contracts for military satellites between the two national suppliers, (ii) the MoDs have very strong countervailing buyer power that allows them to enforce their policy towards national suppliers and (iii) TAS and OHB would quickly detect any foreclosure attempt and inform the respective MoD. In the particular case of the German MoD, the Parties further argue that any risk of foreclosure is even more remote as this MoD rarely relies on Arianespace to launch its military satellites. In the past 10 years, only two out of seven launches to GTO contracted by the German MoD were performed by Arianespace and none of the 12 non-GTO missions were performed by Arianespace.
- (423) The Commission considers that the French agencies would be able to detect and prevent a foreclosure strategy by the Parties against Airbus' rivals. CNES has a strong role in the launch services performed at French Guyana, as it is the authority responsible for the execution of the CSG Agreement. CNES is also in charge of coordinating the conception of launch-supporting facilities and the various launch systems operated from CSG. In addition, CNES also manages the day-to-day operations of the CSG on behalf of ESA and is responsible for the planning and coordination of all operations necessary in the context of a launch campaign, including the direct supervision of the preparation and processing of spacecraft. The French MoD has a right to [...].
- (424) In the case of the German captive market for launch services, according to the Commission's investigation, Arianespace does not have a leading position. On the contrary, the German MoD confirmed that the last military satellites from Germany were launched by a Russian launch services provider and a US launch services provider.

²⁸³

ESA's reply to the Commission's request for information, 22.12.2015.

- (425) In both cases, the commitments put forward by the Parties and described in Section 13, eliminate any risk of discrimination on access to information.
- (426) In light of recitals (421) to (425), the Commission concludes that post-transaction the Parties would likely have a limited, if any, ability to implement a foreclosure strategy in relation to the national (within the EU) captive markets for launch services.

7.6.2. *Incentive to foreclose*

- (427) According to paragraph 44 of the Non-Horizontal Guidelines, "*An upstream monopolist that is already able to fully extract all available profits in vertically related markets may not have any incentive to foreclose rivals following a vertical merger. The ability to extract available profits from the consumers does not follow immediately from a very high market share*". This reasoning, which is included in the vertical mergers section, also applies to conglomerate mergers involving perfect complementary products. Since a satellite operator always needs to buy a system composed of the two products, if for one of the products a company enjoys a monopoly position, it can extract the total value of the system – the so-called monopoly rent.
- (428) This factor is relevant for the European and the French captive markets for launch services. In these markets, given that Arianespace is a monopolist pre-transaction, it should already be able to fully extract all available rents from the complementary markets (namely the European market for institutional satellites and the French market for military satellites).
- (429) In the case of the German captive market for launch services, the German MoD stated that "*the MoD's role in the launch provider selection is to set the requirements for the prime contractor which realizes an assessment according to those requirements. The prime lead the market research for choosing the launch service provider which is then submitted to the German MoD (final decision). (...). The German MoD has never overruled an assessment made by the prime contractor so far. The prime contractor is bound to provide a fair and reasonable proposal*"²⁸⁴. The procurement process is thus such that first the prime contractor for the satellite is selected which is then in charge of selecting the launch services provider. In this way, when the launch services provider is being selected the satellite manufacturer has already been selected. In addition, according to the German MoD, "*Prime contractors do switch providers: OHB chose a Russian launching service before, now they will go with a US launching services*"²⁸⁵. Arianespace would thus not likely have the incentive to offer worse conditions if an Airbus' rival were selected given that it would also be competing with other launch services providers.
- (430) In either case, as regards the developments of launchers explored by Arianespace, and as explained in Section 7.4.2, the transaction does not change the incentive to favour Airbus satellites.
- (431) The Commission therefore concludes that the transaction is not likely to create the incentives for Arianespace to adopt a foreclosure strategy in the European and national (within the EU) captive markets launch services against Airbus' rivals in the European market for institutional satellites and the national markets for military/institutional satellites.

²⁸⁴ Minutes of a conference call held with a MoD on 01.04.2016.

²⁸⁵ Minutes of a conference call held with a MoD on 01.04.2016.

7.6.3. *Likely impact on competition*

(432) The Commission considers that given that the Parties would likely have a limited, if any, ability to implement a foreclosure and in the likely absence of incentives to foreclose, the transaction would not result in a significant detrimental effect on competition related to the relationship between (i) the European and national (within the EU) captive markets for launch services and (ii) the European market for institutional satellites and the national markets for military/institutional satellites as result of foreclosure.

7.6.4. *Conclusion on foreclosure of satellite manufacturers through discriminatory strategies in the European and national (within the EU) captive markets for launch services*

(433) In view of recitals (411) to (432), the Commission concludes that the transaction does not lead to a significant impediment to effective competition due to the relationship between the Parties' activities in (i) the European and national (within the EU) captive markets for GTO and non-GTO launch services and (ii) the European market for institutional satellites and the national markets for military/institutional satellites as regards foreclosure.

7.7. Efficiencies in the markets for launch services

(434) According to paragraphs 52 and 115 of the Non-Horizontal Guidelines "*the effect on competition needs to be assessed in light of the efficiencies substantiated by the merging parties*".

(435) In assessing efficiencies in non-horizontal merger cases, the Commission applies the same principles as set out in Section VII of the Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings ("Horizontal Guidelines")²⁸⁶. Efficiency claims are therefore subject to the three-pronged test and need to be (i) merger-specific, (ii) verifiable and (iii) passed-on to consumers²⁸⁷.

(436) The Parties argue that the transaction would bring several efficiencies for the launch services activity that would benefit satellite operators and satellite manufacturers.

(437) First, the Parties claim efficiencies based on [...]. These would amount to a financial gain of EUR [...].

(438) Second, the Parties are also of the view that the vertical integration between ASL and Arianespace will lead to a reduction of [...] as well as to synergies in the distribution networks as the worldwide commercial network of Arianespace could be used to promote ASL's product portfolio.

(439) Third, the Parties submit that the transaction forms an integral part of the Ariane 6 Programme and that the objectives of Ariane 6 will not be met if the integration between development and exploitation is not implemented.

(440) Fourth, the Parties also claim that there are efficiencies stemming from the increased flexibility in [...]. According to the Parties the latter system is more customer-oriented and makes it easier to adapt the launcher and associated launch services to the market needs. This would also lead to [...].

²⁸⁶ Paragraph 54 of Non-Horizontal Guidelines.

²⁸⁷ Paragraphs 76-88 of Horizontal Guidelines.

- (441) Fifth, the economic study submitted by the Parties makes an efficiency claim when it argues that any potential adverse effect on rival satellite manufacturers stemming from the Parties incentives to bundle would be overcompensated by the partial elimination of the double mark-up, that is to say the vertical efficiencies arising from the transaction.
- (442) According to the Parties, given the very strong competitive constraints imposed by SpaceX and other innovative players, Arianespace has no other choice than to immediately reduce the cost of launch services and pass-on to customers the economic gains resulting from the transaction.
- (443) The claims described in recitals (436) to (442) have however not been sufficiently substantiated by the Parties. In particular, the only piece of documentary evidence on the efficiency claims consisted of [...] that the Commission was unable to verify²⁸⁸. As regards the efficiencies associated to double marginalization, and according to the explanation in Section 7.3.3.1, the Commission does not consider this to be justified. The information provided therefore does not meet the standard as required by the Non-Horizontal Guidelines, namely that they are verifiable in addition to being merger-specific and likely passed-on to consumers.
- (444) The Commission therefore concludes that, without prejudice whether they exist or not, the efficiencies claims made by the Parties have not been substantiated and cannot be taken into account.

7.8. Conclusion on the competitive assessment of the relationship between (i) Arianespace as a launch services provider and (ii) Airbus as satellite manufacturer

- (445) On the one hand, the Commission concludes that the transaction leads to a significant impediment to effective competition due to the relationship between the Parties' activities in the markets for launch services and the markets for satellites, as regards the flows of sensitive information from (i) Arianespace to Airbus in relation to other satellite manufacturers and (ii) Airbus to Arianespace in relation to other launch services providers.
- (446) On the other hand, the Commission concludes that the transaction does not lead to a significant impediment to effective competition due to the relationship between the Parties' activities in the markets for launch services and the markets for satellites, as regards foreclosure strategies (namely those resulting from bundling, input foreclosure or technical discrimination).

8. Competitive Assessment: Vertical relationship between (i) Arianespace as a launch services provider and (ii) ASL as a supplier of the Ariane launcher family

8.1. Introduction to the potential foreclosure concerns

- (447) Arianespace offers launch services with the Ariane 5, Vega and Soyuz launchers which it procures from ASL, ELV and TsSKB, respectively. Post-transaction, ASL, the *prime contractor* for the Ariane 5 launchers, will control Arianespace.

²⁸⁸ The Parties were unable to give additional information, corroborating documentation, or data in answering a follow-up Commission's request for information that aimed at verifying the claimed efficiencies.

- (448) In the following sections, the Commission assesses whether the transaction could result in customer foreclosure²⁸⁹. In particular, the Commission focuses on the likelihood of foreclosure of ELV as a provider of launchers through a restriction of access to Arianespace.
- (449) With regard to a potential foreclosure of Soyuz, the Commission notes that pursuant to the LED, preference shall be granted by Arianespace to ESA developed launchers (Ariane 5 and Vega) instead of the Soyuz launcher²⁹⁰. ESA notes that Arianespace, as per the LEA, is mandated to exploit ESA-developed launchers as their main company's purpose and Soyuz from CSG in support to that main company's purpose²⁹¹. Therefore, the Commission considers that the transaction is not likely to originate any changes in the behaviour of Arianespace in relation to Soyuz, and any hypothetical customer foreclosure would not be merger-specific.

8.2. Customer foreclosure against ELV

- (450) According to paragraph 58 of the Non-Horizontal Guidelines, customer foreclosure may occur "*when a supplier integrates with an important customer in the downstream market*" and because of this downstream presence, "*the merged entity may foreclose access to a sufficient customer base to its actual or potential rivals in the upstream market (the input market) and reduce their ability or incentive to compete*" which in turn, "*may raise downstream rivals' costs by making it harder for them to obtain supplies of the input under similar prices and conditions as absent the merger. This may allow the merged entity profitably to establish higher prices on the downstream market.*"
- (451) As regards the vertical relationship between (i) Arianespace as a launch services provider and (ii) ASL as supplier of the Ariane launcher family to Arianespace, concerns were raised about a potential customer foreclosure strategy whereby the Parties would give priority to launches with the Ariane launchers to the detriment of the Vega launchers produced by ELV and commercialized by Arianespace.
- (452) According to paragraph 59 of the Non-Horizontal Guidelines, in assessing the likelihood of anticompetitive customer foreclosure scenario, the Commission examines, first, whether the Parties would have, post-transaction, the ability to foreclose access to downstream markets by reducing its purchase from its upstream rivals, second, whether it would have the incentive to do so, and third, whether such strategies would have a significant detrimental effect on customers in the downstream market. In the next sections the Commission analyses those three elements.

8.2.1. Ability to foreclose access to downstream markets

8.2.1.1. Vega and Ariane launchers are mostly complementary platforms

- (453) According to paragraph 61 of the Non-Horizontal Guidelines, "*for customer foreclosure to be a concern, it must be the case that the vertical merger involves a company which is an important customer*".
- (454) [...].

²⁸⁹ [...].

²⁹⁰ Article I(8) of LED.

²⁹¹ ESA's submission "Comments on the Commission's Article 6(1)(c) decision", 29.03.2016.

- (455) In assessing whether Arianespace would have the ability to foreclose ELV, the Commission therefore analyses whether and, if so, to what extent the Ariane and Vega launchers can be used for the same type of missions.
- (456) The Parties argue that the three launcher families operated by Arianespace (including Ariane, Soyuz and Vega) are designed to be complementary.
- (i) *Ariane 5 and the Vega launchers cannot be considered substitutable***
- (457) As regards the Ariane 5 and the Vega launchers, the Parties submit that these launchers are not substitutable for the following reasons: (i) Ariane 5 is a heavy launcher, optimised to launch large telecommunication satellites to GTO; and (ii) Vega is a small non-GTO launcher, tailored to carry small scientific spacecraft and other lighter-weight payloads.
- (458) The Parties argue that, from a financial point of view, and except in very specific situations (like the Automated Transfer Vehicle ("ATV") missions, which involve uncommonly heavy payloads)²⁹², heavy launchers are not economically competitive to deliver small satellites to non-GTO orbit, in particular due to the difference in the average launch price.
- (459) According to the Commission's investigation, while there are few overlaps between Ariane 5 and Vega, no competition exists between these launchers. A majority of satellite operators, satellite manufacturers and launch services providers considers that there is no mission type for which Ariane 5 would be an alternative to Vega²⁹³.
- (460) One customer and one satellite manufacturer considered that Vega and Ariane 5 could be substitutable for some missions, namely small satellites for a LEO constellation and small satellites as co-passengers with larger satellites on Ariane 5²⁹⁴.
- (461) However, the Commission's investigation also indicates with regard to LEO constellations that (i) Ariane 5 has never been used for LEO missions (except for the ATV missions), (ii) the high costs of an Ariane 5 launch (approximately EUR [...]) makes it unsuitable for such missions and (iii) Ariane 5 is not technically optimised for LEO constellations: in order to be competitive, it would have to carry at least [...] times more satellites than Vega in a single launch²⁹⁵. With regard to the possibility of launching small satellites as co-passengers with larger satellites on Ariane 5, since Ariane 5 is only used for GTO missions (except in very specific cases), it cannot place an auxiliary payload into LEO as such payloads may only be placed on the same orbit as the main payload²⁹⁶.
- (462) In view of recitals (457) to (461), the Commission considers that it is unlikely that the Ariane 5 and Vega launchers could be considered substitutable.

²⁹² These were missions to deliver ESA's ATV to the ISS in LEO.

²⁹³ Replies to question 44 of Questionnaire Q1 – questionnaire to satellite operators, question 39 of Questionnaire Q2 – questionnaire to satellite primes and question 36 of Questionnaire Q3 – questionnaire to launch services providers.

²⁹⁴ Replies to question 44 of Questionnaire Q1 – questionnaire to satellite operators and question 39 of Questionnaire Q2 – questionnaire to satellite primes.

²⁹⁵ Response to Article 6(1)(c) decision, 11.03.2016.

²⁹⁶ Response to Article 6(1)(c) decision, 11.03.2016.

(ii) *It is unlikely that the Ariane 62 and Vega launchers will be considered substitutable*

- (463) As regards the Ariane 62 and the Vega launchers²⁹⁷, the Parties argue that Ariane 62 will be specialised in taking institutional heavy satellites or clusters of satellites (between 2.5 tonnes and 4.5 tonnes) to LEO and MEO, as well as commercial missions, both of non-GTO commercial constellations and of lighter GTO satellites (less than 5 tonnes), and will still remain significantly more expensive than Vega (around EUR [...] for institutional missions against EUR [...] for Vega). The Parties also argue that the pricing of Vega [...] ²⁹⁸.
- (464) When comparing Ariane 62 with the future evolution of Vega, Vega C²⁹⁹, the Parties argue that substitutability will continue to be limited to rare exceptions. According to the Parties, even if in theory these two launchers could be substitutes, for instance, for some missions to LEO constellations, once the whole set of customer needs is taken into consideration, including satellite mass, targeted orbits, injection strategy, deployment schedule, satellite pairing possibilities and acceptable pricing, no real overlap between Vega C and Ariane 62 can be identified.
- (465) According to the Commission's investigation, any overlap between Ariane 62 and Vega and Vega C would be very limited.
- (466) One market participant argued that Vega, and in particular Vega C, will compete for the same launches with Ariane 6³⁰⁰. This substitutability will be mainly relevant in the case of Ariane 62, which will be suitable for missions to LEO - thus competing directly with Vega. One launch with Ariane 62 would be able to replace two launches with Vega C. According to this market participant, this will be true, in particular, for launches of constellations and replenishment missions.
- (467) According to ESA³⁰¹, the cases in which both Ariane and Vega are technically suitable are exceptional and the two services are not directly comparable for the customer in terms of schedule and availability of the service. An overlap for constellations with Ariane 62 would be possible only if Vega's performance allows reaching the required injection orbit³⁰².
- (468) The Commission's investigation indicates that one launch with Ariane 62 will not be able to replace two launches with Vega C, as a dual launch on Ariane 62 will only be possible if the two satellites have the same targeted orbits and injection plan, while

²⁹⁷ The Ariane 6 new-generation launcher will be designed in two different versions, Ariane 62 and Ariane 64. Ariane 64 will be dedicated to the commercial telecommunications market, with a performance above 10 tons to GTO and a dual launch capability. Like Ariane 5 today, Ariane 64 is not optimised for non-GTO missions and will not normally be used for non-GTO missions.

²⁹⁸ Response to Article 6(1)(c) decision, 11.03.2016.

²⁹⁹ In addition to Vega C, an improved version of Vega, Vega E is under study, but a maiden flight will not be performed until after 2020 (Competitor's reply to the Commission's request for information, 06.04.2016).

³⁰⁰ Competitor's submission on 12.01.2016 and Competitor's reply to the Commission's request for information, 01.04.2016, questions 1-3.

³⁰¹ ESA's reply to the Commission's request for information, 22.12.2015, and ESA's submission "Comments on the Commission's Article 6(1)(c) decision", 29.03.2016.

³⁰² ESA also considers that there are possibly some other missions that would be feasible with both Ariane 62 and Vega: (i) for LEO payload: overlaps might appear for Vega C; (ii) for auxiliary LEO payload: it is technically and economically possible an overlap with Ariane 6 multiple configuration launches; (iii) for Copernicus missions: it is currently an Ariane 6 class mission and it may become feasible with Vega C if the performance of Vega C increases and the size of its fairing becomes larger. However, ESA stresses that these are very limited cases considering the overall launch services market.

two launches with Vega allow to launch the satellites in different orbits³⁰³. Ariane 62 and Vega C will have distinct technical characteristics and pricing, especially in terms of performances to LEO³⁰⁴.

- (469) Therefore, it is more likely that during the initial deployment phase of a large constellation, the satellite operator may favour medium/heavy launch vehicles like Ariane 62, in order to accelerate ramp up, reduce the global cost of reaching full operational capability of the constellation. For the replenishment of large constellations (such as replacing satellites reaching the end of their life on a given orbital plan, unit by unit or by pairs) or the deployment of small constellations (provided they fit under fairing), a smaller launcher like Vega C would be better suited, due to its flexibility and reduced cost per launch. In this sense, the two launchers would be complementary.
- (470) Finally, a potential competition between the two launchers on constellations or for the Copernicus missions would be the development of an additional orbital transfer kit to be installed on Vega's payload interface to enhance the launcher's capacity. However, the project of developing such a kit is currently in its very early stages³⁰⁵.
- (471) In view of recitals (463) to (470) the Commission considers that it is unlikely that the Ariane 62 and Vega launchers could be considered substitutable.
- (iii) *In the overlapping segment for Ariane and Vega, Arianespace has likely to specify to its customers the launcher to be used***
- (472) The Parties argue that it is not possible for Arianespace to adopt a customer foreclosure strategy in relation to some missions that would fit the Vega launcher by making its proposal to the commercial customers without specifying the launch system to be used³⁰⁶. In view of the differences in terms of prices, schedule and technical solutions involved depending on the launcher, an offer made to a customer could not possibly cover two different launch scenarios (one with Ariane 6 and one with Vega/Vega C) at the same time.
- (473) According to the Commission's investigation, for the overlapping market segment the final selection of the most appropriate launch services option will depend on the configuration and corresponding price proposed by Arianespace for what concerns Ariane 6 versus Vega C and the decision will lie with the customer³⁰⁷.
- (474) The same applies to Ariane 5, as Arianespace would have to provide two separate quotes to the customer, one using Ariane 5 and one using Vega. Having regard to different prices, schedule and technical solutions involved, it is not possible for Arianespace to make a single offer covering two different launch scenarios³⁰⁸.

³⁰³ Response to Article 6(1)(c) decision, 11.03.2016.

³⁰⁴ Considering a reference sun-synchronous orbit ("SSO") at an altitude of 800 km and with an inclination of 98.6°, the performance of Ariane 62 is estimated [...], while the performance of Vega C on the same orbit is [...]. Given that the target price for Ariane 62 launches is EUR [...] (for European institutional launches), while the price for Vega C is expected to be above EUR [...], at their maximal capacity the cost per ton to SSO would thus be about [...] lower with Ariane 62 than Vega C (Response to Article 6(1)(c) decision, 11.03.2016).

³⁰⁵ Response to Article 6(1)(c) decision, 11.03.2016.

³⁰⁶ Response to Article 6(1)(c) decision, 11.03.2016.

³⁰⁷ ESA's submission "Comments on the Commission's Article 6(1)(c) decision", 29.03.2016.

³⁰⁸ Parties' reply to the Commission's request for information n° 21, 15.03.2016, question 7.

(475) In view of recitals (472) to (474), the Commission considers that it is likely that, in the few cases where Ariane 62 and Vega could be substitutable, Arianespace has to present both options to customers, which reduces its ability to foreclose ELV.

(iv) Conclusion

(476) In view of recitals (453) to (475), in particular of the fact that the Ariane platform will only rarely be used for the same type of missions as the Vega platform, post-transaction the Parties would likely not have the ability to adopt a strategy that would result in the foreclosure of ELV from the market for launchers exploited by Arianespace.

8.2.1.2. Arianespace needs to perform a minimum number of Vega launches per year

(477) The Parties submit that ESA has entrusted Arianespace with the mission of conducting the exploitation phase of both Ariane and Vega launchers, without any distinction between them. More specifically, according to the Parties, Arianespace is [...].

(478) On the basis of its investigation, the Commission notes that the minimum number of launches, respectively for Ariane and Vega [...] ³⁰⁹. [...] ³¹⁰.

(479) Therefore, the Commission considers that the minimum number of launches of Vega to be performed significantly limits the ability of the Parties to foreclose ELV post-transaction.

8.2.1.3. The Parties have no ability to foreclose Vega to the benefit of Eurockot

(480) According to one market participant, Vega also competes with the Rockot launcher, which is exploited by Eurockot, a joint venture co-controlled by ASL and Khrunichev. This company was set up to perform commercial and institutional launches of small satellites to LEO with the Russian-made Rockot launchers.

(481) According to the Commission's investigation, Eurockot is expected to perform [...] more launches with the Rockot launcher (which is Eurockot's only activity) and its service life will expire in [...] or at the latest after the completion of the [...] launches. While Khrunichev is currently developing Angara 1.2, which could serve as a replacement for Rockot ³¹¹, [...] ³¹² and [...] ³¹³.

(482) Therefore, the Commission concludes that post-transaction the Parties would not have the ability to foreclose Vega to the benefit of Eurockot.

8.2.1.4. Conclusion on ability to foreclose access to downstream markets

(483) In view of recitals (453) to (482), the Commission concludes that post-transaction the Parties would likely not have the ability to foreclose ELV.

8.2.2. *Incentive to foreclose access to downstream markets*

(484) According to paragraph 68 of the Non-Horizontal Guidelines, *"the incentive to foreclose depends on the degree to which it is profitable. The merged entity faces a trade-off between the possible costs associated with not procuring products from*

³⁰⁹ ESA's submission "Comments on the Commission's Article 6(1)(c) decision", 29.03.2016.

³¹⁰ [...].

³¹¹ Angara 1.2 should be capable of carrying up to 3 tonnes to a generic LEO and up to 1.5 tonnes to SSO. The first orbital flight test is scheduled for 2016.

³¹² Parties' reply to the Commission's request for information n° 16, 08.02.2016, question 1.

³¹³ Response to Article 6(1)(c) decision, 11.03.2016.

upstream rivals and the possible gains from doing so, for instance, because it allows the merged entity to raise price in the upstream or downstream markets".

- (485) In this particular case, by adopting a customer foreclosure, the Parties would be facing higher costs of procuring launchers since they would buy at a higher price from ASL instead of ELV. This would be without any gains in the downstream or upstream markets given that the only possible purchaser of the Vega launchers is Arianespace and thus no other launch services provider would be negatively affected. The main gains of such strategy for the Parties would result from ASL increasing their sales of launchers. However, the gains would only compensate the losses in the cases where it would be more efficient for Arianespace to buy internally from ASL.
- (486) In addition, by foreclosing ELV, Arianespace would put itself at a disadvantage for all the missions that cannot be performed with the Ariane launcher. For those missions, which correspond to most of the non-GTO launches, Arianespace has a weaker position in the open segment with many other alternatives being available (see Table 2). Therefore, in case the Parties would adopt a customer foreclosure strategy, and taking into account that Soyuz's [...], Arianespace would not be able anymore to compete for most of the non-GTO missions. This is because Arianespace would not have a competitive launcher available. Even for captive markets, in case it would not have any available compatible launcher, Arianespace would risk losing contracts for other launch services providers.
- (487) The Parties further argue that the existing links between ASL and Avio, one of the shareholders of ELV, and the very important role played by Avio in the supply of key systems and sub-systems for the Ariane launchers, in particular, ensure that the Parties would have no incentive to discriminate against Vega.
- (488) On the basis of market investigation³¹⁴, the Commission considers overall that ASL has higher interests in Ariane launchers than in Vega³¹⁵. However, the Commission notes that ASL and Avio face mutual dependency, which could give the latter some power to retaliate³¹⁶. In fact, ASL and Avio jointly control essential suppliers on all ESA-developed launchers:
- (a) Europropulsion (50% ASL and 50% Avio), the prime contractor for solid propulsion systems on both Ariane 5 (solid rocket motors or "SRM") and Vega (P80 boosters); and;
 - (b) Regulus (40% ASL and 60% Avio), which provides the propellant charges for the SRM of Ariane 5 and for Vega's P80 boosters.
- (489) This situation will be further reinforced by the SRM common to Ariane 6 and Vega C³¹⁷. Avio and ASL have been selected as suppliers for the P120C SRM under the responsibility of their jointly controlled subsidiary Europropulsion³¹⁸.
- (490) In view of recitals (484) to (489), the Commission considers that post-transaction the Parties would not likely have an incentive to promote the Ariane family launchers instead of the Vega launchers.

³¹⁴ Competitor's submission on 12 January 2016.

³¹⁵ ASL holds the industrial responsibility for more than [...]% of the Ariane program, whilst Avio has [...] share. Furthermore, ASL has a responsibility [...]% of the Vega program, whilst Avio has responsibility [...]%. In addition, the Ariane program is significantly larger than the Vega program.

³¹⁶ ESA's submission "Comments on the Commission's Article 6(1)(c) decision", 29.03.2016.

³¹⁷ ESA's submission "Comments on the Commission's Article 6(1)(c) decision", 29.03.2016.

³¹⁸ Response to Article 6(1)(c) decision, 11.03.2016.

8.2.3. *Likely impact on competition*

- (491) In Sections 8.2.1 and 8.2.2 the Commission concluded already that post-transaction the Parties would most likely not have the ability and the incentive to foreclose ELV from the market for launchers exploited by Arianespace. This implies that no significant detrimental effect on competition would result from the transaction as regards the vertical relationship between Arianespace as a launch services provider and ASL as a supplier of the Ariane launcher family.
- (492) Nevertheless, the Commission analyses the impact of the hypothetical adoption of a customer foreclosure strategy by the Parties against ELV.
- (493) According to paragraph 72 of the Non-Horizontal Guidelines, "*Foreclosing rivals in the upstream market may have an adverse impact in the downstream market and harm consumers. By denying competitive access to a significant customer base for the foreclosed rivals' (upstream) products, the merger may reduce their ability to compete in the foreseeable future. As a result, rivals downstream are likely to be put at a competitive disadvantage, for example in the form of raised input costs. In turn, this may allow the merged entity to profitably raise prices or reduce the overall output on the downstream market*".
- (494) As explained in recitals (485) and (486), the hypothetical adoption of a customer foreclosure against ELV would not have any effect on the rivals of Arianespace in the markets for launch services. This is because ELV is bound to sell its launcher exclusively to Arianespace and all Arianespace's rivals exploit their own launcher. Therefore, even if the Parties would adopt a customer foreclosure against ELV, Arianespace rivals' ability to compete in the future would not be affected given that Vega can only be offered to and commercialized by Arianespace, and the Parties would not be able to profitably raise their prices to the detriment of satellite operators.
- (495) In view of recitals (491) to (494), the Commission concludes that the transaction would not have a significant detrimental effect on competition in the markets for launch services even if post-transaction the Parties were to adopt a customer foreclosure against ELV.

8.2.4. [...]

- (496) In the Article 6(1)(c) Decision, the Commission concluded on the basis of its market investigation that [...].
- (497) The Commission takes note however that [...] ³¹⁹. [...] ³²⁰. [...].
- (498) [...].
- (499) First, [...].
- (500) [...].
- (501) [...].
- (502) [...].
- (503) Second, [...].

³¹⁹ [...].
³²⁰ [...].

- (504) Third, [...].
- (505) The Commission considers therefore that [...].
- (506) Without prejudice to the Commission's conclusion in recital (483) that post-transaction the Parties would not have the ability to foreclose ELV, the Commission takes note of [...] and considers that it, in any event, further reduces any such ability to foreclose.

8.3. Conclusion on the competitive assessment of the vertical relationship between (i) Arianespace as a launch services provider and (ii) ASL as a supplier of the Ariane launcher family

- (507) To sum up, the Commission considers that post-transaction the Parties would likely not have the ability and incentive to implement a customer foreclosure strategy against ELV and that, even in the hypothetical case of the adoption of such a strategy, there would not be a significant detrimental effect on competition.
- (508) The Commission therefore concludes that the transaction does not lead to a significant impediment to effective competition due to the vertical relationship between the Parties' activities in the market for launchers exploited by Arianespace and the markets for launch services.

9. Competitive assessment: Vertical relationship between (i) Arianespace as a launch services provider and (ii) Airbus DS SAU and ASL as suppliers of payload dispensers

9.1. Input foreclosure

- (509) According to paragraph 31 of the Non-Horizontal Guidelines input foreclosure may occur " *where, post-merger, the new entity would be likely to restrict access to the products or services that it would have otherwise supplied absent the merger, thereby raising its downstream rivals' costs by making it harder for them to obtain supplies of the input under similar prices and conditions as absent the merger. This may lead the merged entity to profitably increase the price charged to consumers, resulting in a significant impediment to effective competition.*"
- (510) Despite their relatively high market share in the narrowest EEA market for payload dispensers, ASL and Airbus DS SAU currently supply only payload dispensers for launchers commercialised by Arianespace. [...]. As a result, the Parties do not have the ability to restrict access to suppliers to other launch services providers. Therefore, the transaction will not result in any risk of input foreclosure for Arianespace's competitors.

9.2. Customer foreclosure

- (511) According to paragraph 58 of the Non-Horizontal Guidelines customer foreclosure may occur "*when a supplier integrates with an important customer in the downstream market*" and because of this downstream presence, "*the merged entity may foreclose access to a sufficient customer base to its actual or potential rivals in the upstream market (the input market) and reduce their ability or incentive to compete*" which in turn, "*may raise downstream rivals' costs by making it harder for them to obtain supplies of the input under similar prices and conditions as absent the merger. This may allow the merged entity profitably to establish higher prices on the downstream market.*"

- (512) As regards the vertical relationship between (i) Arianespace as a launch services provider and (ii) ASL and Airbus DS SAU as suppliers of payload dispensers, a customer foreclosure strategy would entail the Parties choosing to source payload dispensers only from ASL or Airbus DS SAU, even if this is not the optimal solution available, to the detriment of Arianespace's existing alternative payload dispenser suppliers.
- (513) A market participant expressed concerns about the possibility of foreclosure and submits that *"that a considerable portion of [its] revenues in payload adapters and dispensers will come from the programmes controlled directly or indirectly by Arianespace and/or ASL"*³²¹.
- (514) According to paragraph 59 of the Non-Horizontal Guidelines, in assessing the likelihood of anticompetitive customer foreclosure scenario, the Commission examines, first, whether the Parties would have, post-transaction, the ability to foreclose access to downstream markets by reducing its purchase from its upstream rivals, second, whether it would have the incentive to do so, and third, whether such strategies would have a significant detrimental effect on customers in the downstream market. In the next sections the Commission analyses those three elements.

9.2.1. Ability to foreclose access to downstream markets

- (515) According to paragraph 61 of the Non-Horizontal Guidelines, *"for customer foreclosure to be a concern, it must be the case that the vertical merger involves a company which is an important customer with a significant degree of market power in the downstream market"*.
- (516) The Parties submit that they will not have the ability to implement such a foreclosure because Arianespace is not expected to be a significant buyer in the future. The Parties [...]. As regards Soyuz, [...], the Parties do not expect any significant purchase of payload dispensers [...]. For the incoming years, Soyuz is only expected to launch the Galileo constellation and the OneWeb constellation, for which RUAG has already been selected to supply payload dispensers³²².
- (517) The Commission's investigation showed that Arianespace, currently the only European customer of payload dispensers, has been an important customer of payload dispensers in the past, as it was responsible for four of the 11 constellations launched between 2012 and 2014. Arianespace represented around [...] % of RUAG worldwide payload dispensers' sales in the last five years³²³.
- (518) Over the 2016-2019 period, [...] constellation launches are currently scheduled ([...], [...]). For these launches, RUAG will provide [...] payload dispensers ([...] [...]), Airbus/ASL will provide [...] payload dispensers ([...]) and SpaceX will directly manufacture [...] other payload dispensers ([...]).
- (519) Hence, in the open market (excluding SpaceX's internal production), over 2016-2019, RUAG will have [80-90] % of the market, against [10-20] % for Airbus DS SAU and ASL combined. Therefore, RUAG appears to have seized and secured already an important part of the market for payload dispensers over the next few years.

³²¹ Market participant's reply to the Commission's request for information, 31.03.16, questions 1 and 3.

³²² Parties' reply to the Commission's request for information n° 3, 08.12.2015, question 37.

³²³ Market participants' reply to Commission's request for information, 18.01.2016.

- (520) The Parties further argue that since payload dispensers are not standard products but must be developed specifically for each constellation, Arianespace is subject to the LEA rules providing that any step concerning the exploitation of the ESA-developed launchers undertaken by Arianespace must receive the prior consent of ESA.
- (521) According to the findings of the Commission's investigation, for ESA-developed missions, the procurement of payload dispensers is subject to ESA Procurement Rules: when adequate funding is made available by the participating Member States relevant to the established European payload dispenser suppliers, the procurement is made in an open competition and ESA makes the selection³²⁴. Moreover, as regards Ariane 6, ESA has confirmed that [...] ³²⁵. This would preclude the Parties from adopting a customer foreclosure strategy as regards payload dispensers for ESA-developed missions. Therefore, post-transaction the Parties could only have the ability to adopt a customer foreclosure strategy for non-ESA developed missions³²⁶.
- (522) Based on the findings of the market investigation, a majority of future Arianespace's launches using payload dispensers would be non-ESA funded missions. The Parties mention that [...] out of the [...] payload dispensers that will be used in the next five years regard non-ESA missions. Other market participant confirmed that from the EUR [...] market value of payload dispensers procured by Arianespace to be used in the next five years, at least 80% regard non-ESA missions³²⁷. As a result, the segment of the market for payload dispensers potentially affected by a customer foreclosure strategy corresponds to the largest part of the market, namely the non-ESA funded missions.
- (523) According to one market participant, "*If post-Transaction, Arianespace reduced the quantities of payload adapters or dispensers acquired from RUAG, the remaining business may not be enough to make it profitable for RUAG to remain active in these markets. In this regard, it is relevant to mention that a major part of RUAG's development programs are currently made in relation to products sold to Arianespace. These development activities would also be at risk as a result of the proposed Transaction*". This implies that even if the Parties would only adopt a customer foreclosure strategy for the non-ESA funded missions, the impact of such strategy would be reflected on the overall market for payload dispensers since it would reduce the overall ability of the Parties' main rival to compete and innovate.
- (524) However, in case of a foreclosure attempt on RUAG with regards to payload dispensers given the importance of its guaranteed contracts, RUAG would remain the market leader for payload dispensers and would therefore retain all the necessary expertise, technology and infrastructures to compete on the payload dispenser segment. The strategy would therefore have limited impact on RUAG's investment and innovation capacity.
- (525) The Parties also argue that customers have always the possibility to purchase their payload dispensers directly, without Arianespace's involvement. According to ESA, customers are always "*involved*" in the selection of payload dispensers and they occasionally purchase them directly³²⁸.

³²⁴ ESA's reply to the Commission's request for information, 25.01.2016.

³²⁵ ESA's reply to the Commission's request for information of 29.01.2016.

³²⁶ ESA's reply to the Commission's request for information, 25.01.2016.

³²⁷ Market participant's reply to Commission's request for information, 18.01.2016.

³²⁸ ESA's submission "Comments on the Commission's Article 6(1)(c) decision", 29.03.2016.

- (526) On the basis of the market investigation it appears that, for the non-ESA missions, satellite operators can in some few cases be involved in the choice of payload dispensers and can thus decrease the risk of a customer foreclosure strategy by the Parties by influencing the choice³²⁹. [...].
- (527) Finally, the Parties argue that because RUAG has strong industrial links with Ariespace, ASL and Airbus, it would be in a position to retaliate should the Parties try to implement any customer foreclosure strategy.
- (528) On the basis of the market investigation, the Commission considers that RUAG has strong industrial links with ASL. In particular, RUAG provides the fairing for Ariane 5, a key component of the launcher (as well as the on-board computer and the telemetry antennas) and has been selected to provide the fairing on Ariane 6. RUAG is also a key supplier of Airbus for civil aircraft (in particular, [...])³³⁰. Under such circumstances, a foreclosure strategy against RUAG could lead to retaliation.
- (529) In light of recitals (515) to (528), the Commission concludes that post-transaction the Parties will have limited ability to foreclose its rivals in the market for payload dispensers.

9.2.2. *Incentive to foreclose access to downstream markets*

- (530) According to paragraph 68 of the Non-Horizontal Guidelines, *"the incentive to foreclose depends on the degree to which it is profitable. The merged entity faces a trade-off between the possible costs associated with not procuring products from upstream rivals and the possible gains from doing so, for instance, because it allows the merged entity to raise price in the upstream or downstream markets."*
- (531) A market participant has expressed concerns that *"Ariespace may change its commercial behaviour as it may have the incentive to supply [...] products in-house from Airbus CASA"*³³¹.
- (532) The Parties submit that, except in the case of institutional satellites, the development cost of the payload dispenser for a specific constellation is normally borne by Ariespace itself. Ariespace therefore has a strong incentive to foster competition between several suppliers in order to get the best possible prices, quality and commercial conditions.
- (533) The Parties also submit that Airbus DS SAU supplies the hard point separation sub-systems (an essential sub-system of the payload dispenser) to RUAG for the Galileo constellation and therefore also benefit from RUAG sales and have a limited incentive to foreclose.
- (534) Given the limited ability of the Parties to foreclose and the absence of significant detrimental effect on competition³³², the Commission reaches the conclusion that the issue whether post-transaction the Parties would likely have the incentive to foreclose access to downstream markets can be left open.

³²⁹ Replies to question 58 of Questionnaire Q1 – questionnaire to satellite operators, question 53 of Questionnaire Q2 – questionnaire to satellite primes and question 49 of Questionnaire Q3 – questionnaire to launch services providers.

³³⁰ Market participant's reply to the Commission's request for information, 31.03.2016, question 10.

³³¹ Market participant's reply to the Commission's request for information, 20.01.2015, question 1.

³³² According to paragraph 94 of the Non-Horizontal Guidelines, ability, incentives and likely impact are closely intertwined factors for evaluating foreclosure effects.

9.2.3. *Likely impact on competition*

- (535) Whereas a majority of both satellite manufacturers and launch services providers think the transaction may have a negative impact on price and innovation in this market, the majority of satellite operators do not expect any impact of the transaction on prices and innovation on the market for payload dispensers³³³.
- (536) As regards the overall impact on effective competition, the Commission considers on the basis of the market investigation that the impact of the transaction would not be significant due to the small relative size of the price of payload dispensers in the overall cost of launch services.
- (537) In the past, payload dispensers used on Arianespace launchers have represented between [0-5]% and [0-5]% of the total price of a launch service³³⁴. Therefore, the impact of an even significant price increase of payload dispensers on the overall prices would be minimal (for instance, following an hypothetical increase of the price of a payload dispenser of 5%, a payload dispenser which represents [0-5]% of the total cost of a launch services would increase to [0-5]% of the total price).
- (538) Moreover, Arianespace's main rivals in the worldwide open market for GTO launch services are manufacturing payload dispensers internally, namely SpaceX, ULA, and Khrunichev (the manufacturer of Proton). Therefore, they would not be affected in case RUAG would exit the market following the adoption of a customer foreclosure by the Parties. Arianespace rivals' ability to compete in the future would remain unchanged, and the Parties would not be able to profitably raise their prices to the detriment of satellite operators.
- (539) In the case of the captive markets for launch services, Arianespace is the sole provider of launch services. Therefore, any customer foreclosure strategy would not have any effect on competition since Arianespace could already be collecting the monopoly rents associated to its position.
- (540) Moreover, according to paragraph 76 of the Non-Horizontal Guidelines, "*the effect on competition must be assessed in light of countervailing factors such as the presence of countervailing buyer power or the likelihood that entry would maintain effective competition in the upstream or downstream markets*".
- (541) The Commission considers on the basis of the market investigation that there are new players in this market, namely RTS Rostock from Germany, Spaceflight Corporation, Millennium Space Systems and Adaptive Launch Solutions from US that already address a small portion of the market³³⁵. Some launch services providers such as ULA and ILS have also indicated that they expect entry on the market in the near future for instance by Cubesats³³⁶.
- (542) In addition, those launch services providers already producing payload dispensers internally could potentially decide to enter the market and represent a potential alternative even if they have no current plans to do so in order to defeat a foreclosure attempt³³⁷.

³³³ Replies to questions 70 and 71 of Questionnaire Q1 – questionnaire to satellite operators, questions 67 and 68 of Questionnaire Q2 - questionnaire to satellite primes and questions 63 and 64 of Questionnaire Q3 – questionnaire to launch services providers.

³³⁴ Parties' reply to the Commission's request for information n°32, 27.04.2016, question 2.

³³⁵ Market participant's reply to the Commission's request for information, 31/03/2016, question 15.

³³⁶ Reply to questions 45 and 45.1 of Questionnaire Q6 – questionnaire to launch services providers.

³³⁷ Reply to question 44 of questionnaire Q6 – questionnaire to launch services providers.

(543) In light of recitals (535) to (542), the hypothetical adoption of a customer foreclosure strategy as regards payload dispensers would be not likely have a significant detrimental effect on competition in the markets for launch services.

9.2.4. *Conclusion on customer foreclosure*

(544) On the basis of the market investigation, the Commission considers that post-transaction the Parties are not likely to be in a position to foreclose access to downstream markets as regards payload dispensers.

9.3. Conclusion on the competitive assessment of the vertical relationship between (i) Arianespace as a launch services provider and (ii) Airbus DS SAU and ASL as suppliers of payload dispensers

(545) In view of recitals (509) to (544), the Commission concludes that the transaction does not lead to a significant impediment to effective competition due to the vertical relationship between the Parties' activities in the markets for launch services and the market for payload dispensers.

10. Competitive assessment: Vertical relationship between (i) Arianespace as a launch services provider and (ii) Airbus DS SAU as supplier of payload adapters

10.1. Input foreclosure

(546) According to paragraph 31 of the Non-Horizontal Guidelines input foreclosure may occur " *where, post-merger, the new entity would be likely to restrict access to the products or services that it would have otherwise supplied absent the merger, thereby raising its down- stream rivals' costs by making it harder for them to obtain supplies of the input under similar prices and conditions as absent the merger. This may lead the merged entity to profitably increase the price charged to consumers, resulting in a significant impediment to effective competition.*"

(547) Airbus DS SAU currently provides payload adapters to [...]. The vertical relationship between (i) Arianespace as a launch services provider and (ii) Airbus DS SAU as a supplier of payload adapters could give rise to a potential input foreclosure strategy whereby Airbus DS SAU would only sell its payload adapters to the Parties to the detriment of other launch services providers.

(548) The Parties submit that the transaction would not result in any risk of input foreclosure for Arianespace's competitors. They submit that Airbus DS SAU will have neither the ability nor the incentive to foreclose [...] in order to favour Arianespace, given in particular its limited worldwide market shares compared to RUAG as regards payload adapters. The Parties further submit that certain satellite manufacturers produce their own payload adapters internally. Any foreclosure strategy implemented by Airbus DS SAU would thus not affect ILS, ULA, Sea Launch or Long March.

(549) On an EEA-wide basis, over the 2012-2014 period, Arianespace purchased [...] payload adapters from RUAG ([50-60]%) and [...] from Airbus DS SAU ([40-50]%)³³⁸. On a worldwide basis, the market share of Airbus DS SAU for payload adapters is limited ([20-30]% market share in 2014). Therefore, in case of an input foreclosure strategy, competitors of Arianespace could easily defeat any attempt to

³³⁸ Parties' reply to the Commission's request for information n°21, 15.03.2016, question 13.

foreclose by turning to either RUAG, which is currently the clear market leader, with a [60-70]% worldwide market share in 2014, or Kawasaki Heavy Industries which had a market share of [5-10]% in 2014.

- (550) In conclusion, on the basis of the market investigation, the Commission considers that the Parties would not have the ability and the incentive to foreclose access to payload adapters via input foreclosure strategy vis-à-vis Arianespace's rivals in launch services.

10.2. Customer foreclosure

- (551) According to paragraph 58 of the Non-Horizontal Guidelines customer foreclosure may occur "*when a supplier integrates with an important customer in the downstream market*" and because of this downstream presence, "*the merged entity may foreclose access to a sufficient customer base to its actual or potential rivals in the upstream market (the input market) and reduce their ability or incentive to compete*" which in turn, "*may raise downstream rivals' costs by making it harder for them to obtain supplies of the input under similar prices and conditions as absent the merger. This may allow the merged entity profitably to establish higher prices on the downstream market.*"

- (552) As regards the vertical relationship between (i) Arianespace as a launch services provider and (ii) Airbus DS SAU as suppliers of payload adapters, a customer foreclosure strategy would entail the Parties choosing to source payload adapters only from Airbus DS SAU, even if this is not the optimal solution available, to the detriment of Arianespace's existing alternative payload adapters suppliers.

- (553) A market participant expressed concerns about the possibility of foreclosure and submits that "*that a considerable portion of [its] revenues in payload adapters and dispensers will come from the programmes controlled directly or indirectly by Arianespace and/or ASL*"³³⁹.

- (554) According to paragraph 59 of the Non-Horizontal Guidelines, in assessing the likelihood of anticompetitive customer foreclosure scenario, the Commission examines, first, whether the Parties would have, post-transaction, the ability to foreclose access to downstream markets by reducing its purchase from its upstream rivals, second, whether it would have the incentive to do so, and third, whether such strategies would have a significant detrimental effect on customers in the downstream market. In the next sections the Commission analyses those three elements.

10.2.1. Ability to foreclose access to downstream markets

- (555) According to paragraph 61 of the Non-Horizontal Guidelines, "*for customer foreclosure to be a concern, it must be the case that the vertical merger involves a company which is an important customer with a significant degree of market power in the downstream market*".

- (556) On the basis of the market shares, Arianespace is a significant customer of RUAG. On an EEA-wide basis, over the 2012-2014 period, Arianespace purchased [...] payload adapters from RUAG ([50-60]%) and [...] from Airbus DS SAU ([40-50]%). Moreover, the majority of Arianespace's competitors manufacture their payload adapters internally, namely ILS, ULA, Sea Launch and Long March so that

³³⁹ Market participant's reply to the Commission's request for information, 31.03.16, questions 1 and 3.

Arianespace represents a significant proportion of the demand of the worldwide market for payload adapters. Thus, Arianespace represented around [30-40]% of RUAG's payload adapters' sales in the last 5 years³⁴⁰.

- (557) However, the Parties argue that they would not have the ability to adopt a customer foreclosure strategy against competitors to favour their own internal production of payload adapters.
- (558) The Parties also submit that there are strong industrial links between the Parties and RUAG. As a consequence, any foreclosure strategy against RUAG could lead to retaliation from RUAG. The Commission's investigation confirmed these links (see recital (528)).
- (559) An analysis of Arianespace's future procurement needs by category show that the scope of the Parties to implement a foreclosure strategy is minimal.

10.2.1.1. Payload adapters for Ariane 5

- (560) As regards payload adapters for Ariane 5, the Parties submit that ESA has selected RUAG and Airbus DS SAU as suppliers of payload adapters during the development phase, following a competitive tender organised in accordance with ESA's Procurement Rules and the *juste retour* principle. During the exploitation phase, the actual purchase of the payload adapters has been entrusted to Arianespace pursuant to the LED and LEA. In particular, pursuant to Article 8(1) of the LEA, Arianespace must comply, during the exploitation phase, with the industrial distribution of work set up by ESA during the development of the launcher.
- (561) The Parties argue that [...]. Moreover, ESA has the power to monitor the purchase by Arianespace of payload adapters, and any decision by Arianespace to stop buying from RUAG has to be justified in view of the LEA.
- (562) The Commission confirmed on the basis of the market investigation that Arianespace currently procures from RUAG and Airbus DS SAU³⁴¹. This situation of double procurement results from [...]. However, the current production orders are valid for Ariane 5 launches [...]³⁴².
- (563) As regards the remaining batch of payload adapters [...], a payload adapter manufacturer has expressed concerns that Arianespace may favour Airbus DS SAU for the supply for the remaining years of Ariane 5 which correspond to an estimated [...] payload adapters³⁴³. However, ESA does not see any current indications for a change in the double sourcing approach for Ariane 5 payload adapters and, in any case, any change of supplier would be subject to Article 8 of the LEA which set out the procedure involving ESA and the participating State concerned³⁴⁴.
- (564) The Parties also argue that for two specific diameters representing [20-30]% of the demand of payload adapters for Ariane 5, RUAG's products are the only ones having the necessary qualification, and it would take more than two years for another supplier to develop and qualify substitutable products.
- (565) The Commission confirmed on the basis of the market investigation that RUAG is the only supplier of certain types of payload adapters for Ariane 5 (payload adapters

³⁴⁰ Market participant's reply to Commission's request for information, 18.01.2016.

³⁴¹ ESA's submission "Comments on the Commission's Article 6(1)(c) decision", 29.03.2016

³⁴² ESA's reply to the Commission's request for information, 22.12.2015, question 7.

³⁴³ Market participant's reply to the Commission request for information, 20.01.2015, question 3.

³⁴⁴ ESA's reply to the Commission's request for information, 22.12.2015, question 7.

have higher diameters of interface used for larger satellites) which represent about [20-30]% of the demand on Ariane 5^{345,346}.

- (566) Therefore, on the basis of the market investigation the Commission considers that the Parties will have no or very limited ability to implement a customer foreclosure strategy as regards payload adapters for Ariane 5.

10.2.1.2. Payload adapters for Ariane 6

- (567) As regards payload adapters for Ariane 6, the Parties argue that suppliers for payload adapters have not been selected yet and that the selection process will be subject to ESA Procurement Rules. According to these rules, ESA shall review all tender documentation prepared by the launcher manufacturer to ensure impartiality and will be a member of the evaluation board that makes the supplier selection.
- (568) In addition, the Parties submit that ESA Member States have agreed on a *juste retour* principle for both the development and the exploitation phase of Ariane 6. As a result, ASL/Arianespace will not be in a position to make any change in the industrial organisation of Ariane 6 until that condition of *juste retour* in exploitation has been fulfilled³⁴⁷. Past that date, any change of suppliers during the exploitation phase would be restricted by Article I(6) of the LED.
- (569) A market participant has expressed concerns that ASL will have no incentives to include RUAG in the development phase for payload adapters to Ariane 6³⁴⁸. In particular, it has expressed concerns that the guarantees offered by the LED may end in 2020 when the Launcher Declaration is set to expire³⁴⁹.
- (570) ESA explained that the procedure for the selection of the industrialist in charge of the development of the payload adapter for Ariane 6 follows ESA's Industrial Procurement Plan (IPP)³⁵⁰. The IPP currently establishes that[...]³⁵¹.
- (571) Subject to the allocation of the Swedish contribution to the programme, ESA has confirmed that a dual sourcing approach with RUAG for the procurement of payload adapters is also under consideration³⁵². More precisely, two options are currently possible. Under the first scenario, in case existing Ariane 5 payload adapters can be directly reused on Ariane 6, ESA has given instruction to ASL to apply dual sourcing with RUAG³⁵³. A market participant has received a request for prices on 4 March 2016 for payload adapters and sent its answer in April 2016³⁵⁴. Under the second scenario, in case further development of payload adapters is required for Ariane 6, ESA has requested that RUAG should be invited to bid³⁵⁵.
- (572) During the initial exploitation phase, Arianespace would need to respect the industrial distribution determined by the *juste retour* principle, that is to say, it cannot change the percentage of payload adapters purchased from each of the

³⁴⁵ Parties' reply to the Commission's request for information n°5, 23.12.2015, question 8.

³⁴⁶ Response to Article 6(1)(c) decision, 11.03.2016.

³⁴⁷ ASL estimates that the condition shall not be fulfilled until at least [...] launchers have been delivered.

³⁴⁸ Market participant's reply to the Commission's request for information, 20.01.2016, question 12.

³⁴⁹ Market participant's reply to the Commission's request for information, 28.01.2016, question 2.

³⁵⁰ The IPP is the plan explaining the procurement process between prime contractors or between primes and subcontractors.

³⁵¹ Parties' reply to the Commission's request for information n°5, 23.15.2016, question 9.

³⁵² Minutes of a conference call held with ESA on the 11.01.2016.

³⁵³ ESA's submission, "Dual source for payload adaptors", 19.02.2016.

³⁵⁴ Market participant's reply to the Commission's request for information, 31.03.2016, question 10.

³⁵⁵ ESA's submission, "Dual source for payload adaptors", 19.02.2016.

suppliers selected in the development stage. Past that date, in the very long term, any change of suppliers during the exploitation phase would be restricted by Article I(6) of the LED, which provides that “*the exploitation of the ESA developed launchers shall respect the industrial and geographical distribution of work resulting from the relevant development programmes undertaken by the Agency*” and Article 8 of the LEA, which provides that “*Arianespace undertakes to respect and make the Sub-contractors respect, for each ESA Developed Launcher, the industrial distribution of work on the products/services necessary for the exploitation of the launchers resulting from the [ESA] Launcher Development Programmes*”.

- (573) Therefore, on the basis of the market investigation the Commission considers that the Parties are unlikely to have the ability to implement a customer foreclosure strategy as regards payload adapters for Ariane 6.

10.2.1.3. Payload adapters for Soyuz

- (574) As regards payload adapters for Soyuz, a market participant also expressed concerns that Arianespace may have incentives to change the current supplier of payload adapters in favour of the Parties³⁵⁶.

- (575) The Parties submit that Arianespace has already selected RUAG as the sole provider of payload adapters. They submit that since the development of a payload adapter for a given launcher lasts more than two years and requires several million euros of investments, it would be impossible in practice for Arianespace to switch Airbus DS SAU [...]. Therefore, financing a new qualification of payload adapters for Soyuz given[...] the fact that from 2017 onwards, most of the Soyuz launches performed by Arianespace will launch [...], for which Soyuz uses payload dispensers procured from RUAG would not make economic sense.

- (576) ESA confirmed that it has no role in the selection of the supplier of payload adapters for Soyuz, Arianespace being the sole responsible for those decisions³⁵⁷. Currently RUAG is the sole provider of payload adapters for Soyuz. According to the findings of the market investigation, the Commission confirmed that the development of a new adapter for Soyuz would take at least a year and a half and would have no commercial interest for Arianespace as the average price of an Arianespace adapter, which is around EUR [...] ³⁵⁸.

- (577) Therefore, on the basis of the market investigation the Commission considers that the Parties are unlikely to have the ability to implement a customer foreclosure strategy as regards payload adapters for Soyuz.

10.2.1.4. Payload adapters for Vega

- (578) As regards payload adapters for Vega, a market participant expressed concerns about potential foreclosure³⁵⁹.

- (579) The Parties submit that payload adapters for the Vega launcher are not purchased by Arianespace but by ELV as the launcher manufacturer³⁶⁰. In addition, the Parties argue that Airbus DS SAU has already been selected as the sole provider of payload adapters for Vega during the launcher development phase by ELV with the

³⁵⁶ Market participant's reply to the Commission's request for information, 20.01.2016., question 10.

³⁵⁷ Minutes of a conference call held with ESA on 11.01.2016.

³⁵⁸ Market participant's reply to the Commission's request for information, 20.01.2016, question 11.

³⁵⁹ Market participant's reply to the Commission's request for information, 19.04.2016, question 5.

³⁶⁰ Parties' reply to the Commission's request for information n° 11, 28.01.16, question 4.

agreement of ESA. Therefore, Airbus DS SAU is currently the only supplier qualified to manufacture Vega payload adapters.

- (580) ESA confirmed that Airbus DS SAU is currently the only supplier qualified to manufacture Vega payload adapters and that Arianespace has no role in choosing the adapter supplier³⁶¹. Therefore, the transaction would not change the ability of the Parties to influence the sourcing of this category of payload adapters.

10.2.1.5. Non-standard payload adapters for mission-specific needs

- (581) As regards non-standard payload adapters for mission-specific needs, a market participant has expressed concerns about "*opportunities for mission specific adapters for which Arianespace can decide its procurement without ESA's intervention*"³⁶².

- (582) However, the Commission's investigation has established that dual sourcing has been implemented so far for these mission specific launches and ESA has confirmed it plans to favour this dual approach for Ariane 6³⁶³. Moreover, these mission payload adapters are too rare to enable foreclosure: they are solely used in the case of out-of-the-ordinary military or scientific missions, where the adapter needs to be optimised with regards to a unique and very specific payload. Since 2010, mission-specific payload adapters have been developed for only three Arianespace missions³⁶⁴. Over the period 2013-2015, out of the 46 launches, 38 used payload adapters (the eight remaining launches were for constellations and therefore used payload dispensers instead of payload adapters) and only one was mission-specific (less than 3.3% of payload adapters) and procured by Arianespace (Gaïa mission).

- (583) Therefore, on the basis of the market investigation the Commission considers that the Parties are unlikely to have the ability to implement a customer foreclosure strategy as regards non-standard payload adapters for mission-specific needs.

10.2.1.6. Conclusion on ability to foreclose access to downstream markets

- (584) In light of recitals (555) to (583), the Commission concludes that post-transaction the Parties are unlikely to have the ability to foreclose access to downstream markets via a customer foreclosure strategy as regards payload adapters.

10.2.2. Incentive to foreclose access to downstream markets

- (585) According to paragraph 68 of the Non-Horizontal Guidelines, "*the incentive to foreclose depends on the degree to which it is profitable. The merged entity faces a trade-off between the possible costs associated with not procuring products from upstream rivals and the possible gains from doing so, for instance, because it allows the merged entity to raise price in the upstream or downstream markets.*"

³⁶¹ ESA's submission "Comments on the Commission's Article 6(1)(c) decision", 29.03.2016 : " Insofar as Vega standard payload adapters are concerned, and as provided for in Annex 1 of the Vega Launcher Protocol (Vega industrial distribution of work for the VERTA and following flights – Main industrialists –Status October 2008), EADS Casa Espacio (now Airbus CASA - Spain) is the sole supplier to ELV, from which Arianespace procures an integrated launcher system. Arianespace has no role in the selection of standard adaptors."

³⁶² Market participant's reply to the Commission's request for information, 25.01.2016, question 4.

³⁶³ ESA's reply to the Commission's request for information, 22.12.2015, question 8.

³⁶⁴ Parties' reply to the Commission's request for information n° 13, 03.02.16, question 2.

- (586) A complainant has expressed concerns that "*Arianespace may change its commercial behaviour as it may have the incentive to supply these products in-house from Airbus CASA*"³⁶⁵.
- (587) A large majority of satellite operators did not know whether Arianespace would give preferential treatment payload adapters from Airbus DS SAU and respondents who gave an answer considered it would not³⁶⁶. Likewise only one satellite manufacturer believed that Arianespace would give preferential treatment as a result of the transaction and other did not know³⁶⁷. As regards launch services providers, a majority of respondents did not know or not expect the transaction to result in a preferential treatment³⁶⁸.
- (588) Given the absence of ability of the Parties to foreclose and of significant detrimental effect on competition³⁶⁹, the Commission reaches the conclusion that the issue whether post-transaction the Parties would likely have the incentive to foreclose access to downstream markets can be left open.

10.2.3. *Likely impact on competition*

- (589) According to a market participant, "*Other than with Arianespace, RUAG supplies adapters to Space X and United Launch Alliance. However, the contracts with said companies will not give RUAG enough work to allow it to continue developing adapters and dispensers for future European use, as the Ariane contracts represent the main part of RUAG's business -which is the main part of the demand in Europe*" and "*the transaction envisaged is very likely to seriously damage the competitive structure of the market for adapters in the EEA and would put at risk the survival of RUAG on this market*"³⁷⁰.
- (590) The Parties submit that even if they were to try to foreclose RUAG, their attempt would have no negative impact on the market as there are several other customers of payload adapters worldwide. In particular, RUAG is currently the worldwide market leader for payload adapters and provides payload adapters to several customers beside Arianespace, including ULA and SpaceX. In addition, among the payload adapters sold by RUAG, only [20-30]% (namely [...] units) were purchased by Arianespace. Among these, [...] could have been procured from Airbus DS SAU. Therefore, in the purely hypothetical event where Arianespace would, post-transaction, transfer its purchases of payload adapters to Airbus DS SAU whenever possible, RUAG would still have a market share above [50-60]% for payload adapters. This would ensure that RUAG retains the incentive and ability to pursue innovation.
- (591) Satellite operators agree that the transaction would have a minimal impact as regards payload adapters. In fact, none of them expects the transaction to have any negative impact on prices or innovation on the market for payload dispenser³⁷¹.
- (592) As regards the overall impact on effective competition, the Commission considers on the basis of the market investigation that the impact of the transaction would not be

³⁶⁵ Market participant's reply to the Commission's request for information, 20.01.2015. question 1.

³⁶⁶ Replies to question 57 of Questionnaire Q1 – questionnaire to satellite operators.

³⁶⁷ Replies to question 52 of Questionnaire Q2 – questionnaire to satellite primes.

³⁶⁸ Replies to question 48 of Questionnaire Q3 – questionnaire to launch services providers.

³⁶⁹ According to paragraph 94 of the Non-Horizontal Guidelines, ability, incentives and likely impact are closely intertwined factors for evaluating foreclosure effects.

³⁷⁰ Minutes of a conference call held with a market participant, 16.11.2015.

³⁷¹ Replies to questions 67 and 68 of Questionnaire Q1 – questionnaire to satellite operators.

significant due to the small relative size of the price of payload adapters in the overall cost of launch services.

- (593) The average price of an Arianespace adapter is around EUR [...] ³⁷². Against an average launch price of about EUR [...] on Arianespace launchers, payload adapters therefore represent approximately [0-5]% of the total price of a launch service ³⁷³. Therefore, the impact of an even significant price increase of payload dispensers on the overall prices would be minimal (for instance, following an hypothetical increase of the price of a payload dispenser of 5%, the price of a payload dispenser would increase to [0-5]% of the total price).
- (594) In addition, some of Arianespace's rivals in the worldwide open market for GTO launch services are manufacturing payload adapters internally, namely ILS, ULA, Sea Launch or Long March. Therefore, they would not be affected in case RUAG would exit the market following the adoption of a customer foreclosure by the Parties.
- (595) In the case of the captive markets for launch services, Arianespace is the sole provider of launch services. Therefore, any customer foreclosure strategy would not have any effect on competition since Arianespace could already be collecting the monopoly rents associated to its position.
- (596) Moreover, according to paragraph 76 of the Non-Horizontal Guidelines, "*the effect on competition must be assessed in light of countervailing factors such as the presence of countervailing buyer power or the likelihood that entry would maintain effective competition in the upstream or downstream markets*".
- (597) The Commission confirmed on the basis of the market investigation that some new entrants have emerged recently (Kawasaki Heavy Industries) and that others may decide to enter the market in the near future such as Sierra Nevada and Planetary Systems ³⁷⁴.
- (598) In light of recitals (589) to (597), the hypothetical adoption of a customer foreclosure as regards payload adapters would be not likely have a significant detrimental effect on competition in the markets for launch services.

10.2.4. Conclusion on customer foreclosure

- (599) Therefore, on the basis of the market investigation, the Commission considers that post-transaction the Parties are unlikely to be in a position to foreclose access to downstream markets as regards payload adapters.

10.3. Conclusion on the competitive assessment of the vertical relationship between (i) Arianespace as a launch services provider and (ii) Airbus DS SAU as a supplier of payload adapters

- (600) In view of recitals (546) to (599), the Commission concludes that the transaction does not lead to a significant impediment to effective competition due to the vertical relationship between the Parties' activities in the markets for launch services and the market for payload adapters.

³⁷² Parties' reply to the Commission's request for information n°13, 03.02.2016, question 7

³⁷³ Parties' reply to the Commission's request for information n°32, 27.04.2016, question 2.

³⁷⁴ Parties' reply to Commission's request for information n°32, 27.04.2016, question 7.

11. Competitive assessment: Relationship between (i) Arianespace as an insurance service provider and (ii) Airbus as a satellite operator and satellite manufacturer

11.1. Input foreclosure

- (601) Arianespace's position as a space insurance service provider was consistently below [5-10]% in the period 2013-2015. Even when considering the launches performed by Arianespace, the narrowest possible market, Arianespace market shares were around [20-30]%.
- (602) According to the Parties, the market of space service insurances is also composed of third party insurance companies (for example, AXA, Spaceco, AIG, STARR). Moreover, as insurance services remain dispensable, the customers may decide not to purchase a launch guarantee covering their launch services. Therefore, a certain number of Arianespace customers choose not to be insured for their launch. In fact, for [20-30]% of the launches performed by Arianespace over the 2012-2014 period, customers did not insure their launch³⁷⁵.
- (603) Moreover, the choice of insurance is ultimately made by the final customer, that is to say, the satellite operator itself, and the possible cost of insurance (like the cost of the launch services itself) is passed on by the satellite manufacturer to the satellite operator.
- (604) Finally, the vertical relationship with Airbus as a satellite manufacturer remains limited [...] ³⁷⁶.
- (605) Given the very limited significance of Arianespace's activities in the space insurance sector, the presence of alternative service providers and the additional fact that neither Airbus (nor its clients to any significant extent) resort to the LRG for launches performed by Arianespace, the Commission concludes that it is not likely that post-transaction the Parties would have the ability and the incentive to adopt an input foreclosure strategy vis-à-vis satellite operators and satellite manufacturers as regards space insurance services.

11.2. Customer foreclosure

- (606) Given the very limited significance of Airbus as a customer of space insurance services both at the level of its activities in satellite manufacturing and satellite operation (resulting from Airbus low market shares in satellite operation and the low percentage of IOD contracts), the Commission concludes that it is not likely that Airbus would have the ability and the incentive to adopt a customer foreclosure strategy vis-à-vis competitors of Arianespace in the market for space insurance services.

11.3. Conclusion on the competitive assessment of the relationship between (i) Arianespace as an insurance service provider and (ii) Airbus as a satellite operator and satellite manufacturer

- (607) In view of recitals (601) to (606), the Commission concludes that the transaction does not lead to a significant impediment to effective competition due to the vertical relationship between the Parties' activities in the markets for space insurance services and (i) the markets for satellite operation and (ii) the markets for satellites.

³⁷⁵ Parties' reply to the Commission's request for information n° 10, 21.01.2016, question 3.

³⁷⁶ Parties' reply to the Commission's request for information n° 10, 21.01.2016, question 1.

12. Competitive Assessment: Vertical relationship between (i) Arianespace as a launch services provider and (ii) Airbus as a satellite operator

12.1. Input foreclosure

- (608) Airbus as a satellite operator represents only a very small proportion of all accessible launches, so that Arianespace would not likely have any incentive to foreclose other satellite operators (that is to say, the bulk of its customer base) for the launch of their satellites in order to favour Airbus satellite operation activities.
- (609) Airbus is not active in the operation of civil telecommunication satellites and has limited market positions for both the sale of military telecommunication satellite capacities and Earth imagery. In both sectors, Airbus is facing competitors with much stronger market positions, respectively Xtar for military telecommunication and DigitalGlobe for Earth imagery. Arianespace would therefore have no incentive to favour Airbus to the detriment of those much more significant competitors.
- (610) Also, neither Xtar (which represents [80-90]% of the sales of military telecommunication satellite capacities) nor DigitalGlobe (accounting for [60-70]% of the sales/licencing of Earth imagery) have ever purchased launch services from Arianespace. DigitalGlobe in particular has launched its Worldview satellites with ULA.
- (611) On the basis of the market investigation, the Commission therefore considers that it is not likely that post-transaction the Parties would have the ability and the incentive to adopt an input foreclosure vis-à-vis Airbus' competitors in the markets for satellite operation.

12.2. Customer Foreclosure

- (612) Airbus does not represent a significant share of the demand for GTO launch services. Over 2007-2012 period, Airbus accounted for [...] launches out of 133 GTO satellites launched in the open worldwide market. Therefore, Airbus does not represent any significant share of the demand for GTO launch services.
- (613) As regards satellites launched to non-GTO, similarly, Airbus accounts for a very limited part of the market and does not represent any significant share of the demand for non-GTO launch services. In fact, in the last five years Airbus contracted only [...] out of 43 non-GTO launches in the worldwide open market. In addition, [...].
- (614) Finally, the selection of Arianespace as a launch services provider for the GTO satellite operations ultimately lies with [...] and ESA, which implies that Airbus has no say as regards the launch services provider.
- (615) On the basis of the market investigation, the Commission therefore considers that it is not likely that post-transaction the Parties would have the ability and the incentive to adopt a customer foreclosure vis-à-vis Arianespace's competitors in the market for launch services.

12.3. Conclusion on the competitive assessment of the vertical relationship between (i) Arianespace as a launch services provider and (ii) Airbus as a satellite operator

- (616) In view of recitals (608) to (615), the Commission concludes that the transaction does not lead to a significant impediment to effective competition due to the vertical relationship between the Parties' activities in the markets for launch services and the markets for satellite operations.

13. Overall conclusion on the competitive assessment of the transaction

- (617) As illustrated in Section 7.2, in its competitive assessment of the transaction, the Commission concluded that the transaction leads to a significant impediment to effective competition in relation to the Parties' activities in the markets for launch services and the markets for satellites, as regards the flows of sensitive information from (i) Arianespace to Airbus in relation to other satellite manufacturers and (ii) Airbus to Arianespace in relation to other launch services providers.
- (618) On the other hand, the Commission concludes that the transaction does not lead to a significant impediment to effective competition due to the:
- (a) relationship between the Parties' activities in the markets for launch services and the markets for satellites, as regards foreclosure strategies (namely those resulting from bundling, input foreclosure or technical discrimination) – Sections 7.3 - 7.6;
 - (b) vertical relationship between the Parties' activities in the market for launchers exploited by Arianespace and the markets for launch services – Section 8;
 - (c) vertical relationship between the Parties' activities in the markets for launch services and the market for payload dispensers – Section 9;
 - (d) vertical relationship between the Parties' activities in the markets for launch services and the market for payload adapters – Section 10;
 - (e) vertical relationship between the Parties' activities in the markets for space insurance services and (i) the markets for satellite operation and (ii) the markets for satellites – Section 11;
 - (f) vertical relationship between the Parties' activities in the markets for launch services and the markets for satellite operations – Section 12.
- (619) In the next section, the Commission will examine the commitments put forward by the Parties to address the Commission's competition concerns as regards the flows of sensitive information.

14. Commitments

14.1. Framework for assessment of commitments

- (620) Where a concentration raises competition concerns in that it could significantly impede effective competition, the parties may seek to modify the concentration in order to resolve the competition concerns and thereby gain clearance of their merger³⁷⁷.
- (621) The Commission only has power to accept commitments that are capable of rendering the concentration compatible with the internal market in that they will prevent a significant impediment to effective competition in all relevant markets where competition concerns were identified³⁷⁸. To that end, the commitments have to

³⁷⁷ Commission notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004 (the “Remedies Notice”), OJ 22.10.2008, C 267, p. 1, paragraph 5.

³⁷⁸ Remedies Notice, paragraph 9.

eliminate the competition concerns entirely³⁷⁹ and have to be comprehensive and effective from all points of view³⁸⁰. At the same time, the commitments must be proportionate to the competition concerns identified³⁸¹.

- (622) In assessing whether proposed commitments are likely to eliminate competition concerns, the Commission considers all relevant factors including *inter alia* the type, scale and scope of the commitments, judged by reference to the structure and particular characteristics of the market in which those concerns arise, including the position of the parties and other participants on the market³⁸². Moreover, commitments must be capable of being implemented effectively within a short period of time³⁸³.

14.2. Procedure

- (623) In order to render the transaction compatible with the internal market in relation to the flows of sensitive information between Arianespace and Airbus as regards competitors on the markets for (i) launch services and (ii) satellites, the Parties submitted commitments pursuant to Article 8(2) of the Merger Regulation on 4 May 2016 (the "First Commitments").
- (624) The Commission launched a market test of the First Commitments on 4 May 2016 (the "market test").
- (625) Following the market test, the Parties submitted revised commitments on 20 May 2016 (the "Final Commitments") aimed at addressing the shortcomings identified with regard to the First Commitments.

14.3. The First Commitments

14.3.1. Description of the proposed commitments

- (626) The First Commitments submitted by the Parties included provisions regarding (i) firewalls and (ii) employment restrictions both at the level of Airbus, ASL and Arianespace. The duration of the remedies proposed was set at 15 years.

14.3.1.1. Firewalls

- (627) First, the Parties proposed to commit to set up firewalls in order to prevent exchanges of "Launch Services and Satellite Confidential Information" between (i) ASL/Arianespace and (ii) Airbus.

³⁷⁹ Case C-202/06 P, *Cementbouw Handel & Industrie v Commission*, EU:C:2007: 814, paragraph 54: "it is necessary, when reviewing the proportionality of conditions or obligations which the Commission may, by virtue of Article 8(2) of Regulation No 4064/89, impose on the parties to a concentration, not to determine whether the concentration still has a Community dimension after those conditions or obligations have been complied with, but to be satisfied that those conditions and those obligations are proportionate to and would entirely eliminate the competition problem that has been identified".

³⁸⁰ Remedies Notice, paragraph 9 and 61.

³⁸¹ Recital 30 of the Merger Regulation. The General Court set out the requirements of proportionality as follows: "the principle of proportionality requires measures adopted by Community institutions not to exceed the limits of what is appropriate and necessary in order to attain the objectives pursued; when there is a choice between several appropriate measures recourse must be had to the least onerous, and the disadvantages caused must not be disproportionate to the aims pursued" (*T-177/04 easyJet v Commission* [2006] ECR II-1931, paragraph 133).

³⁸² Remedies Notice, paragraph 12.

³⁸³ Remedies Notice, paragraph 9.

- (628) Launch Services and Satellite Confidential Information was defined in the First Commitments as competitively sensitive information that is not in the public domain relating to the launch services activities of ASL/Arianespace and its relations with prime contractors for satellites, other than Airbus DS Satellites ("Third Party Satellite Prime Contractors"). As such this included (i) information on the identity of Arianespace's potential customers and the offers made, (ii) information on the identity of Arianespace's customers or on the specificities of the contracts/missions/satellites prior to the public announcement of the contract/launch, (iii) detailed manifest (information on the identity of customers and their attributed slots or possible free slots), and (iv) competitively sensitive technical information regarding ongoing or future development projects relating to satellites to be launched by Arianespace, as currently covered by non-disclosure agreements between Arianespace and Third Party Satellite Prime Contractors (including technical information relating to the compatibility between satellites/platforms and launchers). Launch Services and Satellite Confidential Information also included "Third Party Satellite Prime Contractor Key Confidential Information".
- (629) Third Party Satellite Prime Contractor Key Confidential Information was defined as competitively sensitive information that is not in the public domain, as currently covered by non-disclosure agreements between Arianespace and Third Party Satellite Prime Contractors, and which would allow Airbus DS Satellites to determine critical and confidential elements of a Third Party Satellite Prime Contractor's commercial offers or business development strategy, namely, the identity of potential customers of the Third Party Prime Contractor and the key competitively sensitive technical and financial elements contained in its commercial offers to potential customers.
- (630) Second, the Parties proposed to commit to set up firewalls to prevent exchanges of "Third Party Launch Services Provider Key Confidential Information" from Airbus DS Satellites to Arianespace/ASL. These firewalls would cover commercially sensitive information relating to the launch services of Arianespace's rivals.
- (631) Third Party Launch Services Provider Key Confidential Information was defined as commercially sensitive information relating to the launch services of supplier of launch services other than Arianespace ("Third Party Launch Services Provider"), as covered by non-disclosure agreements between Airbus DS Satellites and the Third Party Launch Services Provider.
- (632) Third, in order to ensure the full implementation of the firewalls, the Parties proposed to commit to separate the IT network of ASL/Arianespace from the IT networks of Airbus and Safran.

14.3.1.2. Employment restrictions

- (633) In order to further reinforce the provisions on firewalls, the Parties proposed to commit to prohibit the appointment of Airbus' employees as Arianespace CEO or board/committee members.
- (634) Finally, the Parties proposed to commit to ASL/Arianespace employees with access to competitively sensitive information being made subject to a waiting period of [...] before being allowed to transfer to the satellite division of Airbus.

14.3.2. Commission's assessment of the First Commitments

- (635) The market test consisted of questionnaires sent to satellite primes, launch services providers, satellite operators as well as to one sub-systems manufacturer and one launcher prime.

14.3.2.1. Results of the market test

(636) The results of the market test were mixed. A majority of respondents considered that the First Commitments would remove the competition concerns in relation to flows of information regarding rival satellite manufacturers from ASL/Arianespace to Airbus³⁸⁴. In relation to flows of information regarding rival launch services providers from Airbus to Arianespace, the opinions were more divided as to the effectiveness of the First Commitments³⁸⁵. Nevertheless, in both cases the Commission received comments by market participants as to how the commitments could be improved.

(i) Firewalls

(637) First, with regard to the definition of Launch Services and Satellite Confidential Information slightly more than half of the respondents to the market test considered that the definition was sufficiently broad³⁸⁶. However, other respondents suggested among others the following improvements³⁸⁷: (i) to include in the definition information exchanged between Arianespace and Third Party Satellite Prime Contractors on launch pricing, launch services contract terms and conditions (including but not limited to schedule) and insurance pricing and conditions; (ii) not to limit the definition to information currently covered by non-disclosure agreements; and (iii) to define the notion of competitively sensitive technical information as covering all technical information exchanged between any third party satellite manufacturer and ASL/Arianespace.

(638) Second, regarding the definition of Third Party Satellite Prime Contractor Key Confidential Information, slightly more than half of respondents to the market test considered that the definition was sufficiently broad³⁸⁸. Other participants suggested the following substantive improvements³⁸⁹: (i) not to limit the definition to information currently covered by non-disclosure agreements; (ii) to define the notion of competitively sensitive technical information as covering all third party satellite prime contractor information exchanged with ASL/Arianespace; (iii) to include any information that the satellite owner considers non-public and proprietary which, if publicly disclosed, could cause competitive harm to the data owner; (iv) not to refer in the definition to "key" competitively sensitive technical or financial elements; and, (v) to include information on pricing and contract terms and conditions (including but not limited to schedule).

(639) Third, with regard to the definition of Third Party Launch Services Provider Key Confidential Information, more than half of the respondents submitted that the definition was sufficiently broad³⁹⁰. However, other respondents suggested the following improvements³⁹¹: (i) to include any information that the launch services provider considers non-public and proprietary which, if publicly disclosed, could cause competitive harm to the data owner; and, (ii) to include information on pricing and contract terms and conditions (including but not limited to schedule).

³⁸⁴ Replies to question 6 of Questionnaire Q7 – commitments market test questionnaire.
³⁸⁵ Replies to question 7 of Questionnaire Q7 – commitments market test questionnaire.
³⁸⁶ Replies to question 1 of Questionnaire Q7 – commitments market test questionnaire.
³⁸⁷ Replies to question 1.1 Questionnaire Q7 – commitments market test questionnaire.
³⁸⁸ Replies to question 2 of Questionnaire Q7 – commitments market test questionnaire.
³⁸⁹ Replies to question 2.1 Questionnaire Q7 – commitments market test questionnaire.
³⁹⁰ Replies to question 3 of Questionnaire Q7 – commitments market test questionnaire.
³⁹¹ Replies to question 3.1 Questionnaire Q7 – commitments market test questionnaire.

(ii) Employment restrictions

- (640) Overall, around half of the respondents to the market test considered that the modalities of the employment restrictions included in the First Commitments were adequate complements to the firewalls in order to prevent information flows and guarantee the operational independence of Arianespace vis-à-vis Airbus³⁹².
- (641) However, many respondents made suggestions to improve the employment restrictions, such as³⁹³: (i) to apply a waiting period of [...] also to Airbus employees who had access to sensitive information before they are hired by ASL/Arianespace; (ii) to expand the restrictions to include all employees of Airbus, ASL and Arianespace who have had access to launch services provider or satellite confidential information; (iii) to expand the categories of executive positions in Arianespace (such as CEO, board/committee members) that cannot be filled by Airbus employees; (iv) to include a prohibition for all Arianespace staff to transfer to an Airbus group entity; (v) to provide that during the [...] waiting period, ASL/Arianespace employees may not have access to satellite manufacturer information at ASL/Arianespace before being allowed to transfer to the satellite division of Airbus; (vi) to provide that former ASL / Arianespace employees cannot be hired by the satellite division of Airbus if they were employed by ASL/Arianespace within the past[...]; and (vii) to include a prohibition on Airbus' employees and Arianespace's employees (including any independent directors) to be appointed as the CEO, CFO, President or board/committee members of, respectively, Arianespace and Airbus. One respondent also argued that a commitment on exchange of information is almost impossible to verify and monitor³⁹⁴.

(iii) Duration

- (642) With regard to the duration of the commitments, around half of the respondents considered that the duration of 15 years was sufficient³⁹⁵. However, respondents also suggested some improvements³⁹⁶, namely (i) to maintain the obligations indefinitely or as long as ASL retains sole control over Arianespace; or (ii) to extend the period to 20-25 years; or (iii) to provide for a possible renewal of the commitments after their initial validity, for example depending on how the market has evolved during the period.

(iv) Other comments

- (643) Finally, while half of the respondents did not foresee difficulties or risks in the implementation and monitoring of the commitments³⁹⁷, more than half of them replied that they had suggestions to improve the effectiveness of the commitments³⁹⁸. Respondents suggested, for example: (i) to provide for penalties in case of non-compliance; (ii) to implement an Ombudsman System in order to receive claims from outside entities; (iii) to provide for Government oversight; (iv) to require an electronic marking of documents; and (v) in relation to the Launch Manifest a

³⁹² Replies to question 4 Questionnaire Q7 – commitments market test questionnaire.
³⁹³ Replies to question 4.1 Questionnaire Q7 – commitments market test questionnaire.
³⁹⁴ Replies to question 4.1 Questionnaire Q7 – commitments market test questionnaire.
³⁹⁵ Replies to question 5 Questionnaire Q7 – commitments market test questionnaire.
³⁹⁶ Replies to question 5.1 Questionnaire Q7 – commitments market test questionnaire.
³⁹⁷ Replies to question 8 Questionnaire Q7 – commitments market test questionnaire.
³⁹⁸ Replies to question 9 Questionnaire Q7 – commitments market test questionnaire.

commitment from ASL to continue to be transparent and to apply the same principles³⁹⁹.

- (644) One respondent argued in favour of a structural commitment, consisting in achieving a 50/50 balance in the management of Arianespace between representatives of ASL and the remaining shareholders, with the possibility to have in the Board a "public representative" to be appointed by the governments (possibly through ESA). According to the respondent, this measure would allow maintaining the neutrality of Arianespace and making sure the public interest is taken into account in Arianespace's decisions⁴⁰⁰.

14.3.2.2. Commission's assessment of the First Commitments

- (645) In light of the results of the market test, the Commission considered that the First Commitments were a good starting point to remove the competition concerns identified by the Commission with regard to the flows of confidential information in relation to launch services and satellites. However, as also indicated by some respondents to the market test, the First Commitments could not fully remove the concerns.
- (646) First, with regard to the firewalls, the Commission considered that the definitions of the different types of confidential information covered by the firewalls in the First Commitments, presented several shortcomings and should therefore be improved. In particular, definitions of "Competitively Sensitive Technical Information" and "Competitively Sensitive Information" were missing in the First Commitments. However, the Commission did not consider it necessary, as argued by one respondent to the market test, that the commitments should cover the exchange of *all* information (including all technical information) between any third party satellite manufacturer and ASL/Arianespace given that the transaction leads to a significant impediment to effective competition only as regards the flows of *sensitive* information.
- (647) Another shortcoming of the First Commitments was that most definitions were exhaustive (use of "i.e.") which limited their application to specific situations listed and were therefore not flexible enough. Relatedly, the definition of Launch Services and Satellite Confidential Information did not expressly refer to information on launch pricing, launch services contract terms and conditions (including but not limited to schedule) and insurance pricing and conditions, which is also confidential information and should therefore be covered by the firewalls. Furthermore, several definitions referred to the types of information "as currently covered by non-disclosure agreements" between Arianespace and Third Party Satellite Prime Contractors or between Airbus DS Satellites and the Third Party Launch Services Provider. However, in line with the replies to the market test, the Commission considered that the firewalls should apply irrespective of whether the information is currently covered by such non-disclosure agreements.
- (648) Second, in relation to the employment restrictions, the First Commitments provided for a "waiting period" of [...] for ASL/Arianespace employees with access to competitively sensitive information before being allowed to transfer to the satellite division of Airbus. The Commission considered that the waiting period should also apply to Airbus DS Satellites employees moving to ASL/Arianespace, in order to

³⁹⁹ Replies to questions 8.1 and 10 Questionnaire Q7 – commitments market test questionnaire.

⁴⁰⁰ Replies to question 9.1 Questionnaire Q7 – commitments market test questionnaire.

reinforce the firewalls which also covered information transmitted from Airbus DS Satellites to ASL/Arianespace. However, the First Commitments did not include a relevant provision.

- (649) Third, the duration of the First Commitments was limited to 15 years. While the Commission may accept that non-divestiture remedies are limited in their duration, the acceptability of a time limit and the duration depends on the individual circumstances of the case⁴⁰¹. In the present case, the Commission considered that the remedies should apply for a longer period than offered by the Parties in light of the specific characteristics of the space industry, which has long product development and life cycles. Indeed, one respondent noted: "*Taking into account the mostly lengthy process of implementing a space programme (some programs have spanned over more than 30 years), the proposed period of 15 years is too short*"⁴⁰². Another respondent indicated that "*Ariane 6 will reach full capacity only 10 years from now, so 15 years will be insufficient*"⁴⁰³.
- (650) Fourth, given their long duration and complexity, non-divestiture commitments often require a very high monitoring effort and specific monitoring tools in order to allow the Commission to conclude that they will effectively be implemented⁴⁰⁴. In the present case, the First Commitments provided for the monitoring to be carried out by a trustee. Nevertheless, also in light of the results of the market test, in addition to the involvement of the trustee to oversee the implementation of the commitments, the Commission considered necessary also the establishment of a procedure for a dispute resolution mechanism and the possibility for the commitments to be enforceable by the market participants themselves.
- (651) Fifth, as regards the need for a structural commitment at the management level of Arianespace, as argued by one respondent (see recital (644)), in line with the remaining respondents to the market test, the Commission considered that solid firewalls complemented by employment restrictions would be a sufficiently effective measure to address the identified concerns regarding the risk of flows of sensitive information in their entirety. In addition, in the Commission's view, the structural measure suggested by the respondent would fundamentally interfere with the management powers of the controlling shareholders and, in view of the availability of an equally effective and less onerous measure, would be disproportionate in the present case⁴⁰⁵.
- (652) Overall, in light of a number of shortcomings of the First Commitments set out in recitals (645) to (651), the Commission concluded that the First Commitments were not capable of rendering the transaction compatible with the internal market and informed the Parties accordingly.

14.4. The Final Commitments

- (653) Following the market test, the Parties submitted the Final Commitments aimed at addressing the shortcomings identified with regard to the First Commitments. Under the Final Commitments, the firewalls and employment restrictions have been

⁴⁰¹ Remedies Notice, paragraph 70.

⁴⁰² Reply to question 5.1 Questionnaire Q7 – commitments market test questionnaire.

⁴⁰³ Reply to question 5.1 Questionnaire Q7 – commitments market test questionnaire.

⁴⁰⁴ Remedies Notice, paragraph 130.

⁴⁰⁵ Recital 30 of the Merger Regulation provides that "*commitments shall be proportionate to the competition problem.*"

improved and an arbitration procedure has been introduced. Moreover, the duration of the commitments as regards firewalls has been extended to 25 years. The Final Commitments are further described and assessed in Sections 14.4.1 and 14.4.2.

14.4.1. Description of the Final Commitments

14.4.1.1. Enhanced firewalls with a more comprehensive scope

- (654) First, the Parties have submitted a commitment consisting of the set-up of firewalls in order to prevent exchanges of "Launch Services and Satellite Confidential Information" between (i) ASL/Arianespace and (ii) Airbus.
- (655) The definition of the different categories of information has been improved and made more comprehensive in particular in response to the results of the market test.
- (656) Launch Services and Satellite Confidential Information is now defined as competitively sensitive information relating to the launch services activities of ASL/Arianespace in relation with Third Party Satellite Prime Contractors (including Third Party Satellite Prime Contractor Key Confidential Information), including but not limited to (i) information on the identity of Arianespace's potential customers and the offers made or in preparation, (ii) information on the identity of Arianespace's customers or on the specificities of the contracts/missions/satellites prior to the public announcement of the contract/launch, (iii) detailed manifest (information on the identity of customers and their attributed slots or possible free slots), (iv) technical information exchanged between any Third Party Satellite Prime Contractor and ASL/Arianespace relating to third party satellites to be launched by Arianespace and including ongoing or future satellite development projects, or the compatibility between satellites and launchers, or Third Party Satellite Prime Contractor's technology or intellectual property developed for, or developed with, or provided to Arianespace, and (v) information exchanged between any Third Party Satellite Prime Contractor and ASL/Arianespace regarding launch prices, non-standard launch services contractual terms and conditions (including but not limited to schedule) and insurance prices and conditions for the launch of the Third Party Satellite Prime Contractor's satellites by Arianespace.
- (657) Third Party Satellite Prime Contractor Key Confidential Information is now defined as competitively sensitive information that would allow Airbus DS Satellites to determine confidential elements of a Third Party Satellite Prime Contractor's commercial offers or business development strategy, including but not limited to the identity of potential customers of the Third Party Satellite Prime Contractor and the technical and financial terms and conditions contained in its commercial offers to potential customers.
- (658) Second, the Parties committed to set up firewalls to prevent exchanges of Third Party Launch Services Provider Key Confidential Information between (i) Airbus and (ii) Arianespace/ASL. These firewalls cover commercially sensitive information relating to the launch services of Arianespace's rivals.
- (659) Third Party Launch Services Provider Key Confidential Information is defined in the Final Commitments as competitively sensitive information relating to the launch services of a Third Party Launch Services Provider.

14.4.1.2. Reciprocal employment restrictions

- (660) In order to further reinforce the provisions on firewalls described in recitals (654) to (659), the Parties have submitted a remedy consisting in a prohibition on Airbus' employees to be appointed as Arianespace CEO or board/committee members.

(661) The Parties also defined "Airbus DS Satellites Affected Personnel" which comprises executives and employees of Airbus DS Satellites in charge of interactions and negotiations with Third Party Launch Services Providers and "ASL/Arianespace Affected Personnel" which comprises all ASL/Arianespace executives and employees, except for personnel that does not have access to Launch Services and Satellite Confidential Information and Launcher Roadmap Sensitive Information.

(662) Following the market test, the waiting period has been made reciprocal. Therefore, (i) ASL/Arianespace Affected Personnel cannot not be hired by Airbus DS Satellites for a period of [1-5] years after the date they terminated their employment as ASL/Arianespace Affected Personnel and (ii) Airbus DS Satellites Affected Personnel cannot not be hired by ASL/Arianespace for a period of [1-5] years after the date they terminated their employment as Airbus DS Satellites Affected Personnel.

14.4.1.3. Arbitration in all non-disclosure agreements as regards the implementation of commitments

(663) The Parties have also committed that all non-disclosure agreements entered into by Arianespace with Third Party Satellite Prime Contractors and by Airbus DS Satellites with Third Party Launch Services Providers will include an arbitration clause in case of any dispute relating to the non-disclosure agreement or the implementation of the commitments.

14.4.1.4. Extended duration

(664) The duration of the Final Commitments has been extended from 15 years to 25 years. Only the [1-5] year waiting period for ASL/Arianespace and Airbus DS Satellites personnel with access to sensitive information to be hired by respectively Airbus DS Satellites and ASL/Arianespace, will apply for a period of 15 years.

14.4.2. Commission's assessment of the Final Commitments

(665) The Commission considers that the Final Commitments address the shortcomings identified in the First Commitments. The Final Commitments therefore remove the significant impediment of effective competition identified by the Commission.

(666) Overall, the enhanced firewalls and employment restrictions will ensure that post-transaction, Airbus does not have access to any confidential information held by Arianespace to the detriment of Third Party Satellite Prime Contractors. Reciprocally, the firewalls will also ensure that competitively sensitive information communicated by competitors of Arianespace to Airbus as a satellite prime contractor will not be shared with Arianespace.

(667) First, the Parties will implement firewall measures to guarantee that post-transaction, Airbus will not have access to Arianespace's competitively sensitive information regarding other satellite manufacturers, or other information regarding ASL/Arianespace launch services activities that could hinder competition between satellite prime contractors, as well as to prevent competitively sensitive information from other launch services providers to be shared with ASL/Arianespace by Airbus DS Satellites.

(668) The Final Commitments contain an overall definition of "Competitively Sensitive Information", which addresses a shortcoming of the First Commitments and increases the legal certainty in relation to the scope of the information covered. "Competitively Sensitive Information" is defined as "*information that is not in the public domain, the disclosure of which could result in a serious harm to the*

commercial interests of a Third Party Satellite Prime Contractor and/or a Third Party Launch Services Provider vis-à-vis its competitors".

- (669) With regard to the exchanges of competitively sensitive information of Airbus' competitors, the firewalls between ASL/Arianespace, on the one hand, and Airbus, on the other hand, will be implemented to cover the following information:
- (a) Competitively Sensitive Information transmitted to Arianespace by satellite manufacturers other than Airbus (for example, commercial and technical information about their satellites and customers);
 - (b) Competitively Sensitive Information regarding the launch services of Arianespace and involving satellite manufacturers other than Airbus (including offers made by Arianespace to its prospects or offers in preparation, identity of customers, specificities of contracts/missions/satellites prior to public announcement, detailed manifest);
 - (c) Competitively Sensitive Information relating to non-Airbus satellites to be launched by Arianespace and regarding ongoing or future satellite development projects, or the compatibility between satellites and launchers, or technology of satellite manufacturers other than Airbus or intellectual property developed for, or developed with, or provided to Arianespace;
 - (d) Competitively Sensitive Information exchanged between satellite manufacturers other than Airbus and ASL/Arianespace regarding launch prices, non-standard launch services contractual terms and conditions (including but not limited to schedule) and insurance prices and conditions for the launch of non-Airbus satellites by Arianespace; and,
 - (e) Competitively Sensitive Information that would allow Airbus DS Satellites to determine confidential elements of other satellite prime contractors' commercial offers or business development strategy, including but not limited to the identity of their potential customers and the technical and financial terms and conditions contained in its commercial offers to these potential customers.
- (670) The list of information presented in recital (669) is not exhaustive, which guarantees that the Final Commitments are flexible enough to accommodate other types of competitively sensitive information not specifically listed depending on circumstances.
- (671) In relation to Arianespace's competitors, Competitively Sensitive Information relating to the launch services of a launch services provider other than Arianespace will not be shared with Arianespace, either directly or through ASL.
- (672) The Commission notes that in the Final Commitments, the firewalls apply irrespective of whether the information concerned is currently covered by non-disclosure agreements. The Commission considers that therefore the scope of the confidential information does not depend on the current non-disclosure agreements.
- (673) The firewalls will be reinforced by the signature of the appropriate confidentiality agreements by the relevant employees, provision of information and regular compliance trainings, and the separation of the relevant teams and the IT networks of ASL/Arianespace on the one hand and Airbus/Safran on the other hand.
- (674) The Final Commitments provide that the non-disclosure agreements signed (i) between Arianespace and satellite prime contractors, and (ii) between Airbus and launch services providers shall contain an arbitration clause that applies in the event of any dispute relating to the implementation of the Commitments. If the parties to the non-disclosure agreement fail to reach an amicable solution, the dispute will be

settled under the rules of arbitration of the International Chamber of Commerce. Through this procedure market participants will therefore be able to render the Final Commitments enforceable themselves.

- (675) Second, the Final Commitments include employment restrictions to ensure the operational independence of Arianespace vis-à-vis Airbus. With that objective, the firewalls will be further reinforced by the following employment restrictions:
- (a) No executive or employee of Airbus will be appointed as the CEO of Arianespace or to the board of directors, the *Comité de Stratégie et d'Audit* or the Executive Committee of Arianespace;
 - (b) No ASL/Arianespace executives and employees, except those currently having no access to Competitively Sensitive Information regarding competing satellite prime contractors and launcher-satellite architecture and compatibility will hold simultaneously a position at Airbus Group, and reciprocally;
 - (c) ASL/Arianespace executives and employees, except those having no access to Competitively Sensitive Information regarding competing satellite prime contractors and launcher-satellite architecture and compatibility will not be hired by Airbus DS Satellites for a period of [1-5] years after the date they terminated their employment as ASL/Arianespace Affected Personnel. They will also have to sign the appropriate confidentiality agreement before being transferred to non-satellite activities within Airbus Group;
 - (d) Reciprocally, executives and employees of Airbus's satellite division in charge of interactions and negotiations with launch services providers will not be hired by ASL/Arianespace for a period of [1-5] years after the date they terminated their employment as Airbus DS Satellites Affected Personnel. The Commission considers that the application of the "waiting period" of [1-5] years to Airbus DS Satellites Affected Personnel wishing to move to ASL/Arianespace reinforces the firewalls preventing the communication of Third Party Launch Services Provider Key Confidential Information to ASL/Arianespace and addresses a shortcoming of the First Commitments.
- (676) Third, as regards the duration of the commitments, the results of the market test showed that the initial duration of 15 years proposed by the Parties was deemed to be insufficient by many market participants. The Parties have committed to extend the duration of the remedies to a period of 25 years. This appears to be an appropriate duration in the present case, given the product development and life cycles of the space industry.
- (677) Fourth, the monitoring of the Final Commitments will be ensured by the monitoring trustee. The monitoring trustee will have extensive powers to verify that the firewalls and employment measures are implemented, including having full access to the Parties' documents, personnel and facilities. Also, the Final Commitments explicitly provide that the monitoring trustee may request the expertise of ESA to assess the compliance of the Parties with the commitments.
- (678) In light of all the preceding considerations, the Commission concludes that the Final Commitments address in full the significant impediment to effective competition identified by the Commission as resulting from the transaction in respect of the flows of sensitive information in relation to launch services and satellites.
- (679) The Commission therefore concludes that, subject to full compliance with the Final Commitments given by the Parties, the transaction would not significantly impede effective competition in the internal market or a substantial part thereof. The

transaction should therefore be declared to be compatible with the internal market and the EEA Agreement pursuant to Article 2(2) and Article 8(2) of the Merger Regulation and Article 57 of the EEA Agreement, subject to full compliance with the commitments in Annex to this Decision.

14.5. Overall conclusion

(680) In view of the improvements made, the Commission concludes that the Final Commitments are adequate and sufficient to eliminate entirely all the identified significant impediment to effective competition in the markets for satellites and launch services with regard to the information flows between Airbus and Arianespace.

15. Conditions and obligations

(681) Pursuant to the second subparagraph of Article 8(2) of the Merger Regulation, the Commission may attach to its decision conditions and obligations intended to ensure that the undertakings concerned comply with the commitments they have entered into vis-à-vis the Commission with a view to rendering the concentration compatible with the internal market.

(682) The fulfilment of the measure that gives rise to the structural change of the market is a condition, whereas the implementing steps which are necessary to achieve this result are generally obligations on the Parties. Where a condition is not fulfilled, the Commission's decision declaring the concentration compatible with the internal market is no longer applicable. Where the undertakings concerned commit a breach of an obligation, the Commission may revoke the clearance decision in accordance with Article 8(6) of the Merger Regulation. The undertakings concerned may also be subject to fines and periodic penalty payments under Articles 14(2) and 15(1) of the Merger Regulation.

(683) In accordance with the basic distinction described in recital (681) as regards conditions and obligations, all requirements set out in the commitments submitted by the Parties on 20 May 2016 are considered to constitute obligations within the meaning of Article 8(2) of the Merger Regulation.

(684) The full text of the commitments is attached as an Annex to this Decision and forms an integral part thereof.

HAS ADOPTED THIS DECISION:

Article 1

The notified operation whereby Airbus Safran Launchers (France), a joint venture jointly controlled by Airbus Group S.E. (the Netherlands) and Safran S.A. (France) acquires sole control of Arianespace Participation S.A. and Arianespace S.A. (France) within the meaning of Article 3(1)(b) of the Merger Regulation is hereby declared compatible with the internal market and the EEA Agreement.

Article 2

Article 1 is subject to compliance with the obligations set out in the Annex.

Article 3

This Decision is addressed to:

Airbus Safran Launchers Holding SAS
60-62 rue Camille Desmoulins
92130 Issy-les-Moulineaux
France

Done at Brussels, 20.7.2016

For the Commission

(Signed)

Margrethe VESTAGER

Member of the Commission

Case M.7724 – ASL/Arianespace

COMMITMENTS TO THE EUROPEAN COMMISSION

In accordance with Article 8(2) of Council Regulation (EC) No 139/2004 (the “**Merger Regulation**”), ASL (“**the Notifying Party**”) and its parent companies Airbus Group and Safran acting for themselves and on behalf of ASL (altogether “**the Parties**”) hereby enter into the following commitments (“**Commitments**”) with a view to enable the European Commission (the “**Commission**”) to declare the acquisition of control over Arianespace notified in Case M.7724 (the “**Concentration**”) compatible with the internal market and the functioning of the EEA Agreement by its decision pursuant to Article 8(2) of the Merger Regulation (the “**Decision**”).

The Concentration takes place within the framework of the Resolution on Europe’s Access to Space, adopted by the Council of the European Space Agency meeting at ministerial level on December 2, 2014, calling for a change in governance of the European launcher sector in relation with Ariane 6, and underlining that within this new governance, “*the Joint Venture (ASL) will control the commercial exploitation of the launch service.*”

This text shall be interpreted in light of the Decision, in the general framework of European Union law, in particular in light of the Merger Regulation, and by reference to the Commission Notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004 (the “**Remedies Notice**”).

Section A. Definitions

For the purpose of the Commitments, the following terms shall have the following meaning:

Affiliated Undertakings: undertakings controlled by the Parties, whereby the notion of control shall be interpreted pursuant to Article 3 of the Merger Regulation and in light of the Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings (the “**Consolidated Jurisdictional Notice**”).

Airbus DS Satellites: the Space Systems Business Line of the Airbus Defence and Space Division, with the exception of all activities not related to the design, manufacturing and/or sale of satellites, as well as the Surrey Satellite Technology Ltd company.

Airbus DS Satellites Affected Personnel: executives and employees of Airbus DS Satellites in charge of interactions and negotiations with Third Party Launch Service Providers, as defined in Schedule 3.

Airbus Group: Airbus Group S.E. and its subsidiaries, to the exclusion of ASL. For the avoidance of any doubt, this covers in particular Airbus Defence and Space SAU and Airbus Defence and Space Netherlands.

Ariane Users’ Club: meetings of satellite operators, institutional customers and satellite manufacturers organised by ASL and Arianespace to discuss evolutions of the Ariane launcher family.

Arianespace: Arianespace Participation S.A. and its subsidiary Arianespace S.A., or any subsequent legal form that these entities may take.

ASL/Arianespace Affected Personnel: all ASL/Arianespace executives and employees, except for personnel that does not have access to Launch Services and Satellite Confidential Information and/or Launcher Roadmap Sensitive Information, as defined in Schedule 2.

Closing: the closing of the Concentration.

Competitively Sensitive Information: information that is not in the public domain, the disclosure of which could result in a serious harm to the commercial interests of a Third Party Satellite Prime Contractor and/or a Third Party Launch Service Provider vis-à-vis its competitors.

Conflict of Interest: any conflict of interest that impairs the Monitoring Trustee's objectivity and independence in discharging its duties under the Commitments.

CSA: *Comité de Stratégie et d'Audit* of Arianespace.

Effective Date: the date of adoption of the Decision.

Executive Committee: *Comité exécutif* of Arianespace.

ESA: the European Space Agency.

Launch Services and Satellite Confidential Information: Competitively Sensitive Information relating to the launch services activities of ASL/Arianespace in relation with Third Party Satellite Prime Contractors (including Third Party Satellite Prime Contractor Key Confidential Information), including but not limited to (i) information on the identity of Arianespace's potential customers and the offers made or in preparation, (ii) information on the identity of Arianespace's customers or on the specificities of the contracts/missions/satellites prior to the public announcement of the contract/launch, (iii) detailed manifest (information on the identity of customers and their attributed slots or possible free slots), (iv) technical information exchanged between any Third Party Satellite Prime Contractor and ASL/Arianespace relating to third party satellites to be launched by Arianespace and including ongoing or future satellite development projects, or the compatibility between satellites/platforms and launchers, or Third Party Satellite Prime Contractor's technology and/or intellectual property developed for, or developed with, or provided to Arianespace, and (v) information exchanged between any Third Party Satellite Prime Contractor and ASL/Arianespace regarding launch prices, non-standard launch services contractual terms and conditions (including but not limited to schedule) and insurance prices and conditions for the launch of the Third Party Satellite Prime Contractor's satellites by Arianespace.

Launcher Roadmap Sensitive Information: Competitively Sensitive Information relating to the launcher product roadmap for the Ariane launcher family, including but not limited to the detailed architecture of Ariane 6 and/or the evolutions of Ariane 5, injection orbits, volume of the fairing, capacities regarding launched mass – including lower and upper position technical capacities on the Ariane launcher.

Monitoring Trustee: one or more natural or legal person(s) who is/are approved by the Commission and appointed by the Parties, and who has/have the duty to monitor the Parties' compliance with the Commitments.

Representative of Airbus Group: any employee or executive of Airbus Group.

Schedule: a schedule to these Commitments.

Third Party Launch Service Providers: suppliers of launch services, other than Arianespace.

Third Party Satellite Prime Contractors: prime contractors for satellites, other than Airbus DS Satellites.

Third Party Launch Service Provider Key Confidential Information: Competitively Sensitive Information relating to the launch services of a Third Party Launch Service Provider.

Third Party Satellite Prime Contractor Key Confidential Information: Competitively Sensitive Information that would allow Airbus DS Satellites to determine confidential elements of a Third Party Satellite Prime Contractor's commercial offers or business development strategy, including but not limited to the identity of potential customers of the Third Party Satellite Prime Contractor and the technical and financial terms and conditions contained in its commercial offers to potential customers.

Section B. Commitments to Prevent Any Risk of Exchange of Competitively Sensitive Information - Firewalls

1. The Parties shall implement, or procure to implement, the firewall measures listed below in order to prevent any risk of exchange of Competitively Sensitive Information between ASL/Arianespace and Airbus Group that may provide a competitive advantage to Airbus Group vis-à-vis Third Party Prime Contractors and/or to Arianespace vis-à-vis Third Party Launch Service Providers. For the avoidance of any doubt, the measures listed below do not prevent the necessary exchanges between Airbus Group and ASL/Arianespace in the course of normal business interactions for the launch of an Airbus satellite by Arianespace.

Firewalls Preventing The Communication of Competitively Sensitive Information Regarding Third Party Satellite Prime Contractors to Airbus Group

2. ASL undertakes not to exchange, and that Arianespace shall not exchange, directly or indirectly, in particular *via* commercial networks and local partners, any Launch Services and Satellite Confidential Information with Airbus Group.
3. Launch Services and Satellite Confidential Information shall not be shared with the board of directors of ASL. In particular, the Parties undertake that all launch service agreements (including multi-launch agreements), specific missions or any decision to be taken by Arianespace regarding individual launch services that comply with the financial objectives of Arianespace's approved business plan will not be presented, discussed or be submitted to a vote before the board of directors of ASL.
4. In cases where a launch service agreement or specific mission does not materially comply with the financial objectives of Arianespace's approved business plan, the Parties undertake that only the financial conditions of the contract (*e.g.*, in terms of margin, default risk, warranties, any type of guarantees, payment schedule, but not including the nominal price) may be reported to the board of directors of ASL, to the exclusion of any other provision, including – but not limited to – any information related to the identity of the customer and satellite manufacturer, the technical specificities of the mission, the characteristics of the payload, the characteristics of the payload adapter or dispenser, the launch period and the nominal price.
5. Airbus Group and ASL undertake to ensure separate physical locations between the analysis and mission teams of Airbus DS Satellites on the one hand and ASL/Arianespace on the other hand. Airbus Group and ASL also undertake to maintain separate physical locations between the launch services activities of Arianespace and the technical and commercial activities of Airbus DS Satellites. This does not prevent exchanges between those teams in the course of normal business interactions for the preparation of the launch of an Airbus satellite by Arianespace.
6. ASL undertakes to have its personnel and managers with access to Launch Services and Satellite Confidential Information, including any employee or manager of Arianespace, receive relevant information and training as regards the implementation of the firewalls and sign confidentiality agreements vis-à-vis Airbus Group, in the form set out in Schedule 1 to these Commitments, subject to applicable labour law. The Parties also undertake to set up, under the supervision of the Monitoring Trustee, an adequate mechanism to ensure the continuing awareness of its personnel and managers with access to Launch Services and Satellite Confidential Information regarding the implementation of the firewalls, subject to applicable labour laws.
7. In addition, the Parties undertake to ensure that, subject to applicable labour law, through appropriate information and training, as well as the signing of confidentiality agreements by

Arianespace's personnel in the form set out in Schedule 1 to these Commitments, Third Party Prime Contractor Key Confidential Information shall not be shared outside of Arianespace.

8. Notwithstanding the above, Competitively Sensitive Information relating to future satellite manufacturing agreements not yet signed may be provided by Arianespace to ASL on an anonymised basis only (*i.e.*, without the name of the satellite operator, the name of the satellite manufacturer, the country of operation and of origin of the satellite, unless otherwise provided for under specific laws and regulations) in order to maintain the necessary operational discussions and develop the current commercial synergies between the launcher prime contractor and the launch services operator.

Firewalls Preventing the Communication of Competitively Sensitive Information Regarding Arianespace's Launchers and Technical Information to Airbus Group

9. ASL undertakes not to share, and that Arianespace shall not share, directly or indirectly, Launcher Roadmap Sensitive Information with Airbus Group before it is shared with other Third Party Prime Contractors. In particular, the Parties undertake to maintain regular meetings of the Ariane Users' Club in order to ensure that all Launcher Roadmap Sensitive Information is shared and discussed with satellite operators and satellite manufacturers at the same time and with the same degree of details.
10. ASL undertakes to have its personnel and managers with access to Launcher Roadmap Sensitive Information, including any employee or manager of Arianespace, receive relevant information and training as regards the implementation of the firewalls and sign confidentiality agreements vis-à-vis Airbus Group, in the form set out in Schedule 1 to these Commitments, subject to applicable labour law. ASL also undertakes to set up, under the supervision of the Monitoring Trustee, an adequate mechanism to ensure the continuing awareness of its personnel and managers with access to Launcher Roadmap Sensitive Information regarding the implementation of the firewalls, subject to applicable labour laws.

Firewalls Preventing The Communication of Third Party Launch Service Provider Key Confidential Information to ASL/Arianespace

11. Airbus Group undertakes that Airbus DS Satellites shall not exchange Third Party Launch Service Provider Key Confidential Information with Arianespace, either directly or through ASL. This does not prevent Airbus DS Satellites to use information received from Third Party Launch Service Providers, including the terms and conditions offered (notably in terms of prices and launch slots) in the course of normal business negotiations with ASL/Arianespace for the launch of an Airbus satellite by Arianespace.
12. Airbus Group undertakes to have the personnel and managers of Airbus DS Satellites receive relevant information and training as regards the implementation of the firewalls and sign confidentiality agreements vis-à-vis ASL/Arianespace, in the form set out in Schedule 1 to these Commitments, subject to applicable labour law. The Parties also undertake to set up, under the supervision of the Monitoring Trustee, an adequate mechanism to ensure the continuing awareness of the personnel and managers of Airbus DS Satellites regarding the implementation of the firewalls, subject to applicable labour laws.

Separation of IT Networks

13. In order to ensure the full implementation of the commitments described at paragraphs 2 to 12 above, the Parties commit to the following regarding their respective IT networks.
14. The Parties undertake to separate the IT network of ASL/Arianespace from the IT networks of ASL's parent companies (Airbus Group and Safran) within [...] from Closing. Upon submission of a reasoned request to the Monitoring Trustee, the Monitoring Trustee may grant an extension of the delay to comply with the separation of IT networks. In the meantime, as from Closing, (i) all Launch Services and Satellite Confidential Information and Launcher Roadmap Sensitive Information shall be segregated on ASL/Arianespace servers so as to ensure that Airbus Group and Safran will not have access to it; and (ii) Third Party Launch Service Provider Key Confidential Information shall be segregated on Airbus Group's servers so as to ensure that ASL/Arianespace will not have access to it.

Reinforcement of the Non-Disclosure Agreements between Arianespace and Third Party Satellite Prime Contractors and Airbus DS Satellites and Third Party Launch Service Providers

15. In order to further ensure the full protection of Competitively Sensitive Information, the Parties undertake that all non-disclosure agreements entered into by Arianespace with Third Party Satellite Prime Contractors and by Airbus DS Satellites with Third Party Launch Service Providers shall include the following clause, unless specifically requested otherwise by the other party:

“In the event of any dispute arising out of or relating to this Agreement, or relating to the implementation of the Commitments accepted by the European Commission in case COMP/M.7724 ASL/Arianespace, the Parties shall use their best efforts to reach an amicable settlement. If an amicable settlement cannot be achieved, the dispute shall be referred to [the President of ARIANESPACE/the CEO of Airbus Defence and Space] and of THE COUNTERPARTY, who will use their best efforts to reach a settlement. Should an amicable settlement fail, the dispute shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one arbitrator appointed in accordance with the said Rules. The place of arbitration shall be [TO BE AGREED BETWEEN THE PARTIES]. The language of the proceedings shall be [TO BE AGREED BETWEEN THE PARTIES].”

Section C. Commitments to Ensure the Independence of Arianespace vis-à-vis Airbus Group's Satellite Activities – Governance and Employment Incompatibilities

16. In order to further reinforce the firewall measures described in Section B above and to ensure the operational independence of Arianespace vis-à-vis Airbus DS Satellites, the Parties commit to the following governance and employment incompatibilities measures.
17. The Parties undertake that no Representative of Airbus Group may be appointed to the board of directors of Arianespace, as CEO of Arianespace or as member of the CSA or the Executive Committee of Arianespace.
18. The Parties undertake that the representatives of Airbus Defence and Space SAU and Airbus Defence and Space Netherlands – which, as direct shareholders of Arianespace, are censors of the board of directors of Arianespace and represent the Spanish and Dutch national interests in Arianespace – will continue not to hold any voting right. Launch Services and Satellite Confidential Information and Launcher Roadmap Sensitive Information are in principle not communicated to the board of directors of Arianespace. In any event, should this be the case in circumstances that cannot be foreseen at present, all directors and censors will be held by their legal duty of confidentiality under French law. In any case, Airbus Group undertakes to ensure, through the signing of the appropriate additional confidentiality agreements in the form set out in Schedule 1 to these Commitments, that the censors representing Airbus

Defence and Space SAU and Airbus Defence and Space Netherlands at the board of directors of Ariespace will not share with Airbus Group Launch Services and Satellite Confidential Information or Launcher Roadmap Sensitive Information that would have been provided to them.

19. The Parties undertake that (i) no ASL/Ariespace Affected Personnel shall hold simultaneously a position at Airbus Group, and (ii) no Airbus Group employee or executive (including all members of the executive committee of Airbus Group S.E. and each of its subsidiaries, without limitation, to the exclusion of ASL) shall hold simultaneously a position as ASL/Ariespace Affected Personnel.
20. In addition, the Parties undertake that as from Closing, ASL/Ariespace Affected Personnel shall not be hired by Airbus DS Satellites for a period of [1-5] years after the date they terminated their employment as ASL/Ariespace Affected Personnel. Reciprocally, as from Closing, Airbus DS Satellites Affected Personnel shall not be hired by ASL/Ariespace for a period of [1-5] years after the date they terminated their employment as Airbus DS Satellites Affected Personnel.
21. Should ASL/Ariespace Affected Personnel transfer to an entity of the Airbus Group other than Airbus DS Satellites, the Parties undertake to ensure, through the signing of appropriate confidentiality agreements in the form set out in Schedule 1 to these Commitments, that they will not share any of this information within Airbus Group.

Section D. Monitoring Trustee

Appointment Procedure

22. The Parties shall appoint a Monitoring Trustee to carry out the functions specified in these Commitments for a Monitoring Trustee. The Parties commit not to close the Concentration before the appointment of a Monitoring Trustee.
23. The Monitoring Trustee shall:
 - (i) at the time of appointment, be independent of the Parties and Third Party Prime Contractors and their Affiliated Undertakings;
 - (ii) neither have nor become exposed to a Conflict of Interest;
 - (iii) possess the necessary qualifications to carry out its mandate, for example have sufficient relevant experience as an investment banker or a consultant or an auditor; and
 - (iv) have a European Union nationality, due to the sensitivity of the documentation held by the Parties.
24. The Monitoring Trustee shall be remunerated by the Parties in a way that does not impede the independent and effective fulfilment of its mandate.

Proposal by the Parties

25. No later than two (2) weeks after the Effective Date, the Parties shall submit the name or names of one or more natural or legal persons whom the Parties propose to appoint as Monitoring Trustee to the Commission for approval. The proposal shall contain sufficient information for the Commission to verify that the proposed Monitoring Trustee fulfils the requirements set out in paragraph 23 above and shall include the full terms of the proposed mandate, including all provisions necessary to enable the Monitoring Trustee to fulfil its duties under these Commitments and the outline of a work plan which describes how the Monitoring Trustee intends to carry out its assigned tasks.

Approval or rejection by the Commission

26. The Commission shall have the discretion to approve or reject the proposed Monitoring Trustee and to approve the proposed mandate subject to any modifications it deems necessary for the Monitoring Trustee to fulfil its obligations. If only one name is approved, the Parties shall appoint or cause to be appointed the individual or institution concerned as Monitoring Trustee, in accordance with the mandate approved by the Commission. If more than one name is approved, the Parties shall be free to choose the Monitoring Trustee to be appointed from among the names approved. The Monitoring Trustee shall be appointed within one week of the Commission's approval, in accordance with the mandate approved by the Commission.

New proposal by the Parties

27. If all the proposed Monitoring Trustees are rejected, the Parties shall submit the names of at least two more natural or legal persons within one (1) week of being informed of the rejection, in accordance with paragraphs 22 to 26 of these Commitments.

Monitoring Trustee nominated by the Commission

28. If all further proposed Monitoring Trustees are rejected by the Commission, the Commission shall nominate a Monitoring Trustee, whom the Parties shall appoint, or cause to be appointed, in accordance with a Monitoring Trustee mandate approved by the Commission.

Mission of the Monitoring Trustee

29. The Monitoring Trustee shall assume its specified duties and obligations in order to ensure compliance with the Commitments. The Commission may, on its own initiative or at the request of the Monitoring Trustee or the Parties, give any orders or instructions to the Monitoring Trustee in order to ensure compliance with the Commitments.

Duties and obligations of the Monitoring Trustee

30. The Monitoring Trustee shall:
- (i) supervise that the firewalls, governance and employment incompatibility measures have been implemented and are being complied with as described in Sections B and C above, in particular by:

- verifying that all necessary measures to ensure that Airbus Group does not after the Effective Date obtain any Launch Services and Satellite Confidential Information or Launcher Roadmap Sensitive Information in violation of paragraphs 2 and 9 have been implemented and are being complied with, and ASL has not after the Effective Date obtained Third Party Satellite Prime Contractor Key Confidential Information as per paragraph 7;
 - verifying that all necessary measures to ensure that Airbus DS Satellites does not share Third Party Launch Service Provider Key Confidential Information with Arianespace, either directly or through ASL, have been implemented and are being complied with pursuant to paragraph 11 above;
 - verifying that ASL/Arianespace’s information technology network have been severed from the information technology networks of ASL’s parent companies pursuant to paragraph 14 above;
 - verifying that the obligations regarding the composition and functioning of the boards of directors of Arianespace, the CSA and the Executive Committee, as well as the identity of the CEO of Arianespace, have been implemented and are being complied with pursuant to paragraphs 17 and 18 above; and
 - verifying that the Commitments with regards to the functioning of the board of directors of ASL have been implemented and are being complied with pursuant to paragraphs 3 and 4 above;
 - verifying that the Commitments regarding employment incompatibilities have been implemented and are being complied with as described in Section C, and in particular verifying the accuracy of Schedules 2 and 3;
- (ii) propose to the Parties such measures as the Monitoring Trustee considers necessary to ensure the Parties’ compliance with the Commitments;
- (iii) promptly report in writing to the Commission, sending the Parties non-confidential copies at the same time, if it concludes on reasonable grounds that the Parties are failing to comply with the Commitments;
- (iv) provide to the Commission, sending the Parties non-confidential copies at the same time, a written report that shall cover the measures taken to ensure the implementation of the Commitments, so that the Commission can assess whether the Commitments are implemented in a manner consistent with Sections B and C above. The Monitoring Trustee shall submit this report (a) during the first two (2) years following Effective Date, within fifteen (15) days after the end of every six (6) months, and (b) thereafter, within fifteen (15) days after the end of every calendar year;
- (v) assume the other functions assigned to the Monitoring Trustee under the conditions and obligations attached to the Decision.

31. The Monitoring Trustee shall provide a detailed work plan to the Commission within one (1) month of its appointment, sending a copy to the Parties at the same time, describing how it intends to carry out its mandate.

Duties and Obligations of the Parties

32. The Parties shall provide and shall cause its advisors to provide the Monitoring Trustee with all such co-operation, assistance and information as the Monitoring Trustee may require to perform its tasks. Subject to applicable laws and regulation in matter of national defence and security, the Monitoring Trustee shall have full and complete access to any of the Parties' books, records, documents, management or other personnel, facilities, sites and technical information reasonably necessary for fulfilling its duties under the Commitments and the Parties shall provide the Monitoring Trustee upon request with copies of any document. The Parties shall make available to the Monitoring Trustee one or more offices on their premises and shall be available for meetings in order to provide the Monitoring Trustee with all information reasonably necessary for the performance of its tasks.
33. The Parties shall indemnify the Monitoring Trustee and its employees and agents (each an "***Indemnified Party***") and hold each Indemnified Party harmless against, and hereby agrees that an Indemnified Party shall have no liability to the Parties for, any liabilities arising out of the performance of the Monitoring Trustee's duties under the Commitments, except to the extent that such liabilities result from the wilful default, recklessness, gross negligence or bad faith of the Monitoring Trustee, its employees, agents or advisors.
34. At the expense of the Parties and subject to applicable laws and regulation in matter of national defence and security, the Monitoring Trustee may appoint advisors (in particular IT experts or consultants), subject to the Parties' approval (this approval not to be unreasonably withheld or delayed) if the Monitoring Trustee considers the appointment of such advisors necessary or appropriate for the performance of its duties and obligations under the Mandate, provided that any fees and other expenses incurred by the Monitoring Trustee are reasonable. Should the Parties refuse to approve the advisors proposed by the Monitoring Trustee, the Commission may approve the appointment of such advisors instead, after having heard the Parties. Only the Monitoring Trustee shall be entitled to issue instructions to the advisors. Paragraph 33 of these Commitments shall apply *mutatis mutandis*.
35. In particular, the Monitoring Trustee shall consult ESA on any technical aspect covered by the present Commitments. ESA may especially provide to the Monitoring Trustee all the expertise necessary to assess the compliance of the Parties with the Commitments as regards the treatment of Launch Services and Satellite Confidential Information, Launcher Roadmap Sensitive Information and Third Party Satellite Prime Contractor Key Confidential Information. In that regard, the Parties authorise ESA to use all the information available to it in its capacity as censor of Arianespace to support the mission of the Monitoring Trustee.
36. The Parties agree that the Commission, acting pursuant to the Merger Regulation, may share information proprietary to the Parties with the Monitoring Trustee. The Monitoring Trustee shall not disclose such information and the principles contained in Article 17(1) and (2) of the Merger Regulation apply *mutatis mutandis*.
37. For a period of ten (10) years from the Effective Date, the Commission may request all information from the Parties that is reasonably necessary to monitor the effective implementation of the Commitments.

Replacement, Discharge and Reappointment of the Monitoring Trustee

38. If the Monitoring Trustee ceases to perform its functions under the Commitments or for any other good cause, including the exposure of the Monitoring Trustee to a Conflict of Interest:
- (a) the Commission may, after hearing the Monitoring Trustee and the Parties, require the Parties to replace the Monitoring Trustee; or
 - (b) the Parties may, with the prior approval of the Commission, replace the Monitoring Trustee.
39. If the Monitoring Trustee is removed according to paragraph 38 of these Commitments, the Monitoring Trustee may be required to continue in its function until a new Monitoring Trustee is in place to whom the Monitoring Trustee has effected a full hand over of all relevant information. The new Monitoring Trustee shall be appointed in accordance with the procedure referred to in paragraphs 22 to 28 of these Commitments.
40. Unless removed according to paragraph 38 of these Commitments, the Monitoring Trustee shall cease to act as Monitoring Trustee only after the Commission has discharged it from its duties after the Commitments have been implemented. However, the Commission may at any time require the reappointment of the Monitoring Trustee if it subsequently appears that the relevant remedies might not have been fully and properly implemented.

Section E. Entry into force – Effective Period

41. The Commitments shall take effect as of Effective Date and shall apply for a period of twenty-five (25) years from Effective Date, as long as Airbus Group continues to manufacture satellites as prime contractor during that period.
42. By exception to paragraph 41 above, the measures described in paragraph 20 shall apply for a period of fifteen (15) years from Effective Date, as long as Airbus Group continues to manufacture satellites as prime contractor during that period.

Section F. The review clause

43. The Commission may, in response to a reasoned request from the Parties showing good cause waive, modify or substitute, in exceptional circumstances, one or more of the undertakings in these Commitments. This request shall be accompanied by a report from the Monitoring Trustee, who shall, at the same time send a non-confidential copy of the report to the Parties. The request shall not have the effect of suspending the application of the undertaking and, in particular, of suspending the expiry of any time period in which the undertaking has to be complied with.

May 20, 2016

Name: [...]

Function: [...]

Duly authorised and on behalf of ASL

Name: [...]

Function: [...]

Duly authorised and on behalf of Airbus Group S.E.

Name: [...]

Function: [...]

Duly authorised and on behalf of Safran

SCHEDULE 1 – CONFIDENTIAL

Personal and Confidential

Individual Confidentiality Agreement

I, the undersigned,

[NAME], [FUNCTION]

Hereby acknowledge that I am aware of the firewalls implemented in the context of the decision of the European Commission in case COMP/M.7724 – ASL/Arianespace, and have become familiar with their contents.

I agree to comply with the obligations, policies and procedures described therein, for so long as I remain employed by [COMPANY] or any affiliates or remain in possession of material, non-public information gathered while at [COMPANY].

[...].

[LOCATION, DATE]

[NAME AND SIGNATURE]

SCHEDULE 2 – CONFIDENTIAL

ASL/Arianespace Affected Personnel includes all ASL/Arianespace executives and employees, except for personnel that does not have access to Launch Services and Satellite Confidential Information and/or Launcher Roadmap Sensitive Information.

For indicative purposes, the following ASL personnel does not have access to Launch Services and Satellite Confidential Information and/or Launcher Roadmap Sensitive Information:

- Employees of the Defence Programmes;
- Employees in charge of support functions, including in particular human resources, accounting and controlling, security, communication, general secretary;
- Employees in charge of procurement;
- Employees in charge of propulsion activities; and
- Employees working on ASL's sites of Brest [...], Biscarosse [...], Trauen [...], Mailly-le-Camp [...], Issac [...], Cadarache [...], Toulouse [...], Le Haillan [...], Saint-Médard [...], Vert-Le-Petit [...], Vernon [...], Bremen [...] and Lampoldshausen [...].

In addition, it should be noted that, as of today, most employees of other organisation units within ASL do not either have access to Launch Services and Satellite Confidential Information or Launcher Roadmap Sensitive Information.

The present list is provided for information purposes only and shall be refined upon Closing with the Monitoring Trustee, and afterwards adjusted as necessary on an ongoing basis by ASL and the Monitoring Trustee, under the control of the Commission. In particular, the list above does not preclude any change in the internal organisation of ASL/Arianespace.

[...]

SCHEDULE 3 – CONFIDENTIAL

For the purpose of paragraph 20, Airbus DS Satellites Affected Personnel shall be defined as all Airbus DS Satellites executives and employees in charge of interactions and negotiations with Third Party Launch Service Providers.

As of today, Airbus DS Satellites Affected Personnel are:

- [...]; and
- [...].

The list above does not preclude any change in the internal organisation of Airbus DS Satellites. If need be, and in particular in case of an internal reorganisation of Airbus DS Satellite, the above list may be adjusted as necessary by Airbus Group and the Monitoring Trustee, under the control of the Commission.

[...]